





# **ICECAE 2021**

# PROGRAM

## 2<sup>nd</sup> International Conference on Energetics, Civil and Agricultural Engineering



Let us together take action in support of achieving the United Nations Sustainable Development Goals to promote prosperity while protecting the planet



14-16 October, 2021

Tashkent, Uzbekistan



#### 🝀 ICECAE 2021

#### PROGRAM

2<sup>nd</sup> International Conference on Energetics, Civil and Agricultural Engineering 2021

#### **DAY 1: OCTOBER 14, 2021**

9:00 Onsite registration	
9:30 Welcoming Tea/Coffee	
OPENING CEREMONY	
	[Hybrid: online and onsite]
	10.00am – 12.50pm (Tashkent-Uzbekistan time zone)
	(Chair/Moderator: Prof. Dr. Obid Tursunov)
	(Main hall of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers)
	Prof. Dr. Obid Tursunov
10.00am–10.10am	Professor of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers - Uzbekistan
	Prof. Dr. Bakhadir Mirzaev
10.10am-10.20am	1 <sup>st</sup> Vice-Rector of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers – Uzbekistan
10.20am-10.40am	Representatives from the Ministries of the Republic of Uzbekistan
10 40 10 50	Prof. Dr. Abdushukur Khamzaev
10.40am-10.50am	Director of the Research Institute of Forestry – Uzbekistan
10 50cm 11 00cm	Prof. Dr. Mukhsin Khodjiyev
10.50am-11.00am	Rector of the Gulistan State University – Uzbekistan
11 00om 11 10om	Prof. Dr. hab. eng. arch. Andrzej Białkiewicz
11.00aiii-11.10aiii	Rector of the Cracow University of Technology – Poland
11 10cm 11 20cm	Prof. Dr. Mustafa Yaşar
11.10am-11.20am	Vice-rector of Karabuk Univeristy – Turkey
HONORABLE SPEAKERS	
	Professor Josep M. Guerrero
11.20am-11.50am	Managing Director
	CROM Center for Research on Microgrids
	Department of Energy Technology
Speech title	Aaloorg University - Denmark Space Microgrids NanoSate Lungr Passes and Closed Ecosystems
Abstract	This talk will begin by introducing the control of microgrids, the parallelisms with the human brain
ADDII ACI	and the research for possible sources of inspiration in last frontiers of neuroscience. Then control in
	electric power systems of satellites and space platforms will be presented, showing approaches that
	are extended from terrestrial microgrids and explaining the differences and challenges when it comes
	to apply them out in the space. Further, multi-microgrid systems will be discussed for moon craters
	in future lunar manmade bases. Finally, the extension from the hierarchical control of microgrids to







	bioastronautics in the control of closed ecological systems to support with oxygen, water, and food to the astronauts and creating thus creating new ecosystems for the moon and future mars bases
	to the astronauts and creating thus creating new ecosystems for the moon and ruture mars bases.
11.50am-12.20pm	Professor Saifur Rahman
	Candidate for IEEE President-elect
	Joseph Loring Professor & Director
	Virginia Tech Advanced Research Institute - USA
Speech title	Global Electric Power Sector: Engaging with Environmental Issues
Abstract	China, US, India, Japan and Russia are the top five countries in terms of electricity generation capacity. Between them they had a total capacity of 3,650 million kW in 2016. In terms of fuel sources for electricity coal, natural gas, hydro, nuclear, renewables and oil provided 38.3%, 22.9%, 16.3%, 10.2%, 9% and 3.3% respectively in 2017. This means almost two-thirds of the global electricity production came from fossil fuels in that year. This is reflected in about 10 billion tons of $CO_2$ from electricity generation or about a third of the global production. However, this mix is expected to change significantly in the next 10 years. By 2030 installed power generation capacities from wind, solar PV, hydro power, nuclear and thermal are going to reach 540 GW, 420 GW, 530 GW, 160 GW and 1200 GW respectively. The top five $CO_2$ emitting countries are: China, United States, India, Russian Federation and Japan each producing between nine and one billion metric tons of $CO_2$ in 2016. However, $CO_2$ is not the only concern against global warming. The Global Warming Potentials (GWP) of greenhouse gases are as follows: $CO_2$ (1), Methane (28), Hydro fluorocarbons (138), Nitrous oxide (265), Per fluorocarbons (6,630) and Sulphur hexafluoride (23,500). So, the bottom line is: Efforts in the electric power sector to replace fossil fuel with renewables and nuclear will help. But if emission from the transportation sector continues to rise, the drop in power sector contributions will not be enough. Large scale Electric Vehicle deployment will help, but question remains – how will the EV be powered.
12.20pm-12.50pm	Professor Mohammad Shahidehpour
	Bodine Chair Professor & Director
	of the Robert W. Galvin Center
	for Electricity Innovation
Sneech title	Plockohain for Transactive Energy Management in Penewahle Energy Systems
Abstract	This presentation offers a vision and analyzes a scheme developed for microgrids that utilizes
	blockchain technologies to optimize transactive operations in power distribution systems. Technological and socioeconomic developments in distributed energy resources have promoted the use of renewable energy in microgrids as a promising alternative to the traditional use of thermal energy for electricity delivery in a bulk power grid. Microgrids are small-scale self-controllable power systems that interconnect on-site generation resources and loads for striking a local balance of energy production and consumption. Geographically-close microgrids are networked to broaden the merits of microgrids and eventually refine electricity service provisions across the power distribution system. Transactive energy, as the cross-section of technological, political and economic innovations, opens up the door to peer-to-peer autonomous electricity retail markets together with new business and operation models for power generation, delivery, and consumption. Through active participation in the decentralized transactive energy management process, networked microgrids collectively provide additional opportunities for improving the operational performance of power distribution systems. As networked microgrids are intrinsically cyber-physical systems that may unintentionally expose cybersecurity vulnerabilities to potential disruptive agents, blockchain is considered as an option that provides a transformative solution to address the cybersecurity and mutual-trust concerns through the application of cryptography and the execution of smart contracts. Accordingly, networked microgrids will interact in an automatic, credible and auditable manner for maintaining a greater degree of efficiency, reliability, resilience, and sustainability in electricity services offered to local communities. We present several practical examples and conclude that blockchain technologies embedded in transactive energy will play a significant role in the evolution of traditional power distribution systems to active and smart distribution networks.
END OF OPENING CEREMONY	

#### Lunch: 13.00pm-14.20pm (Main Canteen of TIIAME)





#### PLENARY SESSION - KEYNOTE SPEAKERS

#### [Hybrid: online and onsite]

#### Chair/Moderator: Prof. Dr. Obid Tursunov, Prof. Dr. Jan Wincenty Dobrowolski

14:30pm - 18:20pm

Keynote Speak	er I: 14.30pm-14.50pm (mode of presentation: online)	
	Prof. Dr. Jan Wincenty Dobrowolski	
	Professor of the AGH University of Science and Technology, Poland	
	Member of the World Academy of Arts and Science	
	Experiences related to my 50 years contribution to global cooperation on Sustainable	
Speech title	Development 1971-2021 and innovative proposals for adaptation to climate change,	
	COVOD-19 and outer-space missions	
Keynote Speak	er I: 14.50pm-15.10pm (mode of presentation: online)	
	Prof. Dr. Manoj Stephen Paul and Dr. Ritu Chaturvedi	
	Professor of the St. Johns College, Agra, India	
Speech title	Human Health Risk Assessment associated with consumption of food containing heavy	
~P·····	metals	
Keynote Speak	er II: 15.10pm – 15.30pm (mode of presentation: online)	
	Prof. Dr. hab. eng. arch. Justyna Kobylarczyk and Assoc. Prof. Dr. eng. arch.	
	Michal Kruna	
	Professors of the Cracow University of Technology Poland	
Speech title	High Quality of Residential Environment	
•		
Keynote Speak	Kaynata Snaakar III. 15 30nm 15 50nm (made of presentation, online)	
Drof Dr. bab and anab Dominika Vuoniarz Vuona and Dr. and arab		
	Molgorzoto Hrvniowicz	
	Professor of the Cracow University of Technology Poland	
	Trojessor of the Cracow Oniversity of Technology – Tolana	
Speech title	A new functions in a historic buildings	
Specen the		
Keynote Sneak	er IV: 15 50pm-16 10pm (mode of presentation: online)	
Keynote Speak	Prof Dr. Devides Belsere	
	Professor Emeritus of Rhonal University India	
	Trojessor Emericas of Briopar Oniversity, Inau	
Speech title	Effect of laser diode on oranges to other fruit crops like guava and papaya	
Keynote Speak	er V: 16.10pm-16.30pm (mode of presentation: online)	
	Prof. Dr. Alirza Mamedov	
	Professor of the Kyiv National University of Construction and Architecture – Ukraine	
Cmaaal- 441-	Historical City Analysia	
speech title	HISTOLICAI CITÀ AUBINSIS	







Keynote Speaker VI: 16.30pm – 16.50pm (mode of presentation: online)		
	Prof. Dr. Jose Osvaldo B. Carioca	
	Professor of the Federal University of Ceara – Brazil	
	Synthesis of Chitosan membranes to be used in dual system of dark	
Speech title	fermentation and MEC-electrolyzers to produce high quality	
	Hydrogen	
Keynote Speak	er VII: 16.50pm – 17.10pm (mode of presentation: online)	
	Dr. Ulrich Berk	
	President of the German Association of Homatherapy – Muchlingen, Germany	
Speech Title	Agnihotra and Homa Farming - Tools for a Sustainable Development on Planet Earth	
Keynote Speak	er VIII: 17.10pm – 17.30pm (mode of presentation: online)	
	Assoc. Prof. Pavel Navitski	
	Oral Roberts University, Oklahoma - USA	
Speech title		
<b>Speaker 1:</b> 17.3	1/.45pm (mode of presentation: <b>onsite</b> )	
	Assoc. Prof. Dr. Fatin Lornuk Vildiz Tashniad University Jatanhul Turkay	
Speech title	Indiz Technical University, Islandul - Turkey	
Speech title	It has been known that sour cherry (Prunus cerasus) is a good source of bioactive compounds such as	
	phenolics and flavonoids which exert many health promoting effects. It is mainly consumed as sour	
	cherry juice/nectar. In this study, sour cherry juice was fermented with single cultures of Lactinentibacillus plantarum subsp. plantarum Limosilactobacillus formantum and Lactinentibacillus	
	pentosus at different sugar concentrations (9, 12 or 15%) and temperatures (20, 28.5 or 37 °C) for 48h	
	to obtain the highest starter population. Initial lactic acid bacterial (LAB) counts were set as 107-108	
	cob/mL for all samples and number of LABs was determined at 4-h intervals during the incubation. In	
Abstract	general, bacterial growth was more rapid and balanced at 20 or 28.5 °C temperature levels while	
	remarkable reductions were observed in the extended periods of the fermentation probably due to the	
	lower pH with increased acid accumulation and the higher osmotic pressure. Again, Lacuptantibacillus plantarum grew faster at increasing sugar concentrations while Limosilactobacillus fermentum and	
	Lactiplantibacillus pentosus were not influenced significantly from the varying sugar levels. In	
	conclusion, this study confirmed that lower incubation temperatures were more favorable for the	
	growth of probiotic LAB species while all the species were adapted well at sour cherry environment	
	containing different concentrations of sugar.	
Speelron II. 17	45 mm 18:00 mm (mode of amountations and to)	
Speaker II: 17.	Assoc Brof Dr M ZEKİDUDAK	
	ASSOC. FIOL DF. M. ZEKI DUKAK Vildiz Technical University Istanbul Turkey	
	Microbiological and sensorial properties of probiotic carrier lactofermented sour cherry	
Speech title	heverages	
	In recent years, with the increase in consumer awareness about healthy nutrition, functional foods	
	which contain probiotic microorganisms have drawn great attention in all over the world. Among these	
	functional foods, non-dairy probiotic carrier products have become more prominent due to the	
	increasing vegetarianism and some milk based concerns such as its cholesterol content and lactose	
Abstraat	incorrection in the study, produced sour energy beverage which was produced by fermentation with three different cultures of Lactiniantibacillus plantarum subsp. plantarum Limosilactobacillus	
AUSTIACI	fermentum and Lactiplantibacillus pentosus was stored at 4°C for 10 days and survival of the	
	probiotics and sensory properties of the products were analyzed. Initial LAB populations were around	
	9-9.5 log cfu/mL for all samples while no significant decrease was observed at the end of the storage	
	period. Also, according to sensory evaluation, all the lactofermented probiotic beverage samples had	
	remarkable general acceptance scores as compared to non-termented ones. Moreover, the acceptance	







	score of the samples which were fermented at 20 °C was lower than other samples due to their sugary taste. In addition, the samples which were fermented with Limosilactobacillus fermentum (15% w/v sugar content) at 37 °C were found to be more acidic by the panelists as compared to the other samples. The highest sensory score was belonged to the sour cherry sample obtained at the optimized conditions of 12% w/v sugar content and 28.5 °C for each probiotic cultures. In conclusion, this study confirmed that sour cherry juice could be a convenient media as a non-dairy probiotic carrier with high sensorial acceptance and probiotic survival rates. However, longer storage periods should also be assessed.
G I III 10/	
Speaker III: 18.0	JUpm – 18:20pm (mode of presentation: <b>onsite</b> )
	Dr. Zhaksylyk Makhatov
	M. Auezov South Kazakhstan University, Shimkent - Kazakhstan
Speech title1	Enzymatic depolymerization of wheat straw polysaccharides
Abstract	The purpose of this study is to develop a technology for enzymatic processing for depolymerization of polysaccharides in wheat straw to obtain the maximum yield of glucose and sorbitol. Cellulolytic enzymes endo-1,4- $\beta$ -glucanase (EC 3.2.1.4) and cellobiose (1,3- $\beta$ -glucosidase) (CF 3.2.1.21) were isolated and studied in local strains Tr. viride 121, which are grown under deep cultivation conditions. A technology has been developed for obtaining a complex preparation "Cellozyme G20x" with a high yield and specific activity of cellulase, xylanase, $\beta$ -glucanase and pectinase, and a scheme for purification from cellulases by precipitation, ultrafiltration, and freeze drying is not inferior in efficiency to commercial preparations. The physicochemical properties of the preparation "Cellozyme G20x" have been studied, the optimal parameters of the action and stability of the enzyme preparation have been established. The efficiency of Cellozyme G20x for hydrolysis of straw polysaccharides was 35-40% in terms of glucose yield.
Speech title 2	Hydrolysis of wheat straw hemicelluloses for maximum xylose extraction
Abstract	The aim of the study is to select reaction conditions for hydrolysis of wheat straw with dilute sulfuric acid for maximum xylose extraction under mild conditions (at atmospheric pressure and temperature of 100°C). The authors found that maximum glucose yield (72.4-77.1 weight % of the initial content of hemicelluloses in wheat straw) is achieved at a concentration of H2SO4 2-3 weight % and the hydrolysis process duration of 5 hours. Analysis of the obtained hydrolysates showed that they contain cellulose (56.8-70.4 weight %), lignin (19.8-28.8 weight %) and hemicelluloses (2.8-15.3 weight %).

#### Closing Speech: Prof. Dr. Obid Tursunov

#### END of 1<sup>st</sup> Day







DAY 2: OCTOBER 15, 2021 [Fully online] Time: 10<sup>00</sup> a.m. – 18<sup>00</sup> p.m.

Session chairs: Prof. Dr. Obid Tursunov, Prof. Dr. Justyna Kobylarczyk, Assoc. Prof. Dr. Ziyodulla Yusupov, Dr. Dilshod Kodirov, Dr. Khushiev Sirojiddin, Dr. Jurabek Izatillaev

#### PRESENTERS (ORAL)

Afanasiy Li, Burkhan Utepov, Eduard Kan, and Odil Kuychiev <sup>1</sup>Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent, Uzbekistan <sup>2</sup>Jizzakh Polytechnic Institute, Jizzakh, Uzbekistan Title of presentation: Study on the process of droplet formation when liquid flows out of a capillary Paper ID 04 Abstract: This article presents the theoretical background for the justification of the  $10^{00} - 10^{15}$ parameters of the rotating sprayer. Theoretical studies show that an increase in the (5 min discussion) rotation frequency of the disk at a constant air flow velocity leads to a minimum median mass diameter of the droplets. Therefore, when justifying the diameter of the sprayed droplets, it is necessary to consider the combination of the disk rotation speed and the axial velocity of the air flow. To obtain high-quality air-droplet flow, the initial speed of the main droplets discharged from the periphery of the spray disc should be less than the air velocity and rotational frequency Pavlovskyi spray is recommended to be applied with in  $\omega = 60...200 \text{ c}^{-1}$ . Isomiddin Siddikov and Oksana Porubay Department of Information Processing and Management, Tashkent State Technical University named after Islam Karimov, 100000 Tashkent, Uzbekistan Title of presentation: Neural network model of decision making in electric power facilities under conditions of uncertainty Abstract: The article is devoted to the issue of creating a mathematical model of the Paper ID 05 problem of making management decisions in electric power facilities based on modern  $10^{15} - 11^{30}$ intelligent technologies, which makes it possible to take into account the influence of (5 min discussion) various factors on the operating modes of the power system. A systematic approach to describing processes in the mathematical language of the theory of fuzzy sets is proposed. To solve the problem of controlling the operating modes of the power system, a neuro-fuzzy network has been developed that combines the algorithms of Takagi-Sugeno fuzzy inference, as well as a recurrent neural network. An adaptive learning algorithm based on the Frechet method is proposed for training a neural network. The analysis of the efficiency of the fuzzy control model under the conditions of various modes of functioning of the local power system is carried out. Pinar Akpinar, and Andisheh Zahedi <sup>1</sup>Civil Engineering Department, Near East University, Nicosia, North Cyprus, Mersin Paper ID 14 10, Turkey  $10^{30} - 10^{45}$ <sup>2</sup>*Civil Engineering Department, University of Ottawa, Ottawa, Canada* (5 min discussion)

Title of presentation: Comparison of the Alkali-Silica Reactivity of North Cyprus and







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	South Cyprus aggregates; preliminary studies using RILEM method <b>Abstract:</b> Alkali-silica reaction (ASR) is regarded as one of the most deleterious concrete durability problems, known to cause severe deteriorations in reinforced concrete structures all around the world. ASR involves the reaction of alkaline concrete pore solution with silica minerals in the aggregates and as a result, hydrous alkali-silica gel is produced. Expansion caused by this gel upon absorbing moisture results in serious deterioration in concrete. Although the susceptibility of South Cyprus aggregates to ASR has been previously studied to a very limited extent in the past, no scientific information on the ASR susceptibility of North Cyprus aggregates are available in the related literature. Beşparmak (Pentadaktylos) Mountains (North Cyprus) and from Troodos Mountains (South Cyprus) are positioned close to each other; however, aggregates obtained from both mountains are known to differ in composition. This difference in composition has the potential to yield ASR performances varying significantly. The aim of this study was to carry out preliminary investigations on the alkali-silica reactivity performance of both North and South Cyprus aggregates under same conditions, in a systematic and comparative manner. Aggregates obtained from both mountains are tested in combination with CEM I and CEM II (with supplementary cemenetitious materials) under the exposure conditions of RILEM method AAR-2. Preliminary results showed that North Cyprus aggregates are potentially reactive when used with CEM II, where South Cyprus aggregates tested under same conditions are detected to have much higher levels of reactivity.
	Abdelhamid Banmoumou, and Saïd El Madidi
<b>Paper ID 19</b> $10^{45} - 11^{00}$ (5 min discussion)	<ul> <li><sup>1</sup>Biometrics and Bio Resources, Laboratory BVRN, Faculty of Sciences, University Ibn Zohr, Agadir, Morocco</li> <li><b>Title of presentation:</b> Evaluation of the variability of citrullus colocynthis (1) schrad as potential biodiesel feedstock: oil content, oil yield and the fatty acid composition</li> <li><b>Abstract:</b> <i>Citrullus colocynthis</i> has been garnering interest in recent times as a potential biodiesel feed stockcrop due to its high seed oil content and its natural adaptation to drought The variability seed oil content (OC), Oil yield (kg/ha) (OY) and fatty acid composition were investigated for 12 accessions collected in different localities in Morocco. Analysis of the data revealed high variability among the accessions, with seed oil content ranging between 17.1 and 24.3 % of seed weight and Oil yield from 35.3 to 172.7 kg/ha. The predominant fatty acids and the average values of unsaturated fatty acids vary between 75.25 and 81.94 %. The wide range of variations found in this study for the traits measured offers the possibility of genetic improvement to develop cultivars for biodiesel production compatible with sustainable and ecological agriculture.</li> </ul>
	Eduard Kan Muradulla Mukhammadiay Afanasiy Li and SHarali Aralay
<b>Paper ID 24</b> $11^{00} - 11^{15}$ (5 min discussion)	<sup>1</sup> Department of usage of water energy and pumping stations, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>2</sup> Department of power, Tashkent State Technic University named after Islam Karimov, 100095 Tashkent, Uzbekistan <sup>3</sup> Moscow State University of Civil Engineering, Yaroslavskoe shosse 26, Moskow, Russia Title of presentation: Methodology for assessing the efficiency of water jet pumps in auxiliary systems of irrigation pumping stations Abstract: The reliability and efficiency of irrigation pumping stations operation
	should ensure that the building and territory of the pumping station are not flooded by drainage (filtration) water. At many pumping stations (especially those with long pressure lines), water jet pumps are installed as pumps for pumping out drainage water. The experience of operating such plants has revealed their undeniable advantages in







	comparison with conventional vane centrifugal pumps (type K and D) – sufficient reliability in operation due to the simplicity of the design, the absence of rubbing parts in the installation, the possibility of pumping contaminated liquids and the possibility of their use in the absence of power supply. But with all this, water jet pumps are extremely low-efficiency. To justify the use of jet pumps, a methodology is needed that would allow for a comprehensive consideration of all the main factors that affect their reliability, ease of operation and energy efficiency in the drainage system. On the example of the pumping station "Kiziltepa-2", these factors were identified and the energy efficiency of water jet pumps was calculated. Various applications of jet pumps are considered, and their efficiency is evaluated.
	Hoshimov AA, Sevtnazarov AR, Tadjiev SM, Alimov UK, Tojiev RR, and
	Madenov BD
	<sup>1</sup> Fergana polytechnic Institute, 150100, st. Ferganskava, Fergana, Uzbekistan
	<sup>2</sup> Institute of General and Inorganic Chemistry, 77 <sup>a</sup> Mirzo Ulugbek, 100170, Tashkent, Uzbekistan
	<sup>3</sup> Karakalpak State University, st. Ch.Abdirov, 1, 230112, Nukus, Republic of
	Karakalpakstan
Paper 27	
$11^{15} - 11^{30}$	Title of presentation: NPSCA-containing fertilizers based on ammonium nitrate melt
(5 min discussion)	and powder Suprefos-NS
	<b>Abstract:</b> Methods for improving the composition and properties of ammonium nitrate (AN) using various inorganic additives are considered. It has been shown that the employing Suprefos-NS, a product of JSC "Ammofos-Maxam", as an additive in the AN melt allows obtaining a stabilized fertilizer containing, except nitrogen and phosphorus, macroelements such as calcium and sulfur, exclusively in assimilable forms. In this case, the mass ratio AN: Suprefos-NS varied in the range from 100: 5 to 100: 35. It was found that any amount of Suprefos-NS additives significantly improves the composition and properties of the AN.
	Sreerag S Kallingal, and Priyanka Singh
	<sup>1</sup> Department of Civil Engineering, Amity School of Engineering & Technology, Amity
	University, Uttar Pradesh, Noida, India
<b>Paper ID 65</b> 11 <sup>30</sup> – 11 <sup>45</sup> (5 min discussion)	<b>Title of presentation:</b> Dynamic analysis of cable stayed bridge with various patterns of pylon <b>Abstract:</b> The construction of cable stayed bridge increase day by day. The reason behind this is because of the aesthetic beauty and the uniqueness in the structure. This work deals with the study of dynamic analysis of cable stayed bridge with different pylon arrangements. The cable transmits the reaction forces of deck to pylon. Pylon transmits the load of cable to foundation. The pylons 'H' shape, 'Inverted Y' shape, 'Diamond' shape & 'Needle' shape arrangement were considered. The MIDAS CIVIL software is used to model and analysis of the cable stayed bridge with various pylon arrangements. The materials and section properties of all four bridges are kept same and the moving load is provided as per IRC:6-2000 loading. In the part of seismic analysis, the time history analysis done and took data of 1940 El Centro earthquake so the nonlinear dynamic behaviour of four bridges investigated. A variety of parameter like, axial forces, displacement and bending moment are analysed. From the result, when complexity increases the behaviour of structure changes. Eventually, the results are compared and concluded that which pattern of pylon shows higher and least performance.
Paper ID 66	Priyanka Singh, Mirza Jahangir Baig, Bhumika Pandey, and Kartik
$11^{45} - 12^{00}$	Papreja
(5 min discussion)	Department of Civil Engineering, Amity School of Engineering and Technology, Amity









University Uttar Pradesh, Noida, India

	Title of presentation: Analysis of the behaviour of Cable stayed bridge with different
	Abstract: Cable stayed bridges are known for their good stability, It has been the most favorable use of structural design, for comparatively low designing and maintenance costs, and for effective structural characteristics. Therefore, this type of bridges are gaining popularity and are generally selected for long spans when compared to suspension bridges. A cable stayed bridge comprises of pylons with cables withstanding the weight of deck. There are different types of pylons i.e. ; H-type pylon, A-type pylon, inverted Y-type pylon, and diamond shaped pylon. In this paper the bridge design, model, and analyses for these different types of pylons is done using STAAD Pro. The comparison for three cases are done on the basis of shear force and bending moment in terms of self weight to obtain the most efficient type of pylon design. The results thus obtained are useful in limiting the drawbacks of other types of pylon.
	Md. Tanjid Mehedi, and Azizul Hoque Shochchho
	Department of Building Engineering and Construction Management, KUET, Khulna-
	9203, Bangladesh
<b>Paper ID 69</b> 12 <sup>00</sup> – 12 <sup>15</sup> (5 min discussion)	<b>Title of presentation:</b> Exploring Facility Management (7D) with BIM Considering Quality and Performance Assessment Models <b>Abstract:</b> The fields of Construction Management are so vast these days that it enriched with so many elements contemplate to 7D of BIM (Building Information Modeling). Facility Management holds the 7D position to understand and acquire proper knowledge about the quality and performance of a building structure. The purpose of this paper is to identify research gaps in the field of Building Information Modelling (BIM) in the Facility Management (FM) business, as well as practical issues that facility management professionals face while using BIM. The key to successful BIM deployment in the FM business is to improve communication among various stakeholders throughout the project lifecycle. However, there is still some debate over the value of FM in the construction business. To put it another way, construction does not comprehend FM. There are also concerns about interoperability and data exchange. The Quality of information is connected with PIM and AIM with various IQ perspectives. It is determined that BIM-based FM procedures have the potential to change not just the perspective of the FM sector, but also the perspective of the whole industry, as they are based on a collaborative approach to the delivery of intelligent facilities.
	Alexandr Komarov, Alexey Grachev, Anton Gabriel and Natalya Mokhova
	Institute of Machinery, Materials, and Transport, Peter the Great St. Petersburg
<b>Paper 71</b> $12^{15} - 12^{30}$ (5 min discussion)	<b>Title of presentation:</b> Simulation of the misalignment process of an overhead crane in Matlab / Simulink <b>Abstract:</b> The object of the study is the angle of deviation of the crane from the perpendicular to the rails in a horizontal plane. The aim of the work is the mathematical description of the crane's bridge beam misalignment, creation of the model in Matlab Simulink. Based on the resulting model, there was implemented a control system that compensates for emerging misalignment by speeding up or slowing down crane drives
	Sakir Kuzey, Cihat SekeR. Mohamed Elweddad, and M Tahir Güneser
<b>Paper ID 72</b> $12^{30} - 12^{45}$ (5 min discussion)	<sup>1</sup> Giresun University, Sebinkarahisar Vocational Schools of Tech. Sciences, Electricity and Energy Department, 28400 Giresun, Türkiye <sup>2</sup> Karabuk University, Engineering Faculty, Electrical and Electronics Engineering Department, 78100 Karabuk, Türkiye







	<b>Title of presentation:</b> Designing an irrigation system using photovoltaic energy by considering crop type in Fergana Valley <b>Abstract:</b> Today, the importance of energy cost and efficiency is gradually increase. The decrease in drinking water and agricultural water resources, increases the interest in drip irrigation systems in agricultural irrigation. Environmentally friendly photovoltaic drip irrigation systems (PVDIS) are the appropriate solution in regions where there is no electricity distribution network, where it is far away, or where power cuts are frequently. This study is carried out in the Fergana Valley of Uzbekistan. Regional climate data obtained from Climwat 2.0 software are processed in Cropwat 8.0 software. Crops that are both the source of livelihood of the people of the region and that can be used in this study have been determined. Annual and daily water needs are analyzed so that these crops are irrigated every seven days. A system is designed by taking the data of the crop with the highest water requirement as a reference. The drip irrigation system is set up in a PVsyst 7.1.7 simulation environment to pump 114.24 m <sup>3</sup> of water daily from a 5-
	meter-deep river with a 1.8 kW photovoltaic system. The efficiency of the system is 58.7% and the efficiency of the pump is 34.5%. Crop water need is met at the rate of 98.87%. It is predicted that the designed and analyzed PVDIS will provide efficiency in energy and water resources.
	Valeriano Condori-Apaza, Oscar R. Mamani-Luque, Roberto Alfaro-Alejo,
	Wilber. Laqui, William F. Condori
	<sup>1</sup> Professional School of Topographic Engineering and Surveying, Universidad Nacional
	del Altiplano, Puno, Peru
	<sup>2</sup> Faculty of Agricultural Engineering, Universidad Nacional del Altiplano, Puno, Peru
<b>Paper ID 73</b> 12 <sup>45</sup> – 13 <sup>00</sup> (5 min discussion)	<b>Title of presentation:</b> Analysis and impact of meteorological droughts in the agriculture of Puno region, Peru <b>Abstract:</b> The research focuses on identifying and characterizing the occurrence of episodes of meteorological droughts in the Puno region in Perú, in order to determine the economic impact of this climatic phenomenon on agricultural activities in the region. From the use of the standardized rainfall index for 12 months (SPI-12) for the period 1981-2019, the occurrence, magnitude, persistence and spatial evolution of drought events in the area were determined, determining that the events that occurred in the years 1982/83, 1989/90 and 1991/92, escalated to levels of severe drought and extreme drought, mainly in the extreme south of the region, which corresponds to the provinces of El Collao, Yunguyo and Chucuito. For the determination of the impact of droughts on agriculture in the region, the records of losses of cultivated areas corresponding to the period 1997-2017 administered by the competent authority were used, finding the non-existence of a direct correlation between the presence of meteorological droughts and the economic losses in production, due to the fact that said information has a general character, not discriminating the different climatic phenomena that generate economic losses in the agriculture sector, therefore, they are not adequate to estimate the economic losses in the Puno region.
	University of Persada Indonesia Y.A.I, Diponegoro Street 74, Jakarta-10430, Indonesia
<b>Paper ID 93</b> $13^{00} - 13^{15}$ (5 min discussion)	<b>Title of presentation:</b> Study on the development the market position company of fully electric vehicles <b>Abstract:</b> Owing on decreased the marketing performances on automotive industries- energy generation, and storage industry in many firms. The research inquired of research gap within pursues the market- positions that it was conduct within resources of the corporate. Therefore, the research method conducted the one step approach within the confirmed strategy that conduct within an equation's structural hybrid-model. The results- data was significantly contributed to the goal setting theory that it could drive to improve and enhanced within an innovation evidence in the digital- marketing and







	encompassed the marketing strategies that could pursued the market positions within the
	firms in the automotive fully electric vehicles industry as firms policies that innovation
	effort in digital marketing more focused than task marketing strategies and top
	managers.
	Boris M. Kizyaev, Victor I. Balabanov, and Natalia B. Martynova
	<sup>1</sup> Russian Scientific Research Institute of Hydraulic Engineering and Melioration named
	after A N Kostvakov 127550 Moscow Russian Federation
	<sup>2</sup> Department of Land Reclamation and Construction Machines, Russian State Agrarian
	Department of Lana Rectamation and Construction Machines, Russian State Agranan
	University, Moscow Agricultural Academy named after K.A. Timiryazev, 127550
	Moscow, Russian Federation
<b>Paper ID 97</b> 13 <sup>15</sup> – 13 <sup>30</sup> (5 min discussion)	<b>Title of presentation:</b> Definition of humidification circuit parameters for drip irrigation <b>Abstract:</b> During recent years, there was a steady growth in the gross harvest of potatoes in Moscow region, production capacities for processing of agricultural crop have been also increasing. However, based on 2020 results, the yield is still highly dependent on weather conditions and, in particular, on the amount of precipitation during the growing period. Therefore, in order to obtain sustainable yields, it is necessary to maintain the optimal values of the water-air balance that consider conduction of agromeliorative measures, including additional irrigation. The most economical is drip irrigation among the moisturizing activities. It allows delivering irrigation water directly to the root zone. This will significantly reduce the cost of water and electricity; however, the maximum benefits of drip irrigation may be obtained by ravise and calculation of the irrigation rates. Suggested irrigation rates do not take into
	rates for it. The method for calculating the irrigation rate proposed in the article, takes into account the shape of the humidification contour that enables to use irrigation water wisely
	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and
	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung
	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam
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	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam
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<b>Paper ID 98</b>	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Linh Trung Ward, Thu Duc District,
<b>Paper ID 98</b> 13 <sup>30</sup> – 13 <sup>45</sup>	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam
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<b>Paper ID 98</b> 13 <sup>30</sup> – 13 <sup>45</sup> (5 min discussion)	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Uinh Trung Ward, Thu Duc District, Ho Chi Minh City, Viet Nam         Title of presentation: Chemical Composition and Antioxidant Activities of Extracts of Combretum quadrangulare Kurz Leaves Grown in An Giang Province, Vietnam
<b>Paper ID 98</b> 13 <sup>30</sup> – 13 <sup>45</sup> (5 min discussion)	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam         Title of presentation: Chemical Composition and Antioxidant Activities of Extracts of Combretum quadrangulare Kurz Leaves Grown in An Giang Province, Vietnam         Abstract: Combretum quadrangulare leaves are an important herbal in traditional Vietnamese medicine due to their ability to cure various diseases and improve health. This study provided the investigation results of different organic solvents that affected the chemical composition the extraction of polynberol and flavonoid content the
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<b>Paper ID 98</b> 13 <sup>30</sup> – 13 <sup>45</sup> (5 min discussion)	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam         Title of presentation: Chemical Composition and Antioxidant Activities of Extracts of Combretum quadrangulare Kurz Leaves Grown in An Giang Province, Vietnam         Abstract: Combretum quadrangulare leaves are an important herbal in traditional Vietnamese medicine due to their ability to cure various diseases and improve health. This study provided the investigation results of different organic solvents that affected the chemical composition, the extraction of polyphenol and flavonoid content, the antioxidant activity of Combretum quadrangulare extract obtained through the maceration method. Several classes of constituents in the extract of Combretum
<b>Paper ID 98</b> 13 <sup>30</sup> – 13 <sup>45</sup> (5 min discussion)	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam         Title of presentation: Chemical Composition and Antioxidant Activities of Extracts of Combretum quadrangulare Kurz Leaves Grown in An Giang Province, Vietnam         Abstract: Combretum quadrangulare leaves are an important herbal in traditional Vietnamese medicine due to their ability to cure various diseases and improve health. This study provided the investigation results of different organic solvents that affected the chemical composition, the extraction of polyphenol and flavonoid content, the antioxidant activity of Combretum quadrangulare extract obtained through the maceration method. Several classes of constituents in the extract of Combretum quadrangulare leaves were detected including flavonoids, volatile oils, tannins, etc. The
<b>Paper ID 98</b> 13 <sup>30</sup> – 13 <sup>45</sup> (5 min discussion)	Quy Nguyen Ngoc, Tien Nguyen Minh, Minh Le Van, Danh Pham Hoang, and Thanh Nguyen Trung <sup>1</sup> Faculty of Pharmacy, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>2</sup> Institute of Environmental Sciences, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam <sup>3</sup> Research Center of Ginseng and Medicinal Material (CGMM), National Institute of Medicinal Materials, Ho Chi Minh City, Vietnam <sup>4</sup> Faculty of Food and Environmental Engineering, Nguyen Tat Thanh University, Ho Chi Minh City 700000, Viet Nam <sup>5</sup> Nanomaterial Laboratory, An Giang University, 18 Ung Van Khiem St., Dong Xuyen Dist, Long Xuyen City, An Giang Province, Viet Nam <sup>6</sup> Vietnam National University Ho Chi Minh City, Viet Nam         Title of presentation: Chemical Composition and Antioxidant Activities of Extracts of Combretum quadrangulare Kurz Leaves Grown in An Giang Province, Vietnam         Abstract: Combretum quadrangulare leaves are an important herbal in traditional Vietnamese medicine due to their ability to cure various diseases and improve health. This study provided the investigation results of different organic solvents that affected the chemical composition, the extraction of polyphenol and flavonoid content, the antioxidant activity of Combretum quadrangulare extract obtained through the maceration method. Several classes of constituents in the extract of Combretum quadrangulare leaves were detected including flavonoids, volatile oils, tannins, etc. The ethanol extract had the highest polyphenol content found at 18.45 ± 0.12 mg GAE/g







	$21.19 \pm 0.05$ mg QE/g in. The antioxidant activities were shown through the IC <sub>50</sub> values	
	of 1514.50 ± 25.65 μg/ml (DPPH) and 685.15 ± 8.58 μg/ml (ABTS), individually.	
	Isidro A. Pilares-Hualpa, Roberto Alfaro-Alejo, Carlos A. Pilares-Calla, Oscar E.	
	Projessional School of Civil Engineering, Universidad Andina Nestor Caceres Velásquez Juliaca Peru	
	<sup>2</sup> Faculty of Agricultural Engineering, Universidad Nacional del Altiplano, Puno, Peru	
	<sup>3</sup> Postgraduate Unit of Civil Engineering, Universidad Nacional de Ingeniería, Lima,	
	Perú	
	<sup>4</sup> Faculty of Civil Engineering and Architecture, Universidad Nacional del Altiplano,	
	Puno, Peru	
Donon ID 101		
$13^{45}$ $14^{00}$	Title of presentation: Characterization of expansive soils for the foundation of an	
13 - 14 (5 min discussion)	Irrigation canal in the Peruvian Andes, Cabana-Manazo case	
	implies constructive, socioeconomic and environmental damage. This paper	
	characterizes the swelling soil located in an irrigation canal of the Peruvian Altiplano	
	and its behavior of the properties by addition of lime in 5, 10, 15 and 20% of the total	
	weight. Finding that the sample of the station $6+575$ has combined presence of montmorillopite along in a percentage of 12 52% together with the group of keelinites in	
	a percentage of 1.31%, consequently, it makes an expandable clay of high plasticity. The	
	soils of the station 6+250 have the characteristics of kaolinite clay, which distinguishes	
	it as having low plasticity. In the swelling tests the high expansiveness was found, in the	
	station 6+575, which has decreased with the addition of lime. Considering that concrete	
	dangerous effects on irrigation infrastructure	
	BRFAK 14:00nm - 15:00nm	
BREAK 14:00pm – 15:00pm		
	Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran	
	Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T	
	<b>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran</b> <b>T, Khang Q Bui and Van Ho T T</b> <sup>1</sup> Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam	
	Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T <sup>1</sup> Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam <sup>2</sup> Southern Education Development Center, Office of Ministry of Education and Training,	
	Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T <sup>1</sup> Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam <sup>2</sup> Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.	
	Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T <sup>1</sup> Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam <sup>2</sup> Southern Education Development Center, Office of Ministry of Education and Training, Vietnam. <sup>3</sup> Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.	
	<ul> <li>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T</li> <li><sup>1</sup>Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam</li> <li><sup>2</sup>Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.</li> <li><sup>3</sup>Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.</li> </ul>	
	<ul> <li>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T</li> <li><sup>1</sup>Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam</li> <li><sup>2</sup>Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.</li> <li><sup>3</sup>Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.</li> <li>Title of presentation: Comprehensive study on the amount of CO<sub>2</sub> absorbed by vegetation: A case study in Ho Chi Minh city Vietnam</li> </ul>	
Paper ID 102	<ul> <li>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T</li> <li><sup>1</sup>Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam</li> <li><sup>2</sup>Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.</li> <li><sup>3</sup>Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.</li> <li>Title of presentation: Comprehensive study on the amount of CO<sub>2</sub> absorbed by vegetation: A case study in Ho Chi Minh city, Vietnam</li> <li>Abstract: The city Ho Chi Minh (HCMC) is one of the largest cities in Vietnam with</li> </ul>	
<b>Paper ID 102</b> 15 <sup>00</sup> – 15 <sup>15</sup>	<ul> <li>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T</li> <li><sup>1</sup>Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam</li> <li><sup>2</sup>Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.</li> <li><sup>3</sup>Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.</li> <li>Title of presentation: Comprehensive study on the amount of CO<sub>2</sub> absorbed by vegetation: A case study in Ho Chi Minh city, Vietnam</li> <li>Abstract: The city Ho Chi Minh (HCMC) is one of the largest cities in Vietnam with the most dramatically economic development rate. Along with the economic</li> </ul>	
<b>Paper ID 102</b> $15^{00} - 15^{15}$ (5 min discussion)	<ul> <li>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T</li> <li><sup>1</sup>Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam</li> <li><sup>2</sup>Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.</li> <li><sup>3</sup>Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.</li> <li>Title of presentation: Comprehensive study on the amount of CO<sub>2</sub> absorbed by vegetation: A case study in Ho Chi Minh city, Vietnam</li> <li>Abstract: The city Ho Chi Minh (HCMC) is one of the largest cities in Vietnam with the most dramatically economic development rate. Along with the economic development, the urbanization process in this city is also taking place very fastly. Due to the study of the study of the study of the study.</li> </ul>	
<b>Paper ID 102</b> 15 <sup>00</sup> – 15 <sup>15</sup> (5 min discussion)	<ul> <li>Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T</li> <li><sup>1</sup>Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam</li> <li><sup>2</sup>Southern Education Development Center, Office of Ministry of Education and Training, Vietnam.</li> <li><sup>3</sup>Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.</li> <li>Title of presentation: Comprehensive study on the amount of CO<sub>2</sub> absorbed by vegetation: A case study in Ho Chi Minh city, Vietnam</li> <li>Abstract: The city Ho Chi Minh (HCMC) is one of the largest cities in Vietnam with the most dramatically economic development rate. Along with the economic development, the urbanization process in this city is also taking place very fastly. Due to the rapid urbanization and development, the emission rate from the industry and transportation leads to the increase in the amount of construction divide (CO<sub>2</sub>) which has</li> </ul>	
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<b>Paper ID 102</b> 15 <sup>00</sup> – 15 <sup>15</sup> (5 min discussion)	Truong Nguyen X, Phan Cao H H, Hao Nguyen N, Huyen Duong T T, Nhat Tran T, Khang Q Bui and Van Ho T T <sup>1</sup> Hochiminh City University of Natural Resources and Environment (HCMUMRE), Vietnam <sup>2</sup> Southern Education Development Center, Office of Ministry of Education and Training, Vietnam. <sup>3</sup> Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam.Title of presentation: Comprehensive study on the amount of CO2 absorbed by vegetation: A case study in Ho Chi Minh city, VietnamAbstract: The city Ho Chi Minh (HCMC) is one of the largest cities in Vietnam with the most dramatically economic development rate. Along with the economic development, the urbanization process in this city is also taking place very fastly. Due to the rapid urbanization and development, the emission rate from the industry and transportation leads to the increase in the amount of carbon dioxide (CO2) which has been worsening the climate change. Protecting forests and conducting afforestation so that CO2 is transformed to nutrition through photosynthetic conversion is one of the most effective ways to mitigate the effects of climate change. As a result, the accumulation of CO2 emissions has become a global concern. Vegetation absorbs carbon dioxide, helps to conserve the environment, produces oxygen, reduces noise, and helps to stabilize subsurface water. This paper highlights the results of ENVI software	
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	low due to the high population density in the center of city. The population is mainly concentrated in the center districts but land area for vegetation is low. Regarding the suburban area, with mangrove forests, Can Gio District has the highest amount of $CO_2$ absorbed of 35,894.075 tons/day and followed by Cu Chi District with 21,548.48 tons/day. It can be indicated that Can Gio and Cu Chi districts improtantly function like the greenhouse gas sinks for the whole HCMC. The success of this study could contribute to climate change mitigation and support in urban and land planning, as well as resettlement policies. Aside from that, $CO_2$ emission and absorption assessment and evaluation in large–scale cities like HCMC has become a crucial, urgent, and practical issue nowadays.
	Terwase Wuave
	<sup>1</sup> Abubakar Tafawa Balewa University Bauchi, Bauchi, Nigeria <sup>2</sup> National Environmental Standards and Regulations Enforcement Agency (NESREA), Abuja, Nigeria
<b>Paper ID 103</b> 15 <sup>15</sup> – 15 <sup>30</sup> (5 min discussion)	<b>Title of presentation:</b> Constituents of Leachate Generation and Migration in Ministry of Agriculture Forest Nursery Open Dumpsite in Jos Plateau State, Nigeria <b>Abstract:</b> The constituents of leachate generation and migration in ministry of agriculture nursery open dumpsite in Jos Plateau were determined. Leachate extraction from solid waste (SW) was carried out. Test dumpsite soil with different elevations. Elevations were with uniform density. Representative solid waste dumpsite soil sample were collected from one dumpsite. The collected SW soil subjected to column experimental test, results showed physicochemical parameters (pH, TSS,TDS and EC) range of descriptive value in terms of histogram values of $5.66 - 8.23(1.0m \text{ to } 1.5m \text{ depth})$ pH, 90.65 – 1125.96mg/l (0.5 to 2.0m depth) TSS, 17.78 – 156mg/l (1.5 to 0.5m depth) TDS, $9.02 - 80.01$ us/cm and principal component summary analysis. The histogram and principal component summary values increase. Alkalinity has highest concentration, followed by hardness which has least, BOD5 has lower values, followed by COD which has higher value, Cl <sup>-</sup> increasing, S04 <sup>2-</sup> , N0 <sub>3</sub> values increases, P0 <sub>4</sub> in waste decreases with increase time and depth. The Na <sup>+</sup> , increasing K <sup>+</sup> second to Na <sup>+</sup> , increases, Mg <sup>2+</sup> and Ca <sup>2+</sup> in MSW increases as time and depth proceed. The results of Cu, Fe, Cd and Pb in histogram had moderate to high values. All were examined for physicochemical, alkalinity and hardness, BOD5, COD, anions, cations and heavy metals to study the seasonal variation of significant parameters. The results from the leachate analysis were used as a tool to identify the processes and mechanisms affecting the soil and water chemistry from the study area
<b>Paper 118</b> $15^{30} - 15^{45}$ (5 min discussion)	<ul> <li>Matkarim Ibragimov, Abduvali Turdiboyev, and Dilmurod Akbarov     <sup>1</sup>Department Electrical Technology and Using of Electrical Equipment, Tashkent     Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent,     Uzbekistan</li> <li>Title of presentation: Effects of electric pulse processing in increasing the efficiency of     cotton oil from technical seeds     Abstract: This article provides an analysis of the global demand for cottonseed oil     consumption, the growing trend of cottonseed oil production and methods of obtaining     vegetable oil based on modern technologies. Based on the results of the analysis, the     electro technology of electric pulse processing of seed pulp was proposed to increase the     efficiency of obtaining cottonseed oil from technical seeds. Experiments have shown     that the maximum degree of damage to the seed nucleus by electric pulse treatment     depends on the amount of oil extraction. It is also possible to reduce the roasting     temperature of electrically pulsed seed pulp to 70-75 °C, and these parameters are     considered be energy-saving parameters. It is possible to increase the amount of oil     extracted from the seed and reduce energy costs in the technology through electro-pulse     processing.</li> </ul>







	Nguyen Tien Duy, Le Van Quynh, Dang Viet Ha, Bui Van Cuong and Le Xuan
	<sup>1</sup> Faculty of Electronics Engineering, Thai Nguyen University of Technology, Thai Nguyen 24000, Vietnam <sup>2</sup> Faculty of Automotive and Power Machinery Engineering, Thai Nguyen University of Technology, Thai Nguyen 24000, Vietnam <sup>3</sup> Vietnam Register, Ha Noi 12059, Viet Nam
<b>Paper ID 123</b> 15 <sup>45</sup> – 16 <sup>00</sup> (5 min discussion)	<b>Title of presentation:</b> Ride comfort evaluation for a double-drum vibratory roller with semi-active hydraulic cab mount system <b>Abstract:</b> The construction machinery market has required increasingly not only on working capacity but also ride comfort quality, therefore it has required increasing toward researchers and manufacturers. The main objective of this paper proposes and evaluates the performance of semi-active hydraulic cab mount system (SHCMs) of a double-drum vibratory roller in the direction of enhancing vehicle ride comfort under different operating conditions. Firstly, a nonlinear dynamic model of passive hydraulic cab mount system (PHCMs) is established to determine its vertical force which is connected with a dynamic model of vehicle - ground surface interaction. And then, a fuzzy logic controller (FLC) is designed to control the value of the damping force of SHCMs. Both the differential equations of motion and FLC are implemented in the MATLAB/Simulink environment. Finally, the ride performance of SHCMs is evaluated under different conditions according to ISO 2631: 1997 (E) standard. The obtained results show that the values of objective functions with SHCMs significantly reduce in comparison with PHCMs under different operating conditions.
	<ul> <li><sup>1</sup>Faculty of Automotive and Power Machinery Engineering, Thai Nguyen University of Technology, Thai Nguyen, Vietnam</li> <li><sup>2</sup>Vietnam Register, Ha Noi 12059, Viet Nam</li> <li>Title of presentation: Performance Evaluation of a Novel Hydro - Pneumatic Suspension System of a Heavy Truck on Ride Comfort</li> <li>Abstract: The purpose of this work is to evaluate the performance of novel hydrfo-pneumatic suspension system (HPSs) in comparison with traditional hydro-pneumatic fsuspension system (HPSs) of a heavy truck in the direction of improving vehicle ride</li> </ul>
Paper ID 124 16 <sup>00</sup> - 16 <sup>15</sup> (5 min discussion)	comfort. Firstly, the nonlinear dynamic models of the traditional and novel HPS systems are set up to determine the vertical forces. And then, the vertical forces are connected with a 3-D nonlinear dynamic model of heavy truck with 10 degrees of freedom under random excitation of road surface. The root mean square (RMS) acceleration responses of the vertical cab, pitch and roll angles of the cab ( $a_{wzcb}$ , $a_{wfcb}$ and $a_{wtcb}$ ) based on the International Standard ISO 2631-1: 1997 are chosen as objective functions. The study results show that the $a_{wzcb}$ , $a_{wfcb}$ and $a_{wtcb}$ values with novel HPSs reduce by 28.27%, 28.32% and 6.89% in comparison with traditional HPSs when vehicle moves on ISO class D road surface at vehicle speed of 50 km/h and full load. Finally, the ride performance of novel HPSs is verified and compared and evaluated with traditional HPSs under different operating conditions and the evaluation results are also indicated that the ride performance of a novel HPSs is better than the traditional HPSs under survey conditions.
	Adel Aljwary, Ziyodulla Yusupov, Olimjon Toirov, and Rustam Shokirov
<b>Paper ID 127</b> $16^{15} - 16^{30}$	<sup>1</sup> Department of Electromechanical Engineering, University of Technology, Baghdad, Iraq <sup>2</sup> Department of Electrical-Electronics Engineering, Karabuk University, Karabuk.
(5 min discussion)	Turkey <sup>3</sup> Power Supply and Renewable Energy Sources, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan









	<sup>4</sup> Department of Electric Machine Engineering, Tashkent State Technical University
	named after Islam Karimov, Tashkent, Uzbekistan
	<b>Title of presentation:</b> Mitigation of load side harmonic distortion in standalone
	photovoltaic based microgrid
	Abstract: Photovoltaic (PV) system as one part of distributed energy resources is
	becoming an alternative for low and medium distribution network of microgrid By the
	reason of a wide implementation of newer electronic and non linear loads, hermonics
	distortion is one of the main problems for the power systems. There are soveral filter
	distortion is one of the main problems for the power systems. There are several inter-
	types to initigate the narmonics. The passive linter is distinguished by its simplicity and
	economical options from another liner. In this paper, the passive single tuned liner
	(STF) is used to minimize narmonics distortion in standalone PV based microgrid. A
	solar PV array is modelled as an ideal single diode model (ISDM) and used to supply
	electrical power to an AC load. The simulation results are executed on
	MATLAB/Simulink show that STF is effective in mitigating the voltage total harmonic
	distortion (VTHD) and the current total harmonic distortion (ITHD) with enhancing the
	output power quality.
	Le Xuan Long, Dang Viet Ha, Le Van Quynh, Bui Van Cuong, and Vu Thanh
	Niem
	<sup>1,3,4</sup> Faculty of Automotive and Power Machinery Engineering, Thai Nguyen University
	of Technology, Thai Nguyen, Vietnam
	<sup>2,5</sup> Vietnam Register, Ha Noi 12059, Viet Nam
	<b>Title of presentation:</b> Effect of operating conditions on a heavy truck ride comfort with
	hydro-pneumatic suspension system
	Abstract: The purpose of this paper is to analyze the performance of the hydro-
Paper ID 128	pneumatic suspension system (HPSs) of a mining dump truck on ride comfort under
$16^{30} - 16^{45}$	operating conditions. To achieve goals, a 3-D full-vehicle vibration model of a mining
(5 min discussion)	dump truck with 10 degrees of freedom is set up to analyze the effects. A nonlinear
	mathematical model is set up based on the nonlinear characteristics of the HPSs to
	determine their vertical force which is connected with a 3-D full-vehicle vibration
	model. The effects of operating conditions on a heavy truck ride comfort are
	respectively analyzed through the values of the root mean square of acceleration
	responses of the vertical cab, pitch and roll angles of cab $(a_{wc}, a_{wpbi})$ and $a_{wteta}$ . The
	analysis results indicate that the survey conditions have a great influence on vehicle ride
	comfort. Especially, the values of a <sub>we</sub> , a <sub>web</sub> and a <sub>wteta</sub> with the poor road surface
	condition respectively reduce by 43.1%, 45.9% and 61.8% compared to the very poor
	road surface condition at vehicle speed of 30 km/h and full load.
	Radhika Bansal, and Pammi Gauba
	Department of Biotechnology, Javpee Institute of Information Technology, Sector 62.
	Noida (Uttar Pradesh) 201309
	Title of presentation: Efficacy of Cicer arietinum L. & Vigna mungo L. in remediation
	of Hexavalent Chromium
	Abstract: Hexavalent Chromium is a major soil pollutant; thus, its remediation from
Paper ID 129	soil deserves due attention. Phytoremediation is an area of active current research which
$16^{45} - 17^{00}$	is eco-friendly and economic. Use of leguminous plants for phytoremediation will
(5 min discussion)	improve soil quality, fertility and nutrient balance and would help in restoration of
	natural soil ecosystem. The present study focuses on the use of two commonly growing
	legumes; Cicer arietinum (RPI) and Vigna mungo (RP2) to explore their remediation
	potential towards Cr(VI) with concentration ranging from 100-900 mg kg with the
	growin up to three weeks and were assessed for remediation potential and toxicity
	parameters. Figher percentage of decrease in root and shoot length was observed in RP2
	as compared to KF1. Uniorophyli content was also found to be decreasing with increasing Crieffrage in both the species DD2 recorded higher DCE then DD1. Highert
	mereasing of sucess in bour the species. Kr2 recorded nighter bor than Kr1. Highest







	Translocation factor $>1$ was observed in KP2 at 400 mg kg <sup>-</sup> concentration. Translocation factor $>1$ was observed in both the plants with highest as 1.67 at 600 mg
	kg <sup>-1</sup> in RP2 and 1.93 at 400 mg kg <sup>-1</sup> in RP1. Remediation percentage of 72.25% in RP2
	at 600 mg kg <sup>-1</sup> and 73.13% at 400 mg kg <sup>-1</sup> in RP1 was observed. Both the plants showed
	high tolerance and remediation potential towards Cr(VI) therefore has a great
	phytoremediation prospect, however, RP2 can be preferred over RP1.
	Gennady P. Kornilov, Ildar R. Abdulveleev, Oxana S. Logunova, Palvan I.
	Kalandarov, Obid Tursunov, Dilshod Kodirov, Donivor Abdurakhimov
	<sup>1</sup> Department of Power Supply of Industrial Enterprises Nosov Manonitogorsk State
	Technical University Magnitogorsk Russia
	<sup>2</sup> Department of Computer Engineering and Programming Nosov Manapitogorsk State
	Technical University Magnitogorsk Pussia
	<sup>3</sup> Department of Automation and Control of Technological Process and Production
	Tashkant Institute of Irrigation and Agricultural Mechanization Engineers 100000
	Tushkeni Institute of Irrigation and Agricultural Mechanization Engineers, 100000
	4D ( ) ( ) $1$ ( ) 1 ( ) $1$ ( )
	Department of Power Supply and Renewable Energy Sources, Tashkent Institute of
	Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
	Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>°</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
	<b>Title of presentation:</b> Electric power supply of steel producing companies: schematic
	design solutions to improve reliability of power grids
Paner ID 133	<b>Abstract:</b> This research is aimed at improving electric power supply reliability at major
$17^{00} - 17^{15}$	industrial plants by applying schematic design solutions. The authors analyzed the
(5 min discussion)	features of branch electric power distribution systems at a metallurgical plant:
、	considered options of their revamping to improve reliability of electric power supply;
	carried out experimental research on splitting 110 kV meshed system at the integrated
	iron and steel works. When performing the research, mathematical simulation methods
	and full-scale experiment methods were used. Following the research, we proposed three
	options to revamp the power grid at the industrial plant applying schematic design
	solutions. Scheme A - separating substations causing problems in an individual block:
	Scheme B - separating independent 110 kV closed electric power grids: Scheme C -
	splitting the meshed system into two independent circuits. It is proved that the most
	efficient solution is Scheme C which is characterized by a lower number of
	unscheduled downtimes of the facilities by mitigating the effects of faults in one of
	mashed systems on a continuous operation of shops powered from the neighboring grid:
	eliminated risks of simultaneous stops of all or the majority of metallurgical shops of the
	works during short circuits in 110 kV grids; and a considerable reduction in short circuit
	works during short circuits in 110 kV grids, and a considerable reduction in short circuit
	proposed measures simed at reversing of the electrical grid of metallurgical units by
	applying schemetic design solutions is over USD750 000/year
	Le Van Ouvnh Dang Viet Ha Rui Van Cuong Le Anh Vu and Tran Van Thean
	<sup>1,3</sup> Faculty of Automotive and Power Machinery Engineering That Nauven University of
	Tachnology Thai Nguyen Vietnam
	<sup>2</sup> Viatnam Ragistar, Ha Noi 12050, Viat Nam
	<sup>4,5</sup> Faculty of Automobile Engineering Hung Van University of Technology and
	Education Hung Von Viot Nam
Paper ID 135	Education, Hung Ten, Viet Num
$17^{15} - 17^{30}$	
(5 min discussion)	Title of presentation: Improvement of Ride Comfort Quality for an Earth-Moving
,	machinery with Semi-Active Cab Isolation System
	Abstract: Improving ride comfort of an earth-moving machinery is important to avoid
	potential health hazards for machine operator. A vehicle - road coupled interaction
	model including vehicle body, cab body and driver seat masses is set up under the
	random excitation of ground surface and a Fuzzy –PID controller is designed for control
	of the damping coefficient of a semi-active hydraulic cab isolation system (SHCIs) for







	an earth moving machinery. The ride performance of SHCIs with a combined controller
	is evaluated under different measurement conditions. The comparison results indicate that
	is evaluated under different movement conditions. The comparison results indicate that
	the proposed controller for semi-active cab hydraulic isolation system has the
	significantly improved vehicle ride comfort in compared with passive hydraulic cab
	isolation system (PHCIs) under large amplitude and low frequency excitations of ground
	surface.
	Umarbay Odamov, Mirziyo Kamilov, and Shavki Niyazov
	<sup>1</sup> Institute of Energy Problems, Academy of Sciences of the Republic of Uzbekistan,
	Tashkent, Uzbekistan
	<sup>2</sup> Gulistan State University, Gulistan, Sirdarya, Uzbekistan
	<b>Title of presentation:</b> The efficiency of the solar battery operations in real exploitation
	conditions
	Abstract: Introduction. Nowadays, there is a constant growth of the demand for the use
	of solar power plants and obtaining green energy. In the using process of them in real
	conditions a decrease in efficiency is observed. Because of the influence of external and
	internal factors on solar calls, the Coefficient of Efficiency (COE) panels decreases. The
	study of these influencing factors today is one of the actual problems. In this work is
	study of these influencing factors today is one of the actual problems. In this work is
	presented a study of the efficiency of a solar battery in real operating conditions. $M_{\rm eff} = L_{\rm eff}$ Drug is a solar battery for 54111K 520220, the extent as a solar battery for the solar
	Methods. By using an electronic counter D15-3410M2530230, the output parameters of
	solar cells were experimentally measured hourly, daily, monthly and yearly. In addition,
	a lesto-880 thermal imager was used in order to investigate defects caused by high
	surface temperatures and heating of solar panels. The collected data was analyzed using
	Microsoft Excel and other software packages.
Paper ID 143	Results and Discussions. The annual solar power production over a six-year period
$17^{30} - 17^{45}$	shows that solar cell efficiency has decreased by 10% in the first three years; this
(5 min discussion)	connects with the deposition of dust on the solar cell's working surface as a result of dust
(e min alsousbioli)	storms. After cleaning the surface, the efficiency of the solar cell increases by 8%. In
	general, the exponential trend line shows that the efficiency of the solar power plant has
	decreased by 5.4% over six years. A solar power plant consumes 5-10% of the total
	generated energy for its own needs. The average hourly electricity generation of solar
	panels in real conditions for four companies shows that on a clear sunny day, solar
	panels work very efficiently and generate more than 100% of electricity, on a cloudy
	day, generate 20-30%, and on days with partly cloudy and rainy days generate 10% of
	energy. According to the current changes (I) in real conditions of effective operation of
	S-ENERGY solar panels, the current is higher than that of solar panels from other
	companies. The temperature coefficient of solar panels from S-ENERGY and TOPSAN
	is lower than that of solar panels from other companies; this value shows how solar
	panels are productive on days with high temperatures.
	In solar panels of HANWHA (4 panels) was observed air bubbles between the glass
	layer and the EVA membrane. These air bubbles reduce the intensity of sunlight falling
	on the solar cells and reduce the efficiency of the solar panels.
	<i>Conclusion.</i> The efficiency of the solar battery in real operating conditions has
	decreased by 5.4% due to the influence of internal and external factors. There have been
	determined that S-ENERGY and TOPSAN solar panels perform better under real-world
	conditions, and HANWHA solar panels have been found to be defective and degraded.
	Andrey Khomutov, Gökhan Avdin, and Ismail Karaca
	<sup>1</sup> Pyongyang University of Science and Technology, Korea
	Isparta University of Applied Sciences. Turkey
Paper ID 180	
$17^{45} - 18^{00}$	<b>Title of presentation:</b> Comparison of Biodiversity Measured by Using Pitfall Traps in
(5 min discussion)	Different Habitats of Balcali-Adana Region of Turkey
	Abstract: The study was conducted to calculate insect biodiversity diversity similarity
	dominancy and evenness in agroecosystems (on wheat and trefoil) and in natural
	habitats (in valley and forest on Pinus spp.). Although the species' richness was found to







be higher in agroecosystems than in natural habitats, Shannon-Wiener and Simpson
diversity indices had been calculated in the upward segment in natural habitats. Simpson
dominancy index was found to be higher in agroecosystems (on trefoil and wheat)
compared to natural habitats, in both valley and forest (on Pinus spp.). Shannon
evenness index was found to be more stabilized and had been calculated to be higher in
both valley and forest natural habitats than in agroecosystems. Sørensen similarity index
showed that both agroecosystems, trefoil and wheat habitats are more similar to each
other compared with natural habitats. Agroecosystems and natural habitats were purely
similar. The analyses of insect biodiversity index in natural habitats showed the need to
redound insect diversity via expanding some protected strategies at natural habitats.

#### **CLOSING CEREMONY:**

#### Announcement of Best Presentations and Best Papers Closing Speeches: First vice-rector of TIIAME - Prof. Dr. Bakhadir Mirzaev, and Professor of TIIAME – Prof. Dr. Obid Tursunov

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### **ICECAE 2021** ICECAE 2021 POSTER PRESENTATIONS

#### All posters will be displayed on the ICECAE 2021 website

	POSTERS
	Fazliddin Egamberdiev <sup>1</sup> , Kadam Jumaniyazov <sup>1</sup> , Ilkhom Abbazov <sup>1</sup> , Hilola Yodgorova <sup>1</sup> , and Marguba Rajapova <sup>1</sup>
	<sup>1</sup> Jizzakh Polytechnic Institute, 130100 Jizzakh, Uzbekistan
Paper ID 01	<b>Title of presentation:</b> Theoretical study of the impact aimed at improving the efficiency of fiber cleaning <b>Abstract:</b> Since cotton cleaning in Uzbekistan is carried out mainly manually, this paper discusses the methods and technologies established in the process of cleaning cotton and fiber. The process of fiber cleaning is one of the important processes that complete the technological process of cotton processing, given that the quality of fiber largely depends on the efficiency of this process, the research work on the mechanization of the type of collection and improving the efficiency of its cleaning is analyzed. In order to improve the efficiency of cleaning cotton collected on the machine, information is provided on the need to improve the equipment for cleaning fiber used in cotton gins. The research results are based on the need to replace a special structural device that guides the fiber to the correct tooth of the first sawtooth cylinder located on two drum cleaning plants. New fiber-cleaning equipment was installed in the Jizzakh regional JSC "Zarbdor cotton cleaning» and experimental tests were conducted in production conditions. In addition, the process of changing the pressure, density and speeds in the furnace and the efficiency of cleaning the cotton fiber flow using a column system allows changing the raw material from 4 mm to 15 mm based on the device. By results of the conducted analysis it was shown that the increase of efficiency of purification depends on the device attached to the saw teeth, factor of the taxation of the distribution coefficient <i>B</i> and $p_0$ efficiency factor of increasing the initial pressure and coefficient of efficiency savings from the analysis of graphs, which present graphs of the distribution depending on the type of saw teeth. Based on the results of the research, recommendations are given for the widespread introduction of fiber cleaning
	equipment installed at enterprises of primary cotton processing, with the installation of a special structural guide device.
Paper ID 18	<ul> <li>Vokhid Kadirov<sup>1</sup>, Sherzod Karimov, Uchqun Qushshayev<sup>1</sup>, and Durdona Sharapova<sup>2</sup></li> <li><sup>1</sup>Department of Mining, Tashkent State Technical University, 100095 Tashkent, Uzbekistan</li> <li><sup>2</sup> General education school № 29, Tashkent, Uzbekistan</li> <li>Title of presentation: Study on the influence of the deformation zones of the quarry sides on the rock mass movement</li> <li>Abstract: The article presents a study and analysis of the causes of deformation of the slopes and sides of the quarry indicates that the magnitude and nature of the deformation processes depend on the height of the ledge, the angle of slope of the slopes, the physical and mechanical properties, the lithological and structural features of the instrument array and the geodynamic activity of the fault zones. The influence of the deformation zones of the sides of the quarry on the transport of rock masses is justified. The zone of deformed masses of the ore deposit, which affect the movement of the rock mass, is studied. Each process performed in open pit mining is linked to another workflow. Without ensuring the safety of mining operations and performing the tasks set is impossible. Transportation of rock masses in the lower horizons of a deep quarry is one of the main tasks of the industry. At the same time, the removal of deformation and landslides in the area where the transport</li> </ul>







	berm is being constructed for draining and continuous transportation is the main goal of the quarry. The stability of the transport berm depends directly on the stability of the side of the quarry. It is determined that the choice of a single-lane or two-lane transport berm constructed for heavy-duty quarry dump trucks depends on the condition of the side of the quarry.
	Inovat Umarova <sup>1</sup> , Sokhibion Matkarimov <sup>1</sup> , Javlon Bekpulatov <sup>1</sup> , Dilmurod
	Makhmaredjabov <sup>1</sup> , and Sherzod Yuldashev <sup>1</sup>
	<sup>1</sup> Department of Mining and Metallurgy, Tashkent State Technical University, 100095 Tashkent, Uzbekistan
	Title of presentation: Study of the Form of Minerals in Copper Porphyry Ores of «Yoshlik-I» Deposit
Paper ID 20	<b>Abstract:</b> The purpose of these studies is to study the forms of finding copper-porphyry ores of the Yoshlik I deposit compared with the Kalmakyr deposit data and to decide on the choice of a cost-effective ore processing technology. As a result of the studies, it was revealed that ore mineralization is represented by sulfides of various metals and iron oxides. The primary sulfides are pyrite and chalcopyrite. In the «Yoshlik-I» sample, the pyrite content is six times less than in the Kalmakyr sample and is 0.7%. The mass fraction of chalcopyrite in the Kalmakyr and «Yoshlik-I» deposits is 1.1 and 0.8%, respectively. The
	remaining sulfides of various metals and the minerals of these ribs are present in several single signs. According to the content of cell fids, the Kalmakyr ore sample is characterized by a small-sulfide ore; the «Yoshlik-I» ore sample is a slab-sulfide type ore. According to the oxidation state calculated by iron, ore samples of the Kalmakyr and «Yoshlik-I» deposits belong to the mixed variety of ores.
	Sherzod Khudainazarov <sup>1</sup> , Obidjon Karabayev <sup>2</sup> , Ubaydulla Khalmatov <sup>3</sup> and
	<sup>1</sup> Department of Theoretical and Structural Mechanics, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>2</sup> Tashkent Islamic Institute named after Imam Bukhari, Zarkainar 18th Blind Alley, 97 Almazar district, Tashkent, Uzbekistan, <sup>3</sup> Tashkent State Technical University after I.Karimov, 2, Universitet str., Tashkent, Uzbekistan
	Title of presentation: Numerical solution of problems of plasma dynamics with a neutral
Paper ID 26	layer <b>Abstract:</b> Mathematical modeling on a computer is widely used in problems of magnetic hydrodynamics and dynamics of ionized gas (plasma). In these problems, in addition to the equations of mass, momentum, and energy balance that are common in continuum mechanics, it is necessary to solve Maxwell's equations for the electromagnetic field. An urgent and interesting problem in the theory of ionized gas is the problem of changing the topology of the magnetic field in plasma during the processes of magnetic field lines
	reconnection. Such situations are characteristic of plasma processes in the Earth's magnetosphere (natural processes and the ones resulting from active experiments in space) and in laboratory facilities for the creation of closed configurations. Because of the difficulties of diagnostics, mathematical numerical modeling is of great importance. The article presents two-dimensional mathematical models of the processes of magnetic field lines reconnection occurring in plasma with finite conductivity in the vicinity of the neutral surface. Effective numerical algorithms are constructed for solving problems of plasma dynamics in the approximation of one-fluid magnetohydrodynamics. Calculations are conducted taking into account dissipative processes. The problem of transportation and interaction of closed plasma configurations in a single computational domain was solved.
	Sherzod Khudainazarov <sup>1</sup> , Burkhon Donayev <sup>2</sup> , Talibjan Sabirjanov <sup>3</sup> , and Jahongir
Paper ID 31	Qosimov <sup>1</sup>
	Department of Theoretical and Structural Mechanics, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan







<sup>2</sup>Karshi Engineering-Economics Institute, Karshi, Uzbekistan <sup>3</sup>Fergana Polytechnical Institute, Fergana, Uzbekistan

	Fergana Polytechnical Institute, Fergana, Uzbekistan
	<b>Title of presentation:</b> Dynamics of high-rise structures taking into account the viscoelastic properties of the material <b>Abstract:</b> The article deals with forced vibrations of a high-rise axisymmetric structure, represented as a viscoelastic beam of an annular section with a variable slope of the generatrices and variable thickness. The research was conducted to analyze the behavior of a high-rise structure for various kinematic effects. The task is to determine the displacements of the points of a high-rise structure at different time points under different kinematic effects. The methods were developed and a computer program was built; forced vibrations of high-rise axisymmetric structures under various kinematic actions, considering viscoelastic properties of the material, were investigated in linear, nonlinear, and viscoelastic formulations. The study of the dynamic behavior of a high-rise structure, taking into account the nonlinear and dissipative properties (different in nature) of the material, shows that the combined consideration of all these properties brings the resulting pattern closer to the one observed in reality. That is, the amplitude of the structure's oscillations
	consideration of nonlinear and dissipative properties leads to the fastest damping of
Paper ID 35	oscillations. Muzaffar Khudayarov <sup>1</sup> , Bahrom Bobonazarov <sup>1</sup> <sup>1</sup> Department of Power Plants, Networks and Systems, Tashkent State Technical University named after Islam Karimov, 100095Tashkent, Uzbekistan Title of presentation: Assessment of technical losses of electrical energy in distribution networks based on artificial neural networks Abstract: Calculation of electrical energy losses is one of the difficult problems in the process of transmission and distribution of electricity. At present, for calculating electrical energy losses, some methods based on deterministic information are used, which involves the adoption of a number of assumptions and using the results of iterative steady-state calculations. For a quick and correct calculation of losses, it is necessary to use methods that allow accounting for the fuzziness of circuit-mode information, as well as faster approaches required for the operational management of electrical networks. Considering this, the article presents models for assessing electrical energy losses in distribution networks based on various types of artificial neural networks. The use of these models makes it possible to increase the speed of calculations of electrical energy losses. Approbation of theoretical statements is carried out on the example of real circuits of 6-10 kV distribution networks.
Paper ID 36	M M Adilov <sup>1</sup> , B A Rustamov <sup>1</sup> , M E Amanova <sup>1</sup> , and A S Rustamov <sup>2</sup> <sup>1</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan <sup>2</sup> Scientific Research and Manufacturing Center of Agriculture and Food Supply, 100140 Tashkent, Uzbekistan Title of presentation: Planting dates and seedling age of red cabbage during the spring season in Uzbekistan Abstract: The importance of red cabbage for expanding the range of vegetable crops in Uzbekistan is highlighted in this paper. The results of three-year (2018-2020) studies on the comparative assessment of the effectiveness of three spring planting dates (March 5-9, 13- 16 and 25-27) at three seedling ages (70, 60 and 50 days) at each planting date were presented. It was revealed that the later the seeds are sown to obtain seedlings for spring culture, the faster the seedlings appear and the more the seedlings form leaves. With the postponement of the timing of planting seedlings, the survival rate of seedlings increases. It has been established that the later the seedlings are planted, the higher the temperatures are the growth of plants and the formation of heads. The most unfavorable temperature conditions are formed when the seedlings are planted on March 25-27, which causes a delay at the beginning of the formation of heads of cabbage, an increase in the number of leaves of a root rosette, a decrease in the setting and average weight of heads of cabbage and their







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	marketability. The best indicators of head set-up, their average weight and marketability, yield per unit area are provided when planting on March 14-16, 70 and 60-day old seedlings. Planting seedlings on March 25-27, seedlings of any age, due to the formation of heads of cabbage at excessively high temperatures, delays the flow of products, reduces the setting, average weight and marketability of heads of cabbage and significantly reduces the yield per unit area. It is recommended for a spring culture to plant on March 14-16 with 70 and 60-day old seedlings and not allow planting at the end of March.
	B A Sulaymonov
Paper ID 37	Tashkent State Agrarian University, 100140Tashkent, Uzbekistan <b>Title of presentation:</b> Representatives of lepidoptera groups in plant biotocenosis and their effective parasite-entomophage types <b>Abstract:</b> The article highlights interesting parts of ten years of scientific research, the development of fauna and bioecology and populations of more than 50 species of the main family Lepidoptera, which are found in the biocenosis of agricultural crops in Uzbekistan. Also, the species composition of representatives of the family Trichogrammatidae, Braconidae, Ichneumonidae, Chalcididae, Pteromalidae, Tachinidae from the main entomophagous species that effectively control the number of members of the family Lepidoptera was identified and systematically analyzed.
	A Kayimov <sup>1</sup> , M Z Kholmurotov <sup>1</sup> , and B I Eshankulov <sup>2</sup>
	<sup>1</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan <sup>2</sup> Scientific Research Institute of Forestry, 102017 Tashkent, Uzbekistan
Paper ID 38	<b>The of presentation:</b> Justification of prospective pistachio ( <i>pistacia vera</i> I.) varieties and forms while creating plantations in Uzbekistan <b>Abstract:</b> This article presents the results of research on the study of the qualitative properties of the fruits of selected promising pistachio forms. When creating pistachio plantations, it is recommended to use varieties with different periods of flowering and fruit ripening. This arrangement reduces the likelihood of damage to the pistachio flowers by spring frosts, increases the chances of pollination and ensures that the harvest is carried out in stages. For the creation of plantations in forestry, promising forms 518-G, 521-G, 527-SH, 528-G, 52-RG, 21-SH and 59-G are recommended as the most productive, large-fruited
	and resistant to adverse environmental factors, and also pests.
	<b>V T Kaysarov<sup>1</sup> and E T Akhmedov<sup>1</sup></b> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan
Paper ID 39	<b>Title of presentation:</b> Several features of growing <i>Colchicum autumnale l.</i> in the urban environment of Tashkent-Uzbekistan <b>Abstract:</b> For the first time, the collection of autumn colchicum was created at the experimental field site of the Tashkent State Agrarian University. In this paper, the issues of growing conditions for the growth and development of <i>Colchicum autumnale l</i> plant were deeply studied and investigated. It was revealed that the <i>Colchicum autumnale l</i> growth and development largely depend on the size of the corm and the type of soil conditions.
	A Sh Azizov <sup>1</sup> , K S Sultonov <sup>1</sup> , and J A Gafurov <sup>2</sup>
	<sup>1</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan <sup>2</sup> Scientific Research Institute of Horticulture, Viticulture and Winemaking named after academician Makhmud Mirzaev, 100047 Tashkent, Uzbekistan
Paper ID 40	<b>Title of presentation:</b> Scientific significance of using protective devices in pear storage in refrigerated warehouses (in the case of Uzbekistan) <b>Abstract:</b> In this article, a scientific study on the long-term storage of Santa Maria pears in refrigerated warehouses through using modern protective equipment, special bags and ethylene-absorbing absorbers, was conducted. Accordingly, the main factor influencing the long shelf life of pears was the natural loss during the storage. It was considered that calculation and analysis of effects inducing the natural loss were pivotal to improve the







	preservation of the fruit, maintain freshness and all useful elements of the fruit, and prolong the storage period. Ethylene absorber and Modified Atmosphere Packaging (MAP) packages were used in the initial research step, and collected pears were placed in the refrigerator at a temperature of 0-2°C in 8 different Options. Results showed that the higher
	natural loss in the fruit stored without employing any means (in option 1) was 5.45% equal to 193.9 gram, whereas the best result was in Option 7 used the MAP special plastic bag and two pieces of absorbers, and compared to the initial weight, 4099 grams, the natural loss in the fruit was 1.20% equal to 47.7 gram.
	M M Kalandarov <sup>1*</sup> , KH T Mashrapov <sup>1</sup> , and G M Salokhiddinov <sup>1</sup>
	<sup>4</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan
	<b>Title of presentation:</b> Planting dates and placement of the Sophora plantation on the irrigated lands of the Tashkent oasis
	<b>Abstract:</b> This article is very relevant to set out organizing plantations in the conditions of
Paper ID 41	the Tashkent oasis. Climatic zones of desert and semi-desert under the influence of new conditions (abundance of light and thermal solar energy, a very long growing season, artificial irrigation), the growth and development of sophora is favorable. Annual seedlings under the influence of mineral fertilizers reach a height of up to 110 cm, the growth of lateral shoots of seedlings in the first year after planting is 33 cm. In the conditions of the Tashkent oasis, sophora favorably tolerates short-term winter low air temperatures (up to
	30°C), tolerates soil compaction and has established itself gas-, dust-resistant decorative
	the layout of the seats. Abundant flowering of sophora was noted with a planting pattern of 5.0x4.0, 5.0x3.0 with sufficient sunlight. The content of rutin in fruit elements ranges from 3.9 to 14.7% and depends on agrotechnical care, the state of the plantings themselves and their location.
	<b>B S Kamilov<sup>1</sup>, A SH Makhkamova<sup>1</sup>, G S Sodikova<sup>1</sup>, and E T Kodirov<sup>1</sup></b>
	100140
Paper ID 42	<b>Title of presentation:</b> Effect of humate substances on biological activity and physical properties of eroded soils: a case study of Uzbekistan <b>Abstract:</b> Worldwide, approximately 3 million hectares of land degraded due to erosion, and every minute approximately 44 hectares of agricultural land are being lost. In fact, agricultural area situated in arid zone is vulnerable to erosion, which leads to decline in agricultural productivity due to low quality soil. Evidently, the vital activity of microorganisms is interlinked with the assimilation of minerals by plants in irrigated lands, that is, the production of high and quality crops. Therefore, this research was intended to see effect of humate substance on biological activity and physical properties of eroded soils, that is, investigate how humate substance impact on overall structure of soils in the Pskent district of Tashkent province. The results extracted from field and laboratory experiments showed that poultry manure in moderately eroded soils and humus and poultry manure variants in washed-out soils ranged from 2.2x107 KHB/g to 7.5-3.0x106 KHB/g. Oligonitrophilic microorganisms were found to be the same in all variants. Micromycetes were observed in humus variants with an average erosion of 2.2x104 KHB/g, and in washed-out soils of 7.5x103 KHB/g. The amount of actinomycetes in samples 3 and 4 was 7.5x103 KHB/g per 1 gram of soil, while in samples 1, 2, 5 and 6 they were not found at all. This means that the amount of actinomycetes was slightly reduced in summer, but the relative changes between the options were 1.1-8.3x108 KHB/g in washed-out soils with moderate erosion in less washed soils, and 7.5-8.3x107 KHB/g in moderately washed and washed soils. Furthermore, influence of humic biofertilizers, organic fertilizers on general physical properties of eroded typical gray soils was also studied. Accordingly, the effect of fertilizers in the control variant was 1.30g/cm3, followed by the variant with the use of mineral fertilizers humate 1.27g/cm <sup>3</sup> , an







	moderately eroded soils, the values were found to be 1.40 g/cm <sup>3</sup> , 1.35 g/cm <sup>3</sup> , 1.33 g/cm <sup>3</sup> , respectively, and 1.25 g/cm <sup>3</sup> , 1.31 g/cm <sup>3</sup> , 1.29 g/cm <sup>3</sup> in washed out soils.
	S A Usmanov <sup>1</sup> , KH T Mashrapov <sup>2</sup> , and K O Khudarganov <sup>1</sup>
	<ul> <li><sup>1</sup>Scientific Research Institute of Breeding, Seed Production and Agricultural Technology of Cotton Growing, University str., 1, 100140 Tashkent province, Uzbekistan</li> <li><sup>2</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan</li> </ul>
Paper ID 43	<b>Title of presentation:</b> Vilt resistance of cotton varieties while inoculation with various isolates of the fungus <i>Verticillium dahliae kleb</i> . in an artificial climate of Uzbekistan <b>Abstract:</b> This article addresses the studies on the resistance of cotton varieties to Verticillium dahliae Kleb on an artificial infectious background. It is shown that resistance indicators depend on the origin of varieties. V.dahliae isolates isolated from varieties C-6524, Namangan-77, Barkhayot, Shodiyona, Omad and C-8290 showed different virulence; isolates allocated from varieties C-6524, Namangan-77, Barkhayot, Shodiyona, Omad and C-8290 showed different virulence; how the highest virulence.
	H F Hamroev <sup>1*</sup> , KH T Mashrapov <sup>1</sup> , O A Shaymatov <sup>1</sup> , and D B Tulaev <sup>1</sup>
	<sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan
Paper ID 44	<b>Title of presentation:</b> Efficiency of choosing promising walnut forms in the case of Uzbekistan <b>Abstract:</b> Walnut (Juglans regia L) is one of the most important tree species in Uzbekistan. Natural walnuts have a valuable gene pool, among which there are many forms with different bioecological properties. In particular, biodiversity in terms of kernel quality is highly variable within the species. This article provides information on the analysis of quality indicators of walnut kernels in natural and local nuts. Among the indicators of kernel quality in the selected forms, the yield of walnut kernels was of high importance as the main indicator, and in the selected forms this indicator was 38.2-63.3. According to international indicators, Parkent-2, Boysun-1 and Humson-5 forms are recommended for wide use, given that the form with a yield rate of more than 50% is promising.
	<b>A J Shokirov<sup>1*</sup>, S S Lapasov<sup>1</sup>, and K J Shokirov<sup>1</sup></b> <sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan
Paper ID 45	<b>Title of presentation:</b> Scientific and practical fundamentals of growing cabbage ( <i>Brassica capitata lizg.</i> ) in Uzbekistan <b>Abstract:</b> At present, scientific research is underway to further develop vegetable growing in the secondary crop, in particular to further increase the yield and quality of white cabbage, to select a system of planting time-sowing scheme that maximizes the biological productivity of varieties, and to apply the most optimal standards of fertilization and irrigation. In this regard, the urgent task remains to determine the optimal varieties of cabbage that can be grown in repeated crops, their optimal planting scheme, timing, development and implementation of optimal standards for each variety of mineral fertilizers and irrigation, and its solution is large-scale throughout the country. Besides that a number of problematic issues are addressed, which could allow to get high and high-quality harvest of white cabbage in repeated sowing in grain-free areas.
Paper ID 46	M K Khojanazarova <sup>1*</sup> , S S Murodova <sup>1</sup> , S F Sanakulov <sup>2</sup> , and G K Khalmuminova <sup>1</sup> <sup>1</sup> Department of <sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan <sup>2</sup> Scientific Research Institute of Soil Sciences and Agrochemistry, Kamarniso str., 3, 100020Tashkent, Uzbekistan



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<ul> <li>Abstract: This paper investigates the cultural-morphological, physiological and biochemical properties of bacterial isolates with stimulating properties isolated from the rhizosphere of cotton (<i>Gossýpium hirsútum</i>) grown in saline soils of Uzbekistan. The cells of the isolated culture No. 12 were found to be rod-shaped, 2-3X0,5-0.6 µm in size, single or chain-linked, Gram-positive aerobic bacteria producing spores. In studying the culture No. 146, its cells were in the form of thick, less mobile rods, 1-2x0,6-0.8 µm in size, forming thermostable spores. The spores were located in the center of the cell; the Gram-stained colonies in meat-peptone agar were round, bulging; the edges were flat, consistency oily, smooth and, mucous; and, the upper part was found to be shiny. Studies have shown that the isolates appertained to the genus Bacillus sr.</li> <li>M K Khojanazarova<sup>1*</sup>, S S Murodova<sup>1</sup>, S F Sanakulov<sup>2</sup>, and J M Turdaliev<sup>2</sup> <sup>1</sup>Tashkent State Agrarian University, University str., 2, Tashkent province, Uzbekistan, 100140</li> <li><sup>2</sup>Scientific Research Institute of Soil Sciences and Agrochemistry, Kamarniso str., 3, Tashkent, Uzbekistan, 100200</li> <li>Title of presentation: Influence of biopreparation 'Zamin-M' on cotton plants (gossypium hirsutum) under soil salinization in Uzbekistan</li> <li>Abstract: In this article, a microbial inoculant acting as a biofertilizer is considered as a biostimulant, consisting of three strains of local salt-tolerant strains of rhizobacteria sample of the biological product 'Zamin-M', which increases the resistance of cotton to stress conditions of soil salinity. It is proved that the biological product 'Zamin-M' is presented as a new stimulant in the practice of growing cotton in saline conditions. An agricultura heas been developed. The 'Zamin-M' is included by the State Committee of the Republic of Uzbekistan (certificate No. 1A1005).</li> <li>B B Shoyusupov<sup>1</sup>, N R Ruzibayev<sup>2</sup>, U R Soatv<sup>1*</sup> and N T Shoymurodov<sup>1</sup> 'Tashkent State Agr</li></ul>
<ul> <li>colonies in meat-peptone agar were round, bulging; the edges were flat, consistency oily, smooth and, mucous; and, the upper part was found to be shiny. Studies have shown that the isolates appertained to the genus Bacillus sr.</li> <li>M K Khojanazarova<sup>1*</sup>, S S Murodova<sup>1</sup>, S F Sanakulov<sup>2</sup>, and J M Turdaliev<sup>2</sup></li> <li><sup>1</sup>Tashkent State Agrarian University, University str., 2, Tashkent province, Uzbekistan, 100140</li> <li><sup>2</sup>Scientific Research Institute of Soil Sciences and Agrochemistry, Kamarniso str., 3, Tashkent, Uzbekistan, 100020</li> <li>Title of presentation: Influence of biopreparation 'Zamin-M' on cotton plants (gossypium hirsutum) under soil salinization in Uzbekistan</li> <li>Abstract: In this article, a microbial inoculant acting as a biofertilizer is considered as a biostimulant, consisting of three strains of local salt-tolerant strains of rhizobacteria Pseudomonas stutzeri SKB308, Bacillus subtilis SKB309, Bacillus megaterium SKB310. The authors have developed and introduced into agricultural practice an experimental sample of the biological product 'Zamin-M', which increases the resistance of cotton to stress conditions of soil salinity. It is proved that the biological product 'Zamin-M' increases soil fertility has a beneficial effect on the enzymatic activity of the soil and the development of a population of beneficial microorganisms. The bioproduct 'Zamin-M' is presented as a new stimulant in the practice of growing cotton in saline conditions. An agricultural technique for the use of a local biological product in agriculture has been developed. The 'Zamin-M' is included by the State Committee of the Republic of tuzbekistan (curtificate No. 1A1005).</li> <li>B B Shoyusupov<sup>1</sup>, N R Ruzibayev<sup>2</sup>, U R Soatov<sup>1*</sup> and N T Shoymurodov<sup>1</sup></li> <li><sup>1</sup>Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan</li> <li>Title of presentation: Analysis of external features and live weight of woolly-meaty sheep (ovis a</li></ul>
Isolates appertailed to the genus bachtus st.         M K Khojanazaroval', S S Murodoval, S F Sanakulov², and J M Turdaliev² <sup>1</sup> Tashkent State Agrarian University, University str., 2, Tashkent province, Uzbekistan, 100140 <sup>2</sup> Scientific Research Institute of Soil Sciences and Agrochemistry, Kamarniso str., 3, Tashkent, Uzbekistan, 100020         Title of presentation: Influence of biopreparation 'Zamin-M' on cotton plants (gossypium hirsutum) under soil salinization in Uzbekistan         Abstract: In this article, a microbial inoculant acting as a biofertilizer is considered as a biostimulant, consisting of three strains of local salt-tolerant strains of rhizobacteria Pseudomonas stutzeri SKB308, Bacillus subtilis SKB309, Bacillus megaterium SKB310. The authors have developed and introduced into agricultural practice an experimental sample of the biological product 'Zamin-M', which increases the resistance of cotton to stress conditions of soil salinity. It is proved that the biological product 'Zamin-M' increases soil fertility has a beneficial effect on the enzymatic activity of the soil and the development of a population of beneficial microorganisms. The bioproduct 'Zamin-M' is presented as a new stimulant in the practice of growing cotton in saline conditions. An agricultural technique for the use of a local biological product in agriculture has been developed. The 'Zamin-M' is included by the State Committee of the Republic of Uzbekistan (certificate No. 1A1005).         B B Shoyusupov <sup>1</sup> , N R Ruzibayev <sup>2</sup> , U R Soatov <sup>1*</sup> and N T Shoymurodov <sup>1</sup> <sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan         Title of presentation: Analysis of external features and live weight of woolly-meaty sheep (ovis aries)
<ul> <li><sup>1</sup>Tashkent State Agrarian University, University str., 2, Tashkent province, Uzbekistan, 100140</li> <li><sup>2</sup>Scientific Research Institute of Soil Sciences and Agrochemistry, Kamarniso str., 3, Tashkent, Uzbekistan, 100020</li> <li>Title of presentation: Influence of biopreparation 'Zamin-M' on cotton plants (gossypium hirsutum) under soil salinization in Uzbekistan</li> <li>Abstract: In this article, a microbial inoculant acting as a biofertilizer is considered as a biostimulant, consisting of three strains of local salt-tolerant strains of rhizobacteria <i>Pseudomonas stutzeri</i> SKB308, <i>Bacillus subtilis</i> SKB309, <i>Bacillus megaterium</i> SKB310. The authors have developed and introduced into agricultural practice an experimental sample of the biological product 'Zamin-M', which increases the resistance of cotton to stress conditions of soil salinity. It is proved that the biological product 'Zamin-M' increases soil fertility has a beneficial effect on the enzymatic activity of the soil and the development of a population of beneficial microorganisms. The bioproduct 'Zamin-M' is presented as a new stimulant in the practice of growing cotton in saline conditions. An agricultural technique for the use of a local biological product in agriculture has been developed. The 'Zamin-M' is included by the State Committee of the Republic of Uzbekistan (certificate No. 1A1005).</li> <li>B Shoyusupov<sup>1</sup>, N R Ruzibayev<sup>2</sup>, U R Soatov<sup>1*</sup> and N T Shoymurodov<sup>1</sup> 'Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan</li> <li>Title of presentation: Analysis of external features and live weight of woolly-meaty sheep (ovis aries)</li> <li>Abstract: This article addressed the development and the growth of offspring, the external</li> </ul>
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<b>Paper ID 47Title of presentation:</b> Influence of biopreparation 'Zamin-M' on cotton plants (gossypium hirsutum) under soil salinization in Uzbekistan <b>Paper ID 47Abstract:</b> In this article, a microbial inoculant acting as a biofertilizer is considered as a biostimulant, consisting of three strains of local salt-tolerant strains of rhizobacteria <i>Pseudomonas stutzeri</i> SKB308, <i>Bacillus subtilis</i> SKB309, <i>Bacillus megaterium</i> SKB310. The authors have developed and introduced into agricultural practice an experimental sample of the biological product 'Zamin-M', which increases the resistance of cotton to stress conditions of soil salinity. It is proved that the biological product 'Zamin-M' increases soil fertility has a beneficial effect on the enzymatic activity of the soil and the development of a population of beneficial microorganisms. The bioproduct 'Zamin-M' is presented as a new stimulant in the practice of growing cotton in saline conditions. An agricultural technique for the use of a local biological product in agriculture has been developed. The 'Zamin-M' is included by the State Committee of the Republic of Uzbekistan in the list of agrochemicals and pesticides permitted for use in agriculture of the Republic of Uzbekistan (certificate No. 1A1005). <b>B B Shoyusupov', N R Ruzibayev', U R Soatov'</b> <i>'Tashkent State Agrarian University, University str., 2, 100140 Tashkent province,</i> Uzbekistan <b>Title of presentation:</b> Analysis of external features and live weight of woolly-meaty sheep (ovis aries)Abstract: This article addressed the development and the growth of offspring, the external
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<ul> <li>Paper ID 48</li> <li>Paper ID 48</li> <li>characteristics and the productivity at different breeding periods of woolly-meaty sheep of Uzbekistan. It was observed that wool productivity was higher in sheep rich in wool-meat than ordinary sheep; sheared wool was 1.26 kg (49.6%), after washing it was 0.97 kg (67.8%), wool length was 2.13 (19.2%) higher. Live weights of lambs from ewes in the experimental groups were determined at birth, at 30 days of age, and 3 months of age. From September 1 to September 20 of the year, the live weight, body size and wool productivity of early inseminated ewes were higher than those of inseminated ewes from late October to Neurophysical Days of the physical discussion of the productivity of early inseminated ewes were higher than those of inseminated ewes from late October to Neurophysical Days of the physical discussion of the phys</li></ul>
frozen semen of typical rams in world gene pool considered semi-fine wool in the meat- wool direction was higher than sheep naturally inseminated with pedigree rams.
Accordingly, it was heavier by 00.4 kg (9.3%) at the first day of birth, followed by 0.5 kg
(6.8%)  at 10 days, and 0.4 kg (1.3%) at 3 months of age. Paper ID 49 K I Shokirov <sup>1*</sup> M KH Desmukhamedova <sup>1</sup> A I Shokirov <sup>1</sup> U T Khodiaov <sup>2</sup> and U D







	<b>Soatov<sup>1</sup></b> <sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan
	<sup>2</sup> Scientific Research Institute of Veterinary, Al-Beruni str., 35, Toylok hamlet, Samarkand province, Uzbekistan
	<b>Title of presentation:</b> Improving breeding and productivity qualifications of Holstein cow breeds (b. Taurus) in climate of Uzbekistan <b>Abstract:</b> This article accelerates the development of selection methods for selecting the
	best genotypes that are acceptable from the similarity genotypes of imported Holstein cattle typical of Chinese, German and Slovenian selection. The genetic potential of reproduction and productivity of breeding breeds in genotype-environment interactions has been demonstrated. The results of the same feeding, storage and performance of Holstein cows in summer and winter, the productivity characteristics of the cattle are presented.
	Kh N Atabayeva <sup>1*</sup> , N S Umarova <sup>1</sup> , S Yakubov <sup>1</sup> , and S Sh Khayrullaev <sup>1</sup> <sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province, Uzbekistan
	Title of presentation: Influence of trace elements on soybean yield in grassland-swamp soils
Paper ID 50	<b>Abstract:</b> This article presents the results of experiments conducted in the conditions of meadow-swamp soils of Tashkent region. The study of the effect of various norms of trace elements sulphur, manganese and iron on the growth, development and yield of early maturing varieties of soybeans was studied. Positive results were obtained from moderate levels of sulphur and manganese, and low levels of iron. Macro and micronutrients had a positive effect on soy yield. An additional 7.6 quintals (q)/ha was harvested in exchange for macro fertilizer. Compared to the background variant, the yield was 4.6-8.3 q/ha for sulphur and 4.9-9.8 q/ha for manganese. The yield of the iron element was lower than that of the background variant. Grain quality has changed in exchange for macro and micronutrients. In exchange for mineral fertilizers, this figure increased by 2.4%. In exchange for the element sulphur the protein increased by 3.1-5.8%: an increase of 4.4-8.4% was observed
	in exchange for the element iron
	<b>N M Ilkhamov<sup>1</sup>*, I G Kurbanov<sup>1</sup>, J Kh Aliev<sup>1</sup>, S E Ganiev<sup>1</sup>, and Ch V Toshpulatov<sup>1</sup></b> <sup>1</sup> Tashkent State Agrarian University, University str., 2, 100140 Tashkent province,
	Uzbekistan
	Uzbekistan
Paper ID 51	<b>Abstract:</b> Reducing water consumption in crop irrigation in the world agriculture, studying soil moisture and water consumption by different irrigation methods, improving soil agrophysical properties and increasing productivity, as well as increasing the productivity of vegetable crops by various irrigation methods and improving phytosanitary conditions (weed and pest density, disease). Extensive research is being conducted to assess the level of one of the most pressing issues in agriculture is the development, improvement and widespread introduction of cost-effective irrigation methods in the spring and summer planting and care of vegetable crops in conditions of water scarcity.
	Tulagan Kamalov <sup>1</sup> , Abdusaid Isakov <sup>2</sup> , Abdulatif Shavazov <sup>1</sup> , Albina Elmuratova <sup>2</sup> and
Paper ID 52	Khairulla Hojiev <sup>3</sup> <sup>1</sup> Scientific and Technical Centre of JSC Uzbekenergo, 100204 Tashkent, Uzbekistan <sup>2</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan,
	Tashkent branch of Samarkana institute of veterinary medicine, 100269 Tashkent region, Uzbekistan







	<b>Title of presentation:</b> Development of a procedure for calculation of specific rates of
	electric energy consumption at frequency regulation of electric drives of pumping stations
	Abstract: The issues of developing a methodology for calculating the specific rates of
	electrical energy consumption during frequency regulation of electric drives of pumping
	stations are considered. When calculating specific consumption rates, experimental studies
	were carried out at the Chirchik pumping station. When developing the methodology.
	technological, design parameters, water consumption, as well as the total capacity of
	pumping units based on frequency-controlled electric drives are taken into account. At the
	same time, the characteristics of the main parameters that must be taken into account when
	choosing variable frequency drives for numping units are determined
	<b>B</b> M Usmanov <sup>1*</sup> S M Nabiev <sup>1</sup> S V Lukvanova <sup>1</sup> M T Sagdiev <sup>2</sup> and Sh A Hamdullaev <sup>1</sup>
	<sup>1</sup> Institute of Genetics and Experimental Riology of Plants Academy of Sciences of the
	Republic of Uzbekistan Tashkent Uzbekistan
	<sup>2</sup> Department of Environmental Safety of Agriculture and Botany Tashkent State Agrarian
	Department of Environmental Safety of Agriculture and Dolany, Tashkent Sidle Agrarian
	Oniversity, Tushkeni, Ozbekisiun
	Title of presentation: Influence of physicochemical factors on water exchange in cotton
	leaves under the moisture deficit conditions
	Abstract: Presowing treatment of cotton seeds with a physical factor (low-frequency
Paper ID 53	electromagnetic field - LF EMF) and a chemical compound (glycyrrhizic acid - GzA) and
Tuper ID co	sowing them under conditions of optimal and limited water supply showed that different
	varieties of cotton, depending on their biological peculiarities and the method of seed
	treatment, had different parameters of water exchange in plants. The experiments were
	carried out in laboratory, greenhouse, lysimetric and field conditions, the indicators of the
	electrical resistance of leaf tissues (ERLT) of cotton plants depended on the conditions of
	water supply. According to this indicator, the varieties Ishonch, Gulbahor-2 and Navbahor-
	2 showed greater resistance to soil moisture deficiency, in comparison with the variety
	Tashkent-6. The plant varieties from seeds, treated with LF EMF and GzA, to a greater or
	lesser extent, are in the range with the lowest ERLT values, in comparison with the varieties
	from untreated seeds.
	M Ibragimov <sup>1*</sup> , I E Tadjibekova <sup>2</sup> , and O Matchonov <sup>1</sup>
	<sup>1</sup> Tashkent institute of irrigation and agricultural mechanization engineers, 39, Kari Niyaziy,
	Tashkent state, 100000, Uzbekistan
	<sup>2</sup> Tashkent state agrarian university, 2, University, Tashkent state, 100140, Uzbekistan
	Title of presentation: Interconnected operation of the ozone generator with the power
	supply unit
	Abstract: This article is addressed to the inductivity of the feeder transformer influence on
Paper ID 56	of the plate-type ozone generator operating modes. The equation characterises the ozone
- •· <b>F</b> • · · · · · · ·	generator interconnected operation with the transformer, in discharge and non-discharge
	modes is represented. Use of the near-resonant mode of operation is proposed with a view
	to reach maximum output capacity. With that end in view, it is proposed to use the
	transformer with higher inductance. Oscillograph charts of two modes of operation of the
	ozone generator are analysed. Current waveform factors are determined by the harmonic
	analysis method. Experiments proved that current waveform factor increase in value for the
	account of continuous discharge is conductive to increase of ozone output by 25-30 % and
	power loss reduction by 10-15 %.
	A Z Mamatov <sup>*</sup> , A K Usmankulov <sup>*</sup> , I Z Abbazov <sup>*</sup> , U A Norboyev <sup>*</sup> , and
	<b>E I Mukhametshina</b>
	Department of Mathematics and Computer Science, Tashkent Institute of Textile and Light
Paper ID 57	Indusiry, 1 ashkeni, Uzbekistan <sup>2</sup> Jizzakh Polytochnic Institute, Jizzakh, Uzbekistan
	Title of presentation. Determination of Temperature of Components of Catter Deve
	Material in a Drum Dryer with a Constant
	Abstract: This article solves one parabolic type boundary value problem for determining
	Abstract. This article solves one parabolic-type boundary value problem for determining







	the heat-moisture state of raw cotton in drum dryers at a constant air temperature. Numerical results are obtained by the Bubnov – Galerkin method of the problem under consideration, a comparative analysis is carried out with experimental data. It is shown that the proposed mathematical model and its numerical algorithm adequately describe the drying process of raw cotton.
	<b>Q Jumaniyazov<sup>1</sup>, M Ismatova<sup>1</sup>, I Abbazov<sup>1*</sup>, and D Kazakova<sup>1</sup></b> <sup>1</sup> Jizzakh Polytechnic Institute, Jizzakh, Uzbekistan
Paper ID 58	Title of presentation: Study on the influence of the cotton storage process on the quality indicators of fiber and yarn Abstract: This article defines fiber quality indicators that differ in laboratory conditions from the upper, middle and lower layers of Bukhara-6 breeding varieties of cotton, in the modern system HVI 1000 SA. Based on the results of the study, histograms of changes in the quality of cotton fiber in the layers of the harem are presented. As an alternative, the quality indicators of yarn obtained in the laboratory spinning device "Sherli" of small size from fiber were determined. As can be seen from the analysis of the test results, it was found that the comparative elongation strength of cotton obtained from the lower layer of the stack, the upper average length, elongation at break, the light output coefficient, decreased compared to other layers of the stack. In addition, according to the results of the tests obtained, the fiber viscosity index was obtained – the correlation between the properties of fibers and the properties of yarn, the thread viscosity index was estimated by the CSP (COUNT STRENGTH PRODUKT) coefficient, which was determined by the formula for carded yarn obtained in the laboratory spinning device "Sherli" from fiber stored in the refrigerator. The obtained results showed that the relationship between fiber properties and yarn properties due to the fact that the maturity index of a thread is at the top of the stack compared to the middle and lower part of the stack.
Paper ID 59	<ul> <li>of the stack compared to the middle and lower part of the stack.</li> <li><i>Azimjon</i> Parpiyev<sup>1</sup>, <i>Ilkhom</i> Sabirov<sup>1</sup>, <i>Alisher</i> Usmankulov<sup>2</sup>, <i>Nodir</i> Navruzov<sup>1</sup></li> <li><sup>1</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan</li> <li><sup>2</sup>Jizzakh Polytechnic Institute, 130100 Jizzakh, Uzbekistan</li> <li>Title of presentation: Study of the Influence of Main Parameters of the Regenerator Ginning Machine on the Qualitative Indicators of the Fibers and Seeds</li> <li>Abstract: Since cotton ginning in Uzbekistan is carried out mainly by saw gins, this article proposes a technology for the process of cotton ginning, regeneration, and purification of fibrous waste. The process of regeneration and purification of fibrous waste is an urgent problem for the cotton ginning industry since the composition of fibrous waste contains about 80% of spun fiber. Technology "The process of separating the fiber from seeds," was carried out in two stages: in the first stage of separating the fiber from seeds, a low density of the raw roller of the saw gin took place, while the productivity remained unnamed. After the first stage of separating the fiber from the seeds and fed to the second stage of separating the fiber from the seeds after the first stage of separating the fiber from the seeds and fed to the second stage of separating the fiber from the seeds and fed to the second stage of separating the fiber from the seeds and fibrous waste on gin using the 1DR-119 regenerator on the gin parameters and the quality of the results of the seed comb pegs when ginning a mixture of progressed seeds and fibrous waste on gin using the 1DR-119 regenerator on the gin parameters and the quality of the resulting fiber has been studied. A diagram of an experimental technological process is proposed and the results of production tests carried out at "JSC Dalverzin Buttermilk Cleaning" are presented. Experimental dependences of productivity, quality indicators of fiber, and seeds on the l</li></ul>







	seed comb is 125 mm, lint prevails in the mass of fibrous products. Having a lower specific gravity compared to fiber, causing a decrease in the seed throughput of the regenerator gin. Analyzing the results of studies of the effect of the length of the pegs on the quality indicators of fiber and seeds after the second stage of ginning, it was revealed that with a decrease in the pubescence of the seeds emerging from the working chamber, their mechanical damage increases, which leads to an increase in the fiber of broken seed and such a hard-to-remove defect as a peel with fiber. Based on the research results obtained during processing on the 1DR-119 regenerator gin of a mixture of ginned seeds with the
	fibrous waste of fiber cleaners at different lengths of the seed comb splints, the most acceptable length of the seed comb is $105-115$ mm, since this produces a standard fiber with a staple mass length of $30.1 - 29.9$ mm, meeting the standards.
	Mohamed Elweddad <sup>1</sup> , Muhammet Tahir Guneser <sup>1</sup> , and Ziyodulla Yusupov <sup>1</sup> Department of Electrical-Electronics Engineering, Karabuk University, Karabuk, Turkey
Paper ID 62	<b>Title of presentation:</b> Energy management and optimization of microgrid system using particle swarm optimization algorithm <b>Abstract:</b> An optimization model is proposed to manage a day-ahead optimal energy management strategy for economic operation of Microgrids. The model is based on a using particle swarm optimization algorithm (PSO) for scheduling four energy sources (grid, PV system, wind system, energy storage system) with 24 hours' time step, considering forecasted electrical demands, weather, and renewable energy generations. In this paper, the objective function is to minimize the cost of electricity generation and to manage delivering power from hybrid sources to the demand. The results showed that scheduling and controlling of different energy sources in efficient way reduce the total cost of power generation and ensure sustainable power flow. It is important to enhance the usage of solar and wind sources, optimize the operation of storage systems.
Paper ID 75	<ul> <li><sup>1</sup>Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100007 Tashkent, Uzbekistan</li> <li>Title of presentation: Construction of mathematical modelling of a population of microalgae</li> <li>Abstract: This article devoted to the development of the mathematic model of the technological process of the chlorella cultivation process, its features and solving of this mathematic model. The Exponential growth of microalgae population under conditions of unlimited nutrient resources and population space proceeds at a rate proportional to the number of species of predominant cells and is described by the differential equation. In the presence of several inhibitors, specific velocity equations with the number of inhibitors can be used, but, as a rule, there are practically no elements acting as inhibitors in the cultivation of Chlorella microalgae. The modeling of this particular class of objects did not take into account the effect of inhibitors on the growth of microalgae. The consumption of nutrients to support the life of microalgae is described by the differential equation. In the course of this work, the processes of cultivation of microalgae were brought together into a system of equations. As a result, a system of differential equations of the technological process of</li> </ul>
	process of cultivation of microalgae and its technological process, implemented in a periodic mode.
Paper ID 77	<ul> <li>S.B. Donaev<sup>1</sup>, K.B. Kim<sup>2</sup>, E. Rabbimov<sup>3</sup>, B.E. Umirzakov<sup>1</sup>, G.M. Shirinov<sup>1</sup></li> <li><sup>1</sup>Tashkent State Technical University, 2, University str., Tashkent, Uzbekistan,</li> <li><sup>2</sup>Sejong University, Seoul, South Korea</li> <li><sup>3</sup>Jizzakh Polytechnic Institute, Jizzakh, Uzbekistan</li> <li>Title of presentation: Effect of implantation of barium and oxygen ions on the emission</li> </ul>
	properties of Mo, Pd, and Pd-Ba Abstract: The effect of ion doping on the secondary emission characteristics of Mo. Pd and







	Pd-Ba alloy has been investigated. It was found that as a result of doping with low-energy barium ions, an intermetallic compound of the Pd-Ba type is formed in the Pd surface layer. The formation of a chemical compound between the substrate and the dopant contributes to a significant (threefold) increase in the secondary electron emission (SEE) coefficient. It was found that the Pd and Pd-Ba samples after doping with a large dose of Ba <sup>+</sup> ions have almost the same secondary emission parameters. Doping of Pd-Ba first with barium ions, then with oxygen ions with an energy of $E_0 \le 1$ keV leads to a significant increase in the secondary electron emission (SEE) coefficient.
	Sardor Donaev <sup>1</sup> , Nodira Mustafaeva <sup>2</sup> , Azizakhon Maksumkhanova <sup>3</sup> and Bakhrom
	<b>Shafkarov<sup>3</sup></b> <sup>1</sup> Tashkent State Technical University, 100097 Tashkent, Uzbekistan <sup>2</sup> Karshi State University, 180119 Karshi, Uzbekistan Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
Paper ID 78	<b>Title of presentation:</b> The Dependence of the parameters of energy bands on the depth of the ion-doped layer for Si impanted with ions Ba <sup>+</sup> <b>Abstract:</b> The physicochemical properties of near-surface layers of Si implanted with low- energy ( $E_0 \le 5 \text{ keV}$ ) Ba <sup>+</sup> ions have been investigated by ultraviolet photoelectron spectroscopy and secondary emission spectroscopy. It was found that at $E_0 = 0.5 \text{ keV}$ the dependence of the concentration of Ba <sup>+</sup> atoms on the depth d has a stepwise character. Up to d $\approx 25-30 \text{ Å}$ , the C <sub>Ba</sub> practically does not change and is $\sim 50-55 \text{ at.}\%$ . Starting from d $\approx 25-30 \text{ Å}$ , with an increase in the depth, C <sub>Ba</sub> decreases and at d $\approx 80 \text{ Å}$ does not exceed 1–2 at.%, therefore, in this region, the band parameters and the density of states in valence electrons change. The observed changes are explained both by the formation of chemical bonds between the Ba and Si atoms and the emergence of new electronic states in the band gap due to the presence of unbound barium and silicon atoms.
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Paper ID 79	<ul> <li>Kh Otaboev', D Sherkuziev', Sh Namazov', R Radjabov', and A Seytnazarov'</li> <li><sup>1</sup>Phosphate Fertilizer Laboratory, Institute of General and Inorganic Chemistry, Academy of Sciences of Uzbekistan, 100170 Tashkent, Uzbekistan</li> <li><sup>2</sup>Department of Chemical Technology, Faculty of Chemistry Technology, Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan</li> <li>Title of presentation: Flow of simple superphosphate using two-stage decomposition of phosphorite</li> <li>Abstract: The methods for producing simple superphosphate by two-stage sulfuric acid decomposition of natural phosphates are analyzed. For the first stage, the process of sulfuric acid from stoichiometry to the formation of H<sub>3</sub>PO<sub>4</sub>, its concentration and the reaction time of the starting components. For the second stage, the process of neutralization of phosphoric acid is studied, depending on the norm of phosphate rock for the formation of Ca(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>. The drying process of superphosphate is carried out, in which granular superphosphate is obtained, and P<sub>2</sub>O<sub>5total</sub> 12%, P<sub>2</sub>O<sub>5free</sub> 4.6%, P<sub>2</sub>O<sub>5dig</sub> : P<sub>2</sub>O<sub>5total</sub> = 90%, P<sub>2</sub>O<sub>5 water</sub> : P<sub>2</sub>O<sub>5total</sub> = 79%.</li> </ul>
	B Kuldashov <sup>1*</sup> , L Khalilova <sup>2</sup> , N Khalilov <sup>1</sup> , and A Khamzavev <sup>2</sup>
Paper ID 80	<sup>1</sup> Department of Plant Science and Forage Production, Faculty of Biotechnology and Processing of Livestock Products, Samarkand Institute of Veterinary Medicine, Samarkand, Uzbekistan <sup>2</sup> Department of Plant Science, Faculty of Agrobiology, Tashkent State Agrarian University, Tashkent, Uzbekistan <b>Title of presentation:</b> The influence of planting schemes, norms and inoculants on the yield of new soybean varieties <b>Abstract:</b> In this article, data about the new native variety of Nafis and variety of Selekta- 302 is described which was brought from Krasnodar region of the Russian Federation in the







	conditions of irrigated meadow-gray soils of Samarkand region, seed germination in field conditions, storage, growth, development, productivity, yield composition, the optimal planting schemes, norms have been identified and recommended for implementation. In the second experiment, in the conditions of irrigated meadow-gray soils, local <i>Nafis</i> variety and <i>Selekta-302</i> variety of Krasnodar regions included in the State Register, imported strains of <i>Bradyrhizobium japonica</i> endogenous bacteria produced in our republic and aboriginal populations bacterium present in local soil. The results of the study on the effect of inoculants studied and their effect on plant development, the number and weight dynamics of stems formed in plant roots, crop structure, yield, weight of 1000 seeds, as well as their effectiveness are described.
	D Sherkuziev
	<sup>1</sup> Tashkent Department of Chemical Technology, Faculty of Chemistry Technology, Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan
	<b>Title of presentation:</b> Simple superphosphate by two-stage acid treat-ment of phosphate raw materials
Paper ID 81	<b>Abstract:</b> The distinguishing feature of the proposed flow method before the classical (chamber) method is that the entire production cycle of natural phosphate processing is carried out in two stages. At the first stage, the phosphorite is treated with a stoichiometric flow rate of concentrated sulphuric acid (at least 93%), under conditions of complete decomposition of phosphorite to form phosphoric acid and crystals of anhydrite (calcium sulfate). The reaction temperature is 122 °C. In the second stage, the resulting concentrated
	solution of phosphoric acid in a mixture with sulphur is involved in a reaction with an
	additional input of phosphorite, which is the basis for the mechanism of chemical formation
	of monocalciumphosphate and granulation of superphosphate mass. The processes for
	neutralizing phosphoric acid on monocalciumphosphate and for granulating the product by
	coagulation are combined in one apparatus. The drying stage of the product is excluded
	from the scheme.
	Igor Kravchenko <sup>4</sup> , Mihail Erofeev <sup>4</sup> , Aleksandr Fedorov <sup>5</sup> , Valeriy Kondrashchenko <sup>5</sup> , Diana Abdumuminaya <sup>4</sup> Shukurila Vuldashav <sup>4</sup> Jalaliddin Matualubay <sup>5</sup> and Kudwat
	Bohomurodoy <sup>6</sup>
	<sup>1</sup> Institute of Mechanical Engineering named after A.A. Blagonravov Russian Academy of
	Sciences, Moscow, Russia
	<sup>2</sup> Military Academy of Material and Technical Support Army General A.V. Khruleva, St.
	Petersburg, Russia
	<sup>3</sup> Russian University of Transport (MIIT), Moscow, Russia
	*Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent,
	Uzbekistan <sup>5</sup> Uzbekistan State World Language University Tashkent Uzbekistan
	<sup>6</sup> Termez State University. Termez, Surkhandarva, Uzbekistan
Paper ID 82	Title of presentation: Research of Mechanochemical Processes of Activation of Building
	Materials by Air-Impact Method
	Abstract: To increase the specific surface area of the binder and accelerate the strength gain
	of fast-hardening concrete mixtures, a model has been created for calculating aeroactivators
	enrichment local materials and production waste. The proposed model establishes the
	dependence of the rate of destruction of the dusty shell of particles on the mechanical
	impact of the beaters and materials' physical and mechanical characteristics. To improve the
	operational characteristics of the cement aeroactivator, experimental studies were carried
	out, the results of which made it possible to determine the rational parameters of the
	developed installation. Based on the test results, it was found that the use of the cement
	activation process with additives accelerates the hardening process of concrete and mortar
	mixtures in the initial period, increases the design strength of concretes and mortars by $20-40\%$ in comparison with the strength of the control composition at the same comparison
	1 + 0.70 in comparison with the strength of the control composition at the same cement







	consumption, and also reduces the consumption cement up to 17% to obtain concretes and
	mortars equal to the control composition at the design age.
	Safargul Ulugova <sup>1</sup> , Umid Ruzmetov <sup>1</sup> , Abdushukur Hamzayev <sup>1</sup> , and Askarboy Yunusov <sup>1</sup>
	<sup>1</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<b>Title of presentation:</b> The productivity of raw seeds and cuttings (leaf) of <i>Salvia officinalis</i>
	I medicinal plants
	L. incurrent plants
	Abstract: This article mighting its the different portions of minerals in fertilizer mixture used
Paper ID 83	for the acceleration of cultivation of the medicinal plant of Sage in soil – climatic conditions
	of Syrdarya region. The obtained results showed that different portions of minerals in
	fertilizer mixture have a positive effect on increasing the yield of seedlings and cuttings of
	the plant. When feeding with different sharings of mineral fertilizers used in an experiment,
	applying Nitrogen-90. Phosphorus - 60 and Potassium - 40 kg/ha norms has given good
	results to the rapid growth of plants. This article provides information on the technology of
	intensive cultivation of seedlings and cuttings of Salvia plant
	Pre-it are Databased in Securings and Cuttings of Salvia plant.
	Ruzidoy Bakhramov, Xamza Yuldashev, Feruza Tokhtadoeva, Ergashali Dalaimatar <sup>2</sup> Gashaina Errasharu <sup>2</sup> Saadat Mirraaru <sup>2</sup>
	Koʻzimatov, Guimira Ergasneva, Saodat Mirzaeva
	Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>2</sup> Andijan State University, 170100 Andijan, Uzbekistan
	Title of presentation: Seed Reproduction technology of the Magnolia grandiflora from
Paper ID 86	seeds
- <b>up</b> • • • • •	Abstract: This article highlights the results obtained on the basis of scientific research
	carried out in 2019-2020 on the technology of reproduction from the seeds of Magnolia
	grandiflora plant in the farmer's farm named "Saydullo Temirov" specialized in the
	cultivation of landscape trees and shrubs located in the Uighur village of Pakhtaobod
	District of Andijan region. As a result of the study, determination of seed stratification time,
	planting time and methods as well as maintenance work were determined and conclusions
	were made
	Khusen Khamrovev <sup>1</sup> , Obidion Abdullavev <sup>2</sup>
	<sup>1</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan
	$^{2}$ Research Institute of Forestry, 111104 Tashkent Uzbekistan
	<b>Title of presentation:</b> Formation of the vegetation cover in the desert pasture phytocenoses
	Abstract: Rising global temperatures in recent years have led to a sharp increase in the area
	of desert areas. Desert areas are widely used as pastures. The productivity of desert pastures
Papar ID 87	in Uzbekistan is very low in $1-3$ ts/ha. This limits the year-round use of desert pastures
	One of the recourse coving and long term offective were to increase their productivity is to
	one of the resource-saving and long-term effective ways to increase their productivity is to
	plant enclosures, as well as reclamation and forage rows in these desert pastures using
	plants such as Haloxylon aphyllum, Calligonum caput-medusae, Salsola paletzkiana. This is
	because protected areas have been scientifically proven to show their positive properties in
	other areas (around mountainous and irrigated fields). In these areas, enclosures not only
	perform a protective function, but also serve as a source of fodder for livestock in the
	autumn-winter seasons.
	B Gafurdjanov <sup>1*</sup> , E Berdiev <sup>2</sup> , and U Xoliyorov <sup>3</sup>
	<sup>1</sup> Research Institute of Forestry, 111104 Tashkent. Uzbekistan
	<sup>2</sup> Tashkent State Agrarian University 100700 Tashkent Uzbekistan
	<sup>3</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers 100000
	Tashkeni Institute of Infiguton and Institution internation Engineers, 100000, Tashkont Uzhokistan
Panar ID 88	Tushkeni, Ozbekislun
1 aper 10 00	<b>Title of presentation:</b> Study on the breeding ginkgo (ginkgo bilobal) in Tashkent pasis
	Abstract. This article presents the results of research on the biochemical composition of
	green and vellowing leaves of 64 year old binedal ginkgo (Cinkgo hildha L) sood and
	pollon troop growing in the Dotonical Conden of the Academy of Sciences of Unitative
	ponen nees growing in the botanical Garden of the Academy of Sciences of Uzbekistan,
	introduced to Uzbekistan in the last century. Biochemical analyzes recorded the presence of







	6 types of vitamins and 44 macro- and micronutrients in the leaves of the ginkgo tree. Vitamin C levels were found to be lower in the seed tree than in the pollen tree. The amount was 35.8 mg/% in the green leaves of the seed tree and 34.4 mg/% in the yellowed leaves. Ginkgo leaves contain important macro-and micronutrients such as Ca, Mg, K, Al, Fe, Cu, Mn, Zn, Mo, Co, I, Se, which are necessary for the vital activity of the human body and normal metabolism. The green leaves of the two-leafed ginkgo pollen tree contained 27577.288 mg/l of calcium, 11562.299 mg/l of potassium, the leaves of the seed tree 13912.903 mg/l of calcium and 7491.462 mg/l of potassium. At the same time, the green leaves of ginkgo contain 3073.807 mg/l – 7977.459 mg/l magnesium, 4353.72-5003.88 mg/l phosphorus, 501.073-515.343 mg/l sodium, 779.750 mg/l– the presence of silicon in the amount of 844.039 mg/l and iron in the amount of 373.023 mg/l – 655.148 mg/l was determined.
	<b>J Temirov<sup>1</sup>, G Shukurova<sup>1*</sup>, and I Klichov<sup>1</sup></b> <sup>1</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
Paper ID 89	<b>Title of presentation:</b> Study on the influence of stimulants on the rooting of the paulownia ( <i>paulownia</i> ) and tulip ( <i>liriodendron tulipifera</i> ) trees during the propagation by cuttings <b>Abstract:</b> This article describes the effect of a growth stimulant on the rooting of Paulownia and tulip tree saplings in the conditions of the Tashkent region. In addition, the article discusses the method of propagation of sapling from lignified and annual green cuttings, the influence of the preparation of the substrate 3: 3: 1 from sand, klinec (crushed stone), vermicompost on the development of saplings. In this case, the usual water (control), root SP, basfoliar Kel-SL and heteroauxin stimulants were used.
	<b>A Abdukarimov<sup>+</sup></b> , and I Saidakulov <sup>+</sup> <sup>1</sup> Institute of Mechanics and Seismic Stability of Structures. Academy of Sciences of the
	Republic of Uzbekistan, 100125, Tashkent, Uzbekistan
Paper ID 90	<b>Title of presentation:</b> Dynamic analysis of a ten-link tooth-lever differential transmission <b>Abstract:</b> This article discusses the dynamics of a ten-link tooth-lever differential transmission mechanism. The force analysis of the transmission mechanism is given in order to find the dependence for determining the reaction in kinematic pairs and the balancing moment of the pair of forces and to show some features of the tooth-lever transmission mechanism. The force calculation was carried out taking into account the accelerated movement of links since their acceleration in modern high-speed machines is very significant. To obtain a more accurate concept of the external forces and moments loading the transmission mechanism in the accelerated movement of the links, the dynamics of the transient process of roller technological machines was considered. Cases of feeding the processed material were considered both from the side of the intermediate gears and from the side opposite to the parasitic gears. Dependencies were obtained to determine the force characteristics of this mechanism. Cases of pressure unloading and overloading on the processed material from the side of the free shaft, depending on the location of the transmission mechanism are shown. The dependence of the reaction force of intermediate gears on their own axes of rotation on the angle between the levers is shown. With an increase in the angle between the levers, the reaction of the intermediate gears on the axis of rotation increases.
	Abdusalam Abdukarimov <sup>1</sup> , Sanjarbek Madaminov <sup>1</sup> , and Asrorbek Abdullajonov <sup>1</sup>
	Republic of Uzbekistan, 100125, Tashkent, Uzbekistan
Paper ID 91	<b>Title of presentation:</b> Synthesis of a ten-link tooth-lever differential roller transmission mechanism <b>Abstract:</b> This article deals with the synthesis of a ten-link tooth-lever differential transmission mechanism. The article contains an analytical review of modern scientific research on the synthesis of tooth-lever differential transmission mechanisms of roller machines with a variable center distance of the working shafts; a method for the synthesis of







	tooth-lever differential transmission mechanisms of roller machines with a variable center distance of the working shafts described on the example of a ten-link tooth-lever differential transmission mechanism; the conditions for the synthesis of the mechanism given and substantiated when this mechanism is used in a roller machine; one of its working shafts has the ability to rotate about its own axis, and the second working shaft, in addition to rotation about its own axis, has the ability to move relative to the first working shaft along a line passing through the center the axes of rotation of both working shafts; the geometric synthesis of the tooth and lever contours of the mechanism, the dynamic synthesis of the mechanism, taking into account the angles of pressure between the lever link of the lever
	contour of the mechanism, which allows us to determine the optimal working position of the mechanism where the angles of pressure are within acceptable limits; the graphs of changes in the angles of pressure between the links of the lever contour of the mechanism, plotted depending on its position.
	Abdunabi Bairov <sup>1</sup> , Khurshida Nuriddinova <sup>1</sup> , and Shukhrat Juraev <sup>1</sup> <sup>1</sup> Research Institute of Soil Science and Agrochemistry, 100179 Tashkent, Uzbekistan
Paper ID 94	<b>Title of presentation:</b> Study on the organic carbon and total nitrogen reserves in brown soils in the Chirchik river basin: A case study of Tashkent region, Uzbekistan <b>Abstract:</b> To identify the role in carbon stabilization, the content and reserves of SOC and TN in brown soils of the middle mountains of the Chirchik river basin of the Tashkent region of Uzbekistan were investigated in connection with the climatic conditions of the slopes of various topographic aspects. The content and reserves of SOC and N were the highest in the soils of the northern slope, and the lowest in the soils of the southern slopes; the eastern slopes, in this respect, occupied an intermediate position. The climates of slope exposures were the main factors influencing on the content and reserves of SOC and N in the profile of brown soils, indicating the need for separate consideration of carbon emissions from soils which are developed on slopes of various topographic aspects.
	Dakinfain Mainulov, Evgeniy Dulkov, Abdusinukur Hainzayev, Doinyor Sherkuziev,
Paper ID 95	<ul> <li><sup>1</sup>Research Institute of Forestry, 111104 Tashkent, Uzbekistan</li> <li><sup>2</sup>Department of Chemical Technology, Faculty of Chemistry Technology, Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan</li> <li><sup>3</sup>Department of Biology, Gulistan State University, 120100 Gulistan, Uzbekistan</li> <li>Title of presentation: Application of mineral fertilizers to increasing soil moisture and growth of forest seedlings for creation forest crops in Western Tien-Shan</li> <li>Abstract: This article presents the results of research of studying the effect of mineral fertilizers on soil moisture and the growth and development of forest seedlings when creating forest crops on the western slope of the Western Tien-Shan. It was established by experience that forest seedlings react differently to the action of mineral fertilizers. In pine,</li> </ul>
Paper ID 95	<ul> <li><sup>1</sup>Research Institute of Forestry, 111104 Tashkent, Uzbekistan</li> <li><sup>2</sup>Department of Chemical Technology, Faculty of Chemistry Technology, Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan</li> <li><sup>3</sup>Department of Biology, Gulistan State University, 120100 Gulistan, Uzbekistan</li> <li>Title of presentation: Application of mineral fertilizers to increasing soil moisture and growth of forest seedlings for creation forest crops in Western Tien-Shan</li> <li>Abstract: This article presents the results of research of studying the effect of mineral fertilizers on soil moisture and the growth and development of forest seedlings when creating forest crops on the western slope of the Western Tien-Shan. It was established by experience that forest seedlings react differently to the action of mineral fertilizers. In pine, an increase in the fertilizer dose contributes to an increase in the growth of seedlings in height by 1.2 times. English oak, on the contrary, reacts weakly to the effects of fertilizers. Korolkov's hawthorn reacts intensively to the effects of fertilizers. At the same time, an increased dose of fertilizers contributes to an increase in the annual growth of plants by 3.2 times. The Sievers apple tree differed from other species with intensive growth in all variants of the experiment on the western slopes during the growing season. But in this breed, an increase in the dose of fertilizers caused an increase in annual growth up to 1.5 times compared with the control variant. Mineral fertilizers do not contribute to significant moisture retention in the upper soil layer during the summer vegetation season, but in the lower root-inhabited layers of fertilizer, it has a positive effect in increasing soil moisture above the wilting moisture, which is 8%, and is often observed in the upper horizons.</li> </ul>







	Title of presentation: Study on some features of water exchange of local varieties of hard
	wheat
	Abstract: This article discusses the main physiological indicators of water exchange in
	winter wheat varieties Makus-3, Istiklal and Istiklal-20. There were revealed indicators of
	daily and residual water deficit of leaves, as well as the water potential of leaves. As you are
	aware, drought resistance of plants depends on a number of factors. In particular, it is
	largely determined by the biological characteristics of plants. In this regard, the
	identification of the features of the physiological processes of the water regime and the
	associated metabolic processes that determine the resistance to drought in various varieties
	and hybrids of wheat is of great interest not only in scientific but also in practical terms,
	because the research results can be used to develop recommendations for selection of source
	forms for breeding work. We have studied a number of indicators of the water regime of
	local varieties of winter wheat - Istikial, Istikial-20 and Makus-3. The research was carried
	out on plants grown under the conditions of vegetation and field experiments in the phases
	of booting, earing, flowering and waxy fipeness. <b>P</b> $\mathbf{P}$ $$
	<b>D Kasakhouzhaev</b> , <b>S Makhimuuov</b> , <b>and F Muhimov</b>
	IIzhekistan 100084 Tashkent IIzhekistan
	<sup>2</sup> Department of World Economy Tashkent State Economic University 100003 Tashkent
	Uzbekistan
	<sup>3</sup> Department of Commercialization of Innovative Developments and Technology Transfer,
	Ministry of Innovative Development of the Republic of Uzbekistan, 100060 Tashkent,
	Uzbekistan
	Title of presentation: Selection of a heating system based on climatic conditions of
	Uzbekistan and on calculations of the technical and economic indicators of alternative
	systems: A case study of the solar greenhouse with a transformable building
D ID 104	Abstract: This paper presents studies on the choice of a heating system based on
Paper ID 104	calculations of economic efficiency and payback periods for alternative systems, a solar
	to determine the consumption of fuel resources necessary to ensure the required amount of
	energy for the heating season; consumption of natural gas, solid fuel (coal) and electricity
	for heating a greenhouse with a transformable (adjustable) body. Analytical methods were
	used to determine the cost of materials and the main units of a greenhouse with a
	transformable (adjustable) body. Depending on the shape of the greenhouse the total costs
	economic efficiency and payback periods are determined. The research work carried out
	shows that, in terms of the cost of construction and consumption of materials, the developed
	greenhouse with transformable (adjustable) body are quite acceptable for its successful use
	among farmers and private households in the Republic of Uzbekistan. Calculation of
	economic efficiency and payback periods for greenhouses with a transformable housing
	allows you to choose the most acceptable heating system and technical characteristics of
	alternative systems acceptable for the climatic conditions of Uzbekistan.
	Khakim Muratov <sup>1</sup> , Kamoliddin Kodirov <sup>1</sup> , and Alijon Kushev <sup>1</sup>
	<sup>1</sup> Uzbekenergo "JSC Scientific and Technical Center" LLC, 100076 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Specification of the system application for the different tariffs during the consumption time of electricity by industrial entermises.
D 10 405	the consumption time of electricity by industrial enterprises
Paper ID 105	Adstract: This article is devoted to such issues as smoothing the schedule of loads of manufacturing factories in the "intensive" periods due to the correct use of the sustam of
	tariffe which is stratified by time. It is possible to achieve smoothing of the load schedule
	of the energy system through the correct use of the time-stratified tariff system by taking
	into account the above-mentioned issue. Proper use of the time-stratified tariff system by
	consumers will reduce the load period of the energy system and change its modes.
D ID 10/	Hamrokul Ravshanov <sup>1</sup> , Farmon Mamatov <sup>1,2</sup> , Odil Primov <sup>1</sup> , Shakhnoza
Paper ID 106	Khazratkulova <sup>1</sup> and Dilshod Baratov <sup>3</sup>







	<sup>1</sup> Karshi branch of Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Karshi, 180119, Uzbekistan
	<sup>2</sup> Karshi Engineering Economic Institute, Karshi, 180100, Uzbekistan
	<sup>3</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers. Tashkent.
	100000, Uzbekistan
	<b>Title of presentation:</b> Study on technological properties of winter wheat soils
	Abstract: The aim of the study is to study and analyze the physical, mechanical and
	technological properties of soils from under winter grain crops in the hot climate of
	Uzbekistan. The results of determining the moisture content, density, hardness and
	resistance to various deformations of soils after harvesting winter wheat are presented. The
	basic principles and methods of classical mechanics, mathematical analysis and statistics
	were used in this study. Studies have found that, in the layer 0-30, the soil moisture for ten
	days after harvesting winter cereals decreases by 12.1-16.3% and the soil hardness
	increases by 10.7-16.4% and are 3.22-5.14 MPa. At the same time, at an average humidity
	of 12-14%, the resistance of the soil to breakage and torsion, respectively, is 1.3-1.8 and
	1.0-1.1 times higher than the resistance of the soil to shear. The resistance of the soil to
	shear is 87.9 kPa, and to breakage and torsion-69.7 and 78.6 kPa, respectively.
	F Mamatov <sup>1,3</sup> , B Mirzaev <sup>2</sup> , S Toshtemirov <sup>1</sup> *, O Hamrovev <sup>1</sup> , T Razzagov <sup>1</sup> , and I
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	<b>Title of presentation:</b> Study on the development of a machine to prepare the soil for cotton
	sowing on ridges
	Abstract: The aim of this paper is to create a combined machine for planning the soil for
Paper ID 107	sowing cotton on the edges. A total for the execution of the innovation of planning the soil
	for sowing cotton on the edges was developed, which comprises of a dump deep-dredger
	with a slanted rack and a comb-maker. The essential standards and strategies of classical
	mechanics, numerical examination and measurements were utilized in this paper. The plan
	conspire of the combined unit is advocated. The following results were obtained from the
	outcomes of multivariate tests set up: the width of the ripper within the extend of 10.5-11.03
	cm, the disintegrating point of 27°, the point of establishment of the plowshare edge to the
	heading of movement of 31°. The arrangement of edges of the desired degree with
	negligible vitality utilization is given with a width and length of the deep-dredger bit,
	separately, of 5 and 20 cm, edge hold width of 21 cm, the length of its wing within the run
	of 47-49 cm, and a least longitudinal.
	Bakhadir Mirzaev <sup>1</sup> , Farmon Mamatov <sup>2,3</sup> , Uchkun Kodirov <sup>2</sup> , and Dustmurod Chuyanov <sup>3</sup>
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Paper ID 108	Title of presentation: Study on machine for processing and preparing the soil for sowing
-	potatoes on ridges
	Abstract: The technologies used to prepare the soil for sowing potatoes on ridges,
	consisting of numerous soil preparation operations, lead to loss of moisture, prolonging the
	sowing period and increasing operating costs. The aim of the research is to develop a
	machine for processing and preparing the soil for sowing potatoes on ridges. The authors
	have developed a technology for preparing fields for sowing potatoes on ridges and a
	machine for its implementation. The basic principles and methods of classical mechanics,







	mathematical analysis and statistics were used in this study. On the basis of multifactorial
	experiments, the following parameters are justified: the angle of inclination of the
	ploughshare blade in the range of 6-70, the height and length of the guiding knife in the
	bodies of the machine and its technical characteristics are given. The results of the tests
	have established that the proposed machine for preparing the soil for sowing on the ridges
	reliably performs the specified technological process and its performance indicators fully
	meet the requirements. The use of the machine provides a reduction in operating costs for
	processing 1 hectare of area in comparison with the technical means used by 33.8 %.
	Khayriddin Fayzullaev <sup>1</sup> , Farmon Mamatov <sup>1,3</sup> , Bakhadir Mirzaev <sup>2</sup> , Dilmurod Irgashev <sup>1</sup> ,
	<i>Sodik</i> Mustapakulov <sup>1</sup> , and <i>Akram</i> Sodikov <sup>1</sup>
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	Engineers, 180119, Karsni, Ozbekisian
	<b>Title of presentation:</b> Study on mechanisms of tillage for melon cultivation under the film
	<b>Abstract:</b> The aim of the study is to develop a machine for preparing the soil for sowing
	melons under a tunnel film. The authors have developed a machine for preparing the soil for
	sowing melons under a tunnel film, which is equipped with deep-diggers with an inclined
	stand of the "paraplau" type, a furrow maker and rotary working bodies. A design diagram
<b>D J D</b> 400	and a fragment of the machine operation have beak given. The basic principles and methods
Paper ID 109	of classical mechanics, mathematical analysis and statistics were used in this study. Tests
	process and its performance indicators fully meet the requirements. When using the
	developed machine for preparing the soil for sowing melons under the film the direct cost
	of processing one hectare of area is reduced by 33.4%. The study's goal is to create a
	machine that prepares soil for seeding melons under a tunnel film. The authors have created
	a machine that includes deep-diggers with a "paraplau" style inclined platform, a furrow
	maker, and rotating working bodies for preparing the soil for planting melons beneath a
	tunnel film. A design schematic as well as a portion of the machine functioning has been
	provided. In this work, the fundamental concepts and methodologies of classical mechanics,
	the required technical procedure, and its performance indicators completely fulfill the
	criteria according to tests. The direct cost of processing one bectare of land is lowered by
	33.4 percent when utilizing the developed machine to prepare the soil for growing melons
	beneath the film.
	Kh Ravshanov <sup>1*</sup> , F Mamatov <sup>1,2</sup> , B Mukimov <sup>1</sup> , R Sultonov <sup>1</sup> , A Abdullayev <sup>1</sup> , and G
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Paper ID 110	Title of presentation: Study on combined machine for the subsurface soil treatment
	Abstract: The purpose of the study is to substantiate the relative position of the working
	bodies of a combined machine for non-fall tillage of winter crops. The design scheme and
	the principle of operation of the combined machine are given. The basic principles and
	It is established that the most optimal design scheme of a combined machine for non tillage
	of the soil and its preparation for sowing of repeated crops is considered to be a scheme
	consisting of non-tillage cases with crushers a hattery with cut-out spherical disks and a
	roller According to the results of theoretical and experimental studies it was found that







	with a longitudinal distance between the shaft-free bodies of 40 cm and a transverse
	distance of 90 cm, a longitudinal distance from the toe of the ploughshare to the center of
	the support wheel of 50 cm and a longitudinal distance from the toe of the ploughshare of
	the shaft-free body to the axis of rotation of the cut-out spherical disk of 120 cm. a
	longitudinal distance from the axis of rotation of the cut-out spherical disk to the center of
	the roller of 75 cm high-quality tillage with minimal energy costs is provided
	Lite one of 75 cm, ingr-quarty image with minima chergy costs is provided.
	Uktam Umurzakov, Farmon Mamatov, Baknadir Mirzaev, Sherzod Kurbanov,
	Sunatulio Badalov <sup>-</sup> , and Javion Kaxmonov <sup>-</sup>
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	<sup>3</sup> Karshi Branch of Tashkent Institute of Irrigation and Agricultural Mechanization
	Engineers, 180119, Karshi, Uzbekistan
	Title of presentation. Front-mounted plow for smooth non-furrow plowing with offsets
Papar ID 111	Abstract: The purpose of the study was the development of a front plow with angle clamps
	Abstract. The purpose of the study was the development of a front plow with angle clamps,
	which performs, smooth prowing. The authors have developed an improved from prow with
	angle clamps. The constructive scheme of the plow has been given. The basic principles and
	methods of classical mechanics, mathematical analysis and statistics were used in this study.
	Experimental studies have justified the processing depth within the limits of 10-12. 5 cm
	and the width of the capture of the angle is within the range of 7.5-10 cm. Economic tests
	have established that the developed front plow reliably performs the specified technological
	process and its performance indicators meet agrotechnical requirements. The use of a
	frontal plow for smooth, plowing provides a reduction in direct costs for processing 1
	hectare of area compared to the technical means used by 26.8 %.
	Farmon Mamatov <sup>1,2</sup> , Isroil Temirov <sup>2</sup> , Samar Ochilov <sup>1</sup> , Dilsabo Chorieva <sup>2</sup> , Donivor
	$\mathbf{Rakhmatov}^{1} \text{ and } \mathbf{Gulnoza} \text{ Murtazaeva}^{2}$
	<sup>1</sup> Karshi branch of Tashkent Institute of Irrigation and Agricultural Mechanization
	Findingers 180110 Karshi Uzbekistan
	<sup>2</sup> Karshi Enginaaring Economic Institute 180100 Karshi Uzbekistan
	<sup>2</sup> Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan
	<sup>2</sup> Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan <b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type
	<i><sup>2</sup>Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</i> <b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow
	<i><sup>2</sup>Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</i> <b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow <b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of
	<i>"Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</i> <b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow <b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of
	<ul> <li><i><sup>2</sup>Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</i></li> <li><b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow</li> <li><b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub tillage</li> </ul>
	<ul> <li><i><sup>2</sup>Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</i></li> <li><b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow</li> <li><b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage</li> </ul>
	<b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow <b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage loosening of the most compacted layers of the soil of the fields from under the cotton must
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Paper ID 112	<b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow <b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage loosening of the most compacted layers of the soil of the fields from under the cotton must be carried out in a strip way along the line of the middle of the irrigation furrows between the rows. It is established that for the implementation of strip loosening of the sub-arable soil layers of fields from under cotton, the width of the two-tier plow should be a multiple of the width of the row spacing. At the same time, for loosening the compacted subsurface layers of the middle of the rise stablished that one working body, the soil dredgers are installed behind each even lower body in the plane of the field edges of the odd bodies. In the case of sub-tillage loosening of the middle of the row spacing by two soil dredgers with an inclined stand, one soil dredger is installed behind each lower body. An analytical relationship is obtained to justify the relative position of the plow bodies and the soil dredgers, as well as their parameters. Experimental studies have established that the resistivity of a two-tier plow decreases (in comparison with continuous loosening) when the most compacted layers of the middle of the row are loosened with a pointed paw by 17.56%, two soil dredgers with inclined posts by 24.04%, and one soil dredger with an
Paper ID 112	<b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow <b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage loosening of the most compacted layers of the soil of the fields from under the cotton must be carried out in a strip way along the line of the middle of the irrigation furrows between the rows. It is established that for the implementation of strip loosening of the sub-arable soil layers of fields from under cotton, the width of the two-tier plow should be a multiple of the width of the row spacing. At the same time, for loosening the compacted subsurface layers of the middle of the row spacing of cotton with one working body, the soil dredgers are installed behind each even lower body in the plane of the field edges of the odd bodies. In the case of sub-tillage loosening of the middle of the row spacing by two soil dredgers with an inclined stand, one soil dredger is installed behind each lower body. An analytical relationship is obtained to justify the relative position of the plow bodies and the soil dredgers, as well as their parameters. Experimental studies have established that the resistivity of a two-tier plow decreases (in comparison with continuous loosening) when the most compacted layers of the middle of the row are loosened with a pointed paw by 17.56%, two soil dredgers with inclined posts by 24.04%, and one soil dredger with an inclined post by 23.24%.
Paper ID 112	<sup>2</sup> Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan <b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow <b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage loosening of the most compacted layers of the soil of the fields from under the cotton must be carried out in a strip way along the line of the middle of the irrigation furrows between the rows. It is established that for the implementation of strip loosening of the sub-arable soil layers of fields from under cotton, the width of the two-tier plow should be a multiple of the width of the row spacing. At the same time, for loosening the compacted subsurface layers of the middle of the row spacing of cotton with one working body, the soil dredgers are installed behind each even lower body in the plane of the field edges of the odd bodies. In the case of sub-tillage loosening of the middle of the row spacing of the middle of the row spacing with an inclined stand, one soil dredger is installed behind each lower body. An analytical relationship is obtained to justify the relative position of the plow bodies and the soil dredgers, as well as their parameters. Experimental studies have established that the resistivity of a two-tier plow decreases (in comparison with continuous loosening) when the most compacted layers of the middle of the row are loosened with a pointed paw by 17.56%, two soil dredgers with inclined posts by 24.04%, and one soil dredger with an inclined post by 23.24%.
Paper ID 112	<ul> <li><sup>2</sup>Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</li> <li><b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow</li> <li><b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage loosening of the most compacted layers of the soil of the fields from under the cotton must be carried out in a strip way along the line of the middle of the irrigation furrows between the rows. It is established that for the implementation of strip loosening of the sub-arable soil layers of fields from under cotton, the width of the two-tier plow should be a multiple of the width of the row spacing. At the same time, for loosening the compacted subsurface layers of the middle of the row spacing of cotton with one working body, the soil dredgers are installed behind each even lower body in the plane of the field edges of the odd bodies. In the case of sub-tillage loosening of the relative position of the plow bodies and the soil dredgers, as well as their parameters. Experimental studies have established that the resistivity of a two-tier plow decreases (in comparison with continuous loosening) when the most compacted layers of the middle of the row are loosened with a pointed paw by 17.56%, two soil dredgers with inclined posts by 24.04%, and one soil dredger with an inclined post by 23.24%.</li> <li><b>F Mamatov<sup>1,3</sup>, I Temirov<sup>1,8</sup>, P Berdimuratov<sup>2</sup>, A Mambetsheripova<sup>4</sup>, and S Ochilov<sup>1</sup></b></li> </ul>
Paper ID 112 Paper ID 113	<ul> <li><sup>2</sup>Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan</li> <li><b>Title of presentation:</b> Substantiation the technology and parameters of the "paraplau" type soil dredger for a two-tier plow</li> <li><b>Abstract:</b> The purpose of the study was to substantiate the technology and parameters of the "paraplau" type soil dredger for a two-tier plow. The basic principles and methods of classical mechanics, mathematical analysis and statistics were used in this study. Sub-tillage loosening of the most compacted layers of the soil of the fields from under the cotton must be carried out in a strip way along the line of the middle of the irrigation furrows between the rows. It is established that for the implementation of strip loosening of the sub-arable soil layers of fields from under cotton, the width of the two-tier plow should be a multiple of the width of the row spacing. At the same time, for loosening the compacted subsurface layers of the middle of the row spacing of cotton with one working body, the soil dredgers are installed behind each even lower body in the plane of the field edges of the odd bodies. In the case of sub-tillage loosening of the middle of the row spacing by two soil dredgers with an inclined stand, one soil dredger is installed behind each lower body. An analytical relationship is obtained to justify the relative position of the plow bodies and the soil dredgers, as well as their parameters. Experimental studies have established that the resistivity of a two-tier plow decreases (in comparison with continuous loosening) when the most compacted layers of the middle of the row are loosened with a pointed paw by 17.56%, two soil dredgers with inclined posts by 23.24%.</li> <li><b>F Mamatov<sup>1,3</sup>, I Temirov<sup>1*</sup>, P Berdimuratov<sup>2</sup>, A Mambetsheripova<sup>4</sup>, and S Ochilov<sup>1</sup></b> <i>Karshi branch of Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 180119, Karshi, Uzbekistan</i></li> </ul>







	Tashkent, Uzbekistan
	<sup>3</sup> Karshi Engineering Economic Institute, 180100, Karshi, Uzbekistan
	<sup>4</sup> Karakalpak State University, Nukus, Uzbekistan
	Title of presentation: Study on plowing of cotton soil using two-tier plow
	Abstract: The purpose of the study is to substantiate the parameters of a two-tier plow for
	plowing soil from under cotton. The basic principles and methods of classical mechanics.
	mathematical analysis and statistics were used in this study. The effects of the cotton field
	relief on the tillage and traction resistance of a two-tier plow were studied theoretically and
	experimentally. Analytical expressions are obtained for determining the uniformity of the
	course, the lead of the bodies and the center of registeries of the play, depending on its main
	course, the road of the boulds and the center of resistance of the plow, depending on its main
	parameters and the foughness of the fener of the could field. It is established that senai
	two-tier plows, due to the discrepancy between their width of the gripper and the width of
	the row spacing, do not meet the requirements of agricultural technology: the plowing depth
	is not stable, the coefficient of variation of the plowing depth reaches 16% for a trailed
	plow, and for a mounted plow - 25.8%; the transverse direction of the plough the bottom of
	the furrow turns out to be stepped; the value of the traction resistance changes at each pass
	of the plow. To improve the quality of plowing fields from under cotton, a new plowing
	method has been developed, carried out by a two-tier plow, the width of which is a multiple
	of the width of the row spacing of cotton. The width of the plow bodies is equal to half the
	width of the row spacing.
	J H Rakhmanov <sup>1</sup> , R A Gulmurodov <sup>2</sup> , S S Tukhtamishev <sup>3</sup> , T T Soatov <sup>2</sup> , Sh
	Gulmurodova <sup>2</sup>
	<sup>1</sup> Scientific-Research Institute of Protecting Plants, 100140 Tashkent, Uzbekistan
	<sup>2</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan
	<sup>3</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
	<b>Title of presentation:</b> Diseases that provoke fungi in leguminous cereals and measures of
	fighting against them
Paper ID 116	Abstract: Many crop losses have been observed in all states due to diseases in which fungi
	come from leguminous grain crops such as mung bean peas and beans. In particular this
	situation was noted in scientific observations conducted in several regions of our republic
	where legumes are grown Eugariosis, which occurs in leguminous grain crops, has been
	studied in studies on root rot anthrachosis, ascochitosis, flour dew and other fungi diseases
	at what time of their appearance, spread, development and damage to the grop. From these
	discosses root rotting in chickenpox and furgrices as well as anthroenesis in mung been
	and beens, root rot in fuzziosis, rapid spread and development of flour day discusses in
	and beans, foot for in fuzations, fapid spread and development of flour-dew diseases in
	$\frac{1}{2} = \frac{1}{2} = \frac{1}$
	B WIIrzaev, F Wiamatov, U Kodirov, and A Shirinboyev
	Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000
	$^{2}$ K 1:1 L $(T + 1)$ $(T + 1)$ $(T + 1)$
	Karshi branch of Tashkent Institute of Irrigation and Agricultural Mechanization
	Engineers, 180119 Karshi, Uzbekistan
	<sup>3</sup> Karshi Engineering Economic Institute, 180100 Karshi, Uzbekistan
	Title of presentation: Study on working bodies of the soil preparation machine for sowing
Paper ID 117	potatoes
	Abstract: The purpose of the study is to substantiate the parameters of the guide knife and
	the loosening pointed leg of the machine. The basic principles and methods of classical
	mechanics, mathematical analysis and statistics were used in this study. Theoretical studies
	were carried out to determine the parameters of the guide knife and the loosening pointed
	leg of the machine. It is established that to ensure the required value of the crest height with
	minimal energy consumption, the height and length of the guide knife should be 8 and 15
	cm, respectively, the angle of the knife blade to the horizon - 30°, the longitudinal distance
	from the toe of the ploughshare body of the knife toe $-13$ cm. To ensure the required







	crumbling of the soil, the width of the pointed loosening paw should be 15 cm.
	Isroil Jumanov <sup>1</sup> , Olim Djumanov <sup>1</sup> , and Rustam Safarov <sup>1</sup> Department of Information Technologies, Samarkand State University, 140104, University blv. 15, Samarkand, Uzbekistan
Paper ID 121	Title of presentation: Improving the quality of identification and filtering of micro-object images based on neural networks Abstract: Constructive approaches, principles, and models for optimizing the identification of micro-objects have been developed based on the use of combined statistical, dynamic models and neural networks with mechanisms for filtering noise and foreign particles of images of medical objects and pollen grains. Algorithms for learning neural networks under conditions of a priori insufficiency, uncertainty of parameters, and low accuracy of data processing are investigated. The mechanisms of contour selection, segmentation, obtaining the boundaries of segments with hard and soft thresholds, filtering using the morphological features of the image have been developed [1]. Mechanisms for recognition and classification of images, adaptation of parameter values, tuning of the network structure, approximation and smoothing of random emissions, bursts in the image contour are proposed. A mechanism for suppressing impulse noise and noise is implemented based on various filtering methods, preserving the boundaries of objects and small-sized parts. Mathematical expressions are obtained for estimating the identification of the image contour. A software package for the recognition and classification of micro-objects has been developed. The results were obtained for correct, incorrect recognition, as well as rejected pollen samples, which were synthesized with cubic, biquadratic, interpolation spline-functions and wavelet transforms.
Paper ID 130	Nzomjon Usmonov <sup>1</sup> , Yusufbek Abdullabekov <sup>1</sup> , and Saodat Axmatova <sup>1</sup> <sup>1</sup> Department of Thermodynamics, Tashkent State Technical University, 100097 Tashkent, Uzbekistan Title of presentation: Development of an experimental facility for cooling circulated water of industrial plants Abstract: The article discusses the installation and the hydrodynamic results analysis of three-phase fluidized bed experimental studies. An energy coefficient linear dependence of the circulating water evaporative cooler of the considered type on the irrigation coefficient has been experimentally established. The dependence of the fraction of circulating water evaporated moisture in an evaporative cooler of the type under consideration on the cooled water temperature at the inlet to the cooler and the irrigation coefficient has been established. The analysis of hydrodynamic and thermal processes occurring in a three-phase fluidized bed is carried out, and the main technological parameters for the optimal operation of installations with the specified bed are obtained in relation to solving the problem of cooling the circulating water. The dependence of the expansion of a three-phase fluidized bed on air velocity and irrigation density has been investigated. On the basis of the performed experimental studies, empirical formulas for calculations are derived.
Paper ID 131	Nizomjon Usmonov <sup>1</sup> , Shaxlo Mavjudova <sup>1</sup> , and Adeliya Ivanisova <sup>1</sup> <sup>1</sup> Department of Thermodynamics, Tashkent State Technical University, 100097 Tashkent, UzbekistanTitle of presentation: Mathematical modeling of heat and mass exchange processes in the evaporative coolerAbstract: This article describes the advantages of the widespread using of the evaporative coolers for cooling recycled wastewater in the air conditioning systems in various industries. The mathematical model of heat and mass transfer processes in the evaporative coolers has been developed. The dependence of the changes in the temperature of the air leaving the evaporator on the irrigation density is considered. When comparing the values obtained by using mathematical expressions and experiments, the resulting difference was









	6.7%.
	Kh Isakhodjayev <sup>1</sup> , F Mukhtarov <sup>1*</sup> , D Kodirov <sup>2</sup> , and I Toshpulatov <sup>1</sup> <sup>1</sup> Tashkent State Technical University, 100097 Tashkent, Uzbekistan <sup>2</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
Paper ID 132	<b>Title of presentation:</b> Development of a laboratory nozzle chamber installation for the humidification of buildings <b>Abstract:</b> The nozzle chamber, in which water is sprayed into the air stream using mechanical nozzles, is the main unit for these processes in central air conditioning systems (AHUs). The types of nozzles used do not have a sufficiently high effect of interfacial surface forming due to increased metal usage and the broad total dimensions of certain chambers, i.e., they do not have intensive heat and mass transfer. The authors performed testing of the apparatus in the direct iso-enthalpic air cooling mode to improve the performance of the nozzle chamber. Thus, the experiments conducted confirm the relatively high efficiency of FET operation at small values of irrigation coefficient $B \le 1.0$ . The area highlighted is characterised by the unstable operation of other nozzle types. Therefore, FET nozzles can be operated at irrigation factor values $B = 0.1 \dots 1.0$ . Experiments have shown that this equation is applicable for practical calculations, with a relative error of $\pm 6.7$ %. The aerodynamic resistance of the spray chamber nozzle chamber is also according to the
	data not exceeding 160 Pa. <b>M T Khodijev<sup>1</sup> D D Eshmurodov<sup>2</sup> and D A Ortigova<sup>2</sup></b>
	<sup>1</sup> Gulistan State University, Gulistan, Uzbekistan
	<sup>2</sup> Tashkent State Institute of Textile and Light Industry, Tashkent, Uzbekistan
Paper ID 134	<b>Title of presentation:</b> Study on the development of improved routing technology of CC-15A cotton separator <b>Abstract:</b> The present article examines the existing problems in pneumo-transporters. It also presents advantages of the proposed improved model and the results of research on the Uster HVI 1000 laboratory equipment with high average length, uniformity index in length, short fiber index. The ability to maximize the natural properties of the products and significantly extend the service life of the separator design through this improved device has been proven on the basis of theoretical and practical analysis.
	<b>M T Khodjiev<sup>1</sup>, and Sh Sh Isaev<sup>2</sup></b>
	<sup>2</sup> Engineering and Technology Institute of Namangan, Namangan, Uzbekistan
	<b>Title of presentation:</b> Study on the improvement of the device for cleaning low-grade cotton with high- moisture
Paper ID 136	<b>Abstract:</b> This article analyzes the importance of the process of ginning cotton with high pollution before ginning, the operation of the ginning device before ginning, the impact of the device nodes with the raw cotton. At the same time, the cleaning efficiency of the machine in the cleaning equipment from small and large contaminants, the basic control developments and calculation processes in the selection of the technological parameters of the cleaners are considered. It was suggested and analyzed that before the cotton was ginned, the cleaning device should be replaced with cone-tipped piles and a new belt extension to remove impurities instead of fine-grained drum piles. The impact strength and impact of the proposed conical-tipped pile drums on cotton have been studied.
	M Ergashev <sup>1</sup> , Z Abdikulov <sup>1</sup> , and M Tursunov <sup>2</sup>
	<sup>2</sup> Department of Biology, Gulistan State University, Gulistan, Uzbekistan <sup>2</sup> National University of Uzbekistan named after Mirzo Ulusbek, Tashkent, Uzbekistan
Paper ID 137	<b>Title of presentation:</b> Heredity of determination coefficient in cotton plant hybrids <b>Abstract:</b> The fiber yield and fiber length are strong, the weight of 1000 cottonseeds is
	average, and the weight of cotton boll in one piece is weakly determined. The weight of







	cotton in one cotton boll was recognized as ecological, the weight of 1000 seeds as
	biological, and the length of the fiber as genotypic indicator. The similarity of the first-
	generation hybrid with L-395 was 92.7%, and with L - 620-50.9%, according to the nature
	of inheritance of the degree and structure of correlations. This showed that the first-
	breading it is recommended to attach importance to the length of the fibere and the
	selection of genetypes and to use the "correlation matrix comparison" method when
	comparing them
	$\frac{\text{Comparing them.}}{\text{Muksin Khodijev}^1 \text{ and } \text{Orif Alimov}^2}$
	<sup>1</sup> Gulistan State University Gulistan Uzbekistan
	<sup>2</sup> Jizzakh Polytechnic Institute, Jizzakh, Uzbekistan
D ID 129	Title of presentation: Study on the process of droplet formation when liquid flows out of a
Paper ID 138	capillary
	Abstract: In this article, the law of interaction of air and fibrous materials emanating from
	two opposite pipelines is described in the theory of singular points by S.A. Chapligin, N.E.
	Zhukovsky function, theoretically studied using K. Schwarz's integral formula, Lopital's
	rule, complex potential field and canonical field.
	Muksin Khodjiev <sup>1</sup> , Ilkhom Abbazov <sup>2</sup> , and Javlon Karimov <sup>1</sup>
	<sup>2</sup> Gulistan State University, Gulistan, Uzbekistan
	<sup>2</sup> Jizzakh Polytechnic institute, Jizzakh, Uzbekistan
	Title of an and the set of the se
	Title of presentation: Influence of Local Resistance on Pressure and Speed Changes in
	Abstract: This article focuses on improving product quality and reducing costs to ansure
	the efficiency of the global production of cotton fiber in recent years an increase in the
	consumption of cotton fiber, its specific type and navigation, changing demand for quality
	indicators production of products with certain quality indicators. In all processes of cotton
Paper ID 139	production as well as in the processes of transporting raw cotton using pneumatic transport
	on the basis of analyzes, studies conducted to determine factors that have a negative impact
	on product quality and their elimination, to create resource-saving technologies that reduce
	production costs, theoretically the connection is substantiated by the pressure loss of the
	local resistance of the mixture of air and fibrous waste. Based on the analysis, theoretical
	equations of motion of a mixture of air and fibrous waste in the expanding part of the
	pipeline in currently used pneumatic transport systems have been developed. It has been
	theoretically proven that the angle of expansion of an expanding pipe depends on local
	resistances generated in the expanding part of the pipe during the movement of air and
	fibrous waste in the ginner.
	Zatar Abdikulov', and Marufjon Ergashev'
	Gulistan State University, 120100 Gulistan, Uzbekistan
	Title of presentation: Effect of cadmium metal on barley (Hordown vulgare) growth and
	development
	<b>Abstract:</b> In this study, the effect of cadmium metal ion to 7, 14 and 21 day after
Paper ID 140	germination (DAG) autumn barley samples under laboratory condition is investigated. We
	determined the biomass of plant organs and the amount of cadmium accumulation in above-
	ground organs at germination (7 DAG), 2-leaf (14 DAG), 3-leaf (21DAG) stages. The
	results showed that the dry mass of 7, 14 and 21 DAG barley plant was decreased under
	cadmium metal treatment. However, the root biomass did not change compared with control
	plant. It is also observed that the 21 DAG plant accumulated around 2.4 and 5.6 times more
	cadmium than the 14 DAG and 7 DAG plants respectively.
	Elmira Mukhametshina <sup>1</sup> , Rustam Muradov <sup>1</sup> , Ilkhom Abbazov <sup>1</sup> , and Alisher
Paper ID 141	Usmankulov <sup>1</sup>
	<sup>4</sup> Jizzakh Polytechnic Institute, 130100 Jizzakh, Uzbekistan







	Title of presentation: Improving fiber quality by reducing seed damage in the gin machine
	Abstract: The article focuses on the prevention of seed damage in a gin machine and
	conducts research on what parameters of the gin machine affect seed damage. Based on the
	analysis of scientific research in this area, it was established and studied that the density of
	the raw material roller and its rotation speed, as well as the release of fibers from the
	working chamber are factors influencing seed damage. Scientific research on the density of
	raw materials and the acceleration of turnover have been analyzed. Based on the analysis,
	the acceleration of the rotation of the raw material roller is based on obtaining optimal
	results, which is carried out using a rotating disk with piles on the side of the working
	chamber. It is also scientifically proven that the surface of the gutter must be grooved in
	order to timely remove the seeds separated from the fiber from the working chamber of the
	gin. Practical studies have shown that as a result of turning the side of the working chamber
	of the gin machine, the short fiber index in the fiber content decreased by 1.5%, Str-specific
	tensile strength 0.4 qs / tex and Ehg-elongation elongation improved by 0.2%.
	Alisher Mamatov <sup>1</sup> , Xusanboy Narjigitov <sup>2</sup> , Dilshod Turdibayev <sup>2</sup> , and Jamshidbek
	Rakhmanov <sup>2</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	<sup>2</sup> Department of Mathematics, Gulistan State University, Gulistan, Uzbekistan
	<b>Title of presentation:</b> Refining the Galerkin method error estimation for parabolic type
	problem with a boundary condition Abstract: The article considers a norshalic type houndary value problem with a divergent
	Abstract: The afficience considers a parabolic-type boundary value problem with a divergent
	function:
	d d
	$u_t - \frac{du}{dx_i}a_i(x, t, u, \nabla u) + a(x, t, u, \nabla u) = 0,$
	$\begin{cases} ux_i \\ a y_i + a(x + y_i)\cos(y_i x) = a(x + y_i)  (x + y \in S) \end{cases}$
	$ u_0 u_t + u_i(x, t, u, \forall u) \cos(\forall, x_i) - y(x, t, u),  (x, t) \in S_t , $
	Such nonclassical problems with boundary conditions containing the time derivative of the
	desired function arise in the study of a number of applied problems for example, when the
	surface of a body whose temperature is the same at all its points, is washed off by a well-
	mixed liquid or when a homogeneous isotropic body is placed in the inductor of an
Paper ID 142	induction furnace and an electro-magnetic wave falls on its surface. Such problems have
	been little studied therefore the study of problems of parabolic type when the boundary
	condition contains the time derivative of the desired function is relevant. In this paper, the
	definition of a generalized solution of the considered problem in the space $H\overline{1}1(0)$ is
	given This problem is solved by the approximate Rubnoy Galerkin method. The coordinate
	given. This problem is solved by the approximate Bubblov-Galerkin method. The coordinate system is chosen from the space $H^1(\Omega)$ . To determine the coefficients of the approximate
	solution, the parabolic problem is reduced to a system of ordinary differential equations
	The aim of the study is to obtain conditions under which the estimate of the error of the
	approximate solution in the norm $H^1(0)$ has order $O(k^{k-1})$ . The paper first evaluates the
	approximate solution in the norm $H(\Omega)$ has order $O(n^2)$ . The paper first explores the auxiliary alliptic problem. When the condition of the allipticity of the problem is satisfied
	inequalities are proposed for the difference of the generalized solution of the considered
	narabolic problem with a divergent principal part, when the boundary condition contains the
	time derivative of the desired function and the solution of the auxiliary elliptic problem
	Using these estimates as well as under additional conditions for the coefficients and the
	function included in the problem under consideration, estimates of the error of the
	approximate solution of the Bubnov-Galerkin method in the norm $H^1(\Omega)$ of order
	$O(h^{k-1})$ for the considered nonclassical parabolic problem with divergent principal part
	when the boundary condition contains the time derivative of the desired function.
	Abduvali Khaldjigitov <sup>1</sup> , Aziz Kalandarov <sup>2</sup> , Umidjon Djumayozov <sup>3</sup>
Donon ID 144	<sup>1</sup> National University of Uzbekistan, 100174 Tashkent, Uzbekistan
raper ID 144	<sup>2</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
	<sup>3</sup> Samarkand branch of Tashkent University of Information Technologies, 140100









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Samarkand, Uzbekistan

	Title of presentation: Numerical modeling of coupled problems of thermoplasticity on non-uniform meshes Abstract: This article discusses a new approach for the numerical solution of two- dimensional dynamic problems of thermo-elastic-plasticity. The deformation theory of Ilyushin was used as a model. Discrete equations are based on non-uniform grid equations. The essence of using non-uniform meshes is that you can thicken the mesh if there are features in the area under consideration. As an example, a two-dimensional dynamic coupled thermoplastic problem for an isotropic material is solved numerically. The influence of the temperature field on the thermo-stressed state of a solid is estimated. Based on the numerical results, the dynamics of deformation and the appearance of plastic zones in the considered two-dimensional region are shown.
	Abduvali Khaldjigitov <sup>1</sup> , Aziz Kalandarov <sup>2*</sup> , Mumin Babajanov <sup>3</sup> , Uchkun Adambaev <sup>1</sup> , Dilnoza Sagdullaeva <sup>4</sup> <sup>1</sup> National University of Uzbekistan, 100174 Tashkent, Uzbekistan <sup>2</sup> Gulistan State University, 120100 Gulistan, Uzbekistan <sup>3</sup> Tashkent University of Information Technologies, 100200 Tashkent, Uzbekistan <sup>4</sup> Institute of Mechanics and Seismic Stability of Structure named after M.T. Urazbaev, Academy of Sciences of the Republic of Uzbekistan, 100125 Tashkent, Uzbekistan
Paper ID 146	<b>Title of presentation:</b> Three-Dimensional Coupled Dynamic Thermoplastic Boundary Value Issue for a Transversely Isotropic Parallelepiped Numerical Solution <b>Abstract:</b> This article is devoted to the numerical study of a three-dimensional coupled thermoplastic boundary value problem for a transversely isotropic parallelepiped. The coupled boundary value problem consists of an equation of motion, the thermoplastic constitutive relations for transversally isotropic bodies, the Cauchy relation, and the heat conduction equations with the corresponding initial and boundary conditions. For coupled dynamic boundary value problem, an explicit and implicit difference schemes are constructed. The finite-difference schemes are numerically solved, using the recurrent formulae and elimination method, corresponding to explicit and implicit schemes. The distribution of the displacement and temperature depending on time and coordinates are investigated. The propagation of the plastic zones also is considered. The coincidence of the numerical results obtained by the two methods is shown.
	Isroil Jumanov <sup>1*</sup> , Olim Djumanov <sup>1</sup> , and Sunatillo Xolmonov <sup>1</sup> <sup>1</sup> Department of Information Technologies, Samarkand State University, University blv. 15,
Paper ID 147	<ul> <li><i>140104 Samarkand, Uzbekistan</i></li> <li><b>Title of presentation:</b> Mechanisms of image recovery optimization in the system for recognition and classification of micro-objects</li> <li><b>Abstract:</b> The scientific and methodological foundations for the construction of methods, models, and algorithms of the software complex for visualization, recognition, classification of micro-objects with mechanisms for optimizing image restoration based on the use of structural and statistical redundancy of information have been developed Mechanisms for optimizing image recovery based on the principles of using structural-statistical redundancy caused by the repetition of identical frames during stream transmission, interframe difference, and fractal characteristics of images are proposed. The image recovery mechanisms are improved on the basis of multilayer segmentation of the contour, object texture, binary alpha map, creation of metadata arrays, image scaling by bicubic interpolation. Mechanisms for image identification based on a dynamic model of neural networks with component schemes of axon branching, neuronal activity, and revealing their influence on interneuronal connections have been developed. Optimization of NN image restoration is based on the use of process features, axon movement, axon branching, choice of the direction of its growth depending on the concentration of surrounding neurons.</li> </ul>







	emulation of changes in global and additional characteristics of images. A software package
	has been implemented that includes mechanisms for optimizing image recovery, which has
	been tested with 538 training sets of medical objects (unicellular microorganisms in the
	blood).
	Aziz Kalandarov <sup>*</sup> , Abdukayum Kalandarov <sup>*</sup> , Sindorkul Kulmamatov <sup>*</sup> , Shamshidin
	Ashirov <sup>*</sup> <sup>1</sup> Culiatan State University, 120100 Culiatan, U-bakistan
	Guilsian State Oniversity, 120100 Guilsian, Ozbekistan
	<b>Title of presentation:</b> Numerical modeling of the thermo-stressed state of isotropic bodies
	<b>Abstract:</b> This article proposes a numerical method for solving unconnected static
Paper ID 148	boundary value problems of the theory of thermoelasticity, based on the finite-difference
-	approach. Mathematical and numerical models of a two-dimensional unconnected static
	boundary value problem of thermoelasticity for an isotropic rectangle with boundary
	conditions of the first and second types are considered. Finite-difference schemes have been
	constructed that allow, in combination with the iterative method, to find the desired nodal
	displacement values. The influence of the temperature field on the stress-strain state of the
	considered solid is estimated.
	Knamza Yuldasnev, Yakubjan Yuldasnov, Kuziboy Banramov, and Muknitdin Kolondorov <sup>2</sup>
	<sup>1</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>2</sup> Tashkent State Agrarian University, 100020 Tashkent, Uzbekistan
	Title of presentation: Influence of mineral fertilizers on growth and formation of large-
	sized saplings of small-leaved linden (Tilia Cordata Mill.) and silver birch (Betula Pendula
Paper ID 149	Roth.)
	Abstract: This article presents the results of a study on the effect of mineral fertilizers on
	the growth and formation of large-sized saplings of small-leaved linden ( <i>Tilia Cordata Mill</i> ) and tilture birth ( $\mathbf{P}$ , $(\mathbf{h}, \mathbf{p})$ , $(\mathbf$
	and silver birch ( <i>Betula Penaula Roth.</i> ) in a typical sierozem of the Tashkent region. The
	growth of sanlings. It has been established that the growth of sanlings of small-leaved
	linden and silver birch is enhanced by the use of mineral fertilizers. At the same time, the
	growth rate depends on the doses and the ratio of the fertilizers used.
	Zinoviy Novitskiy <sup>1</sup> , Abdushukur Hamzayev <sup>1</sup> , Nizomiddin Bakirov <sup>2</sup> , and Abdulla
	Karimkulov <sup>3</sup>
	<sup>1</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>2</sup> State committee on forestry of the Republic of Uzbekistan, 100163 Tashkent, Uzbekistan
	Gulistan State University, 120100 Gulistan, Uzbekistan
	Title of presentation: Study on the development of the desert pasture agrophytocenoses
	using a wide range of forage plants
	Abstract: The drained bottom of the Aral Sea covers an area of about 6 million hectares, of
	which 3.2 million hectares are located on the territory of the Republic of Uzbekistan. In
Donor ID 150	addition to the fact that sail is spread from the drained bottom there is a forest suitable area
	of 1.5 million hectares where it is possible to create desert shrub agrophytocenoses. The
	purpose of the work was to develop the most effective methods for creating desert
	agrophytocenoses on forest suitable types of bottom sediments of the dried bottom of the
	Aral Sea and the selection of desert forage plants to increase the productivity of the created
	pastures. Studies shown that when using focal, pasture protection and reclamation-fodder
	methods, as well as such fodder plants as teresken, boialich, keyreuk, it is possible to create
	pastures with a fodder capacity of up to 500 fodder units per hectare. This will increase the
	this work is forest suitable types of bottom sediments of the drained bottom of the Aral Sac
	The drained bottom of the Aral Sea is a reserve of a forage base for animals in the near
	future, which will give a new impetus to the development of animal husbandry in the Aral







Paper ID 152         Title of presentation: Study on program of the solution of the solutis of the solution of the solutis solution and soluti		San racion and at the same time, folder plants, fixing the sail of the drained better of the
Paper ID 157         Nuscratily minore une congrant sidiation in the Keguli.           Paper ID 151         Nuscratilitie of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkem, Uzbekistan <sup>7</sup> Research Institute of Forestry, 11104 Tashkemi, Uzbekistan <sup>7</sup> Calistan State University, 120100 Gulistan, Uzbekistan <sup>7</sup> Calistan, Pases through the circuit with the least resistance and thus provides the lethal effect of harmful microorganisms. <sup>8</sup> Sardor Gulyanov <sup>7</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>7</sup> Utle of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent region. Based on the analysis of climate, soil, hydrogeological, hydrological and economic conditions of the experimental plot and biological features of the garden is determined by the values of total water use, scarcity of water, irrigation, irrigation norms and number of irrigations bioclimatic method. <sup>7</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>7</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>7</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent,		Aral Sea, will significantly improve the acclerical situation in the Design
Paper ID 152         Nusrature 1 assignation 2, Ordina Nazarova , Dualruz Yulosheva , Azamat Tabaev, and Roza Amanhova'a <sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>2</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan <sup>2</sup> Gulistan State University, 120100 Gulistan, Uzbekistan <sup>3</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan <sup>4</sup> Ulistan State University, 120100 Gulistan, Uzbekistan <sup>6</sup> Gulistan State University, 120100 Gulistan, Uzbekistan <sup>6</sup> Dubrit State Comparison, Plans, from the point of view of electricity, are regarded as a well-conductive cable. The peel of the plant is the sheath of the cable, the fire (core) is the electrically conductive conductor. When infected with diseases, the growth of the cellular structure occurs and, as a result, the resistance of the plant lissue decreases. When current is applied, it passes through the circuit with the least resistance and thus provides the lethal effect of harmful microorganisms.           Strader Gulyamov         Tashkent Institute of Irrigation of the apple orchard in the conditions of Tashkent region. Based on the analysis of climate, soil. hydrogeological, hydrological and economic conditions of the experimental plot and biological features of the agarden is determined by the values of total water use, scarcity of water, irrigation norms and number of irrigations bioclimatic method.           T Baizakory, K Yunusov <sup>7</sup> , Sh Yusupov <sup>7</sup> , Z Kilichev <sup>2</sup> , and Yu Xasnov <sup>2</sup> <sup>1</sup> Tashkent Institute of Tarigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan		And Sea, will significantly improve the ecological situation in the Kegion.
Paper ID 151 <sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000         Tashkent, Uzbekistan <sup>2</sup> Research Institute of Protextry, 111101 Tashkent, Uzbekistan <sup>2</sup> Gulistan State University, 120100 Gulistan, Uzbekistan <sup>1</sup> Gulistan State of Irrigation of the apple orchard in the conditions of Tashkent         region in Uzbekistan <sup>1</sup> Gue of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent         region. Based on the analysis of climate, soil, hydrogeological, hydrological and economic         conditions of total water use, scarcity of water, irrigation, irrigation inroms and number of         irrigations bicelimatic method. <sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000         Tasixkov, R Yunusov, Sh Yusupov <sup>1</sup> , Z Kilichev <sup>2</sup> , and Yu Xusanov <sup>2</sup> <sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000         Tasixkent, Uzbekistan <sup>2</sup> Karshi Engineering and Economics Institute, Karshi, Uzbekistan <sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000         Tasita		Nusratilio Lashpulatov, Udina Nazarova <sup>-</sup> , Dilatruz Yuldosheva <sup>-</sup> , Azamat Tabaev <sup>-</sup> ,
Paper ID 151       Title of presentation: Study on propagation of use current discharges in plant tissue Advent. Uzbekistan <sup>2</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan <sup>2</sup> Gulistan State University, 120100 Gulistan, Uzbekistan <sup>2</sup> Gulistan State Gulistan, Uzbekistan <sup>2</sup> Gulistan Advection State Gulistan, Uzbekistan <sup>2</sup> Gulistan Advection State Gulistan, Uzbekistan <sup>2</sup> Gulistan Advection State Gulistan, Uzbekistan <sup>2</sup> Gulistan Apple orchard of the cultivar "Golden" in the conditions of Tashkent         region in Uzbekistan <sup>3</sup> Fasheant Institute of Irrigation of the apple orchard in the conditions of Tashkent         region in Uzbekistan <sup>3</sup> Fasheant Institute of Irrigation of the cultivar "Golden" in the conditions of Tashkent         region in Uzbekistan <sup>3</sup> Fasheant Agricultural Mechanization Engineers, 100000         Tashkent region of the experimental fold and biological factures of the garden is determined by         the values of total water use, scarcity of water, irrigation, norms and number of         irrigations bioclimatic method. <b>T</b> Faizakov <sup>7</sup> , R Vunusov <sup>7</sup> , Sh Yusupov <sup>19</sup> , Z Kilichev <sup>2</sup> , and Yu Xasanova <sup>2</sup> <sup>1</sup> Tashkent Institute of Terxitian and Agricultural Mechanization Engineers, 100000         Tashkent inistitute of methods for using ecological sources of cle		and Koza Amandoeva
Paper ID 151 <sup>7</sup> Research Institute of Froestry, 111/104 Tashkent, Uzbekistan <sup>7</sup> Gulistan State University, 120100 Gulistan, Uzbekistan <sup>7</sup> Gulistan State University, 120100 Gulistan, Uzbekistan          Paper ID 151          Title of presentation: Study on propagation of pulse current discharges in plant tissue         Abstract: This article provides a theoretical description of the propagation of current pulses         in plant tissue and the processes of destruction of cellular structures of harmful pathogens in         the plant organism. Plants, from the point of view of electricity, are regarded as a well-         conductive cable. The peel of the plant is the sheath of the cable, the fire (core) is the         electrically conductive conductor. When infected with diseases, the growth of the cellular         structure occurs and, as a result, the resistance of the plant tissue decreases. When current is         applied, it passes through the circuit with the least resistance and thus provides the lethal         effect of harmful microorganisms.          Paper ID 152          Tashkent Institute of Irrigation of the apple orchard in the conditions of Tashkent         region. Based on the analysis of climate, soil, hydrogeological, hydrological and economic         conditions of the experimental plot and biological features of the garden is determined by         the values of total water use, scarcity of water, irrigation norms and number of         irrigations bioclimatic method.         Tashkent unstitute of Irrigation and Agricultural Mechanization Engineers, 100000         Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000         Tashkent, Uzbekistan          Paper ID 151          The of presentation: Methods of using ecological. hydrological and economic         con		Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000
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Paper ID 151         The of presentation: Study on propagation of pulse current discharges in plant issue Abstract: This article provides a theoretical description of the propagation of current pulses in plant tissue and the processes of destruction of cellular structures of harmful pathogens in the plant organism. Plants, from the point of view of electricity, are regarded as a well- conductive cable. The peel of the plant is the sheath of the cable, the fire (core) is the electrically conductive conductor. When infected with diseases, the growth of the cellular structure occurs and, as a result, the resistance of the plant issue decreases. When current is applied, it passes through the circuit with the least resistance and thus provides the lethal effect of harmful microorganisms.           Paper ID 152         Title of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent region in Uzbekistan Abstract: This article presents the results of long-term theoretical experimental field studies on drip irrigation of Apple orchard of the cultivar "Golden" in the conditions of Tashkent region Based on the analysis of climate, soil, hydrogeological, hydrological and economic conditions of the experimental plot and biological features of the garden is determined by the values of total water use, scarcity of water, irrigation norms and number of irrigations bioclimatic method.           Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent Uzbekistan *Karshi Engineering and Economics Institute, Karshi, Uzbekistan *Karshi Engineering and Economics Institute, Karshi, Uzbekistan *Karshi Engineering and Economics Institute, Karshi, Uzbekistan *Karshi Engineering and Economics for the widespread use of solar cells, their new capabilities, development of methods for increasing efficiency. With the development of new innovative technologies, it is necessary to study the ope		
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Paper ID 153       The plant organism. Plants, from the point of view of electricity, are regarded as a well-conductive cable. The peel of the plant is the sheaht of the cable, the fire (core) is the electrically conductive conductor. When infected with diseases, the growth of the cellular structure occurs and, as a result, the resistance of the plant its use decreases. When current is applied, it passes through the circuit with the least resistance and thus provides the lethal effect of harmful microorganisms.         Paper ID 152       Sardor Gulyamov         Title of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent region in Uzbekistan         Abstract: This article presents the results of long-term theoretical experimental field studies on drip irrigation of Apple orchard of the cultivar "Golden" in the conditions of Tashkent region. Based on the analysis of climate, soil, hydrogelogical, hydrological and economic conditions of the experimental plot and biological features of the garden is determined by the values of total water use, scarcity of water, irrigation, irrigation norms and number of irrigations of the experiment for and Agricultural Mechanization Engineers, 100000 Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan         Paper ID 153       Title of presentation: Methods of using ecological sources of clean energy in the cultivation of bell pepper seedlings         Abstract: Development of methods for increasing efficiency. With the development of new innovative technologies, it is necessary to study the operating conditions of autonomous power sources that can be use		in plant tissue and the processes of destruction of cellular structures of harmful pathogens in
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Paper ID 152       Performation         Paper ID 152       Title of presentation: Drip irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan         Title of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent region in Uzbekistan         Title of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent region in Uzbekistan         Title of presentation: Drip irrigation of the apple orchard in the conditions of Tashkent region in Uzbekistan         Abstract: This article presents the results of long-term theoretical experimental field studies on drip irrigation of Apple orchard of the cultivar "Golden" in the conditions of Tashkent region. Based on the analysis of climate, soil, hydrogeological, hydrolgcical and economic conditions of the experimental plot and biological features of the garden is determined by the values of total water use, scarcity of water, irrigation, irrigation norms and number of irrigations bioclimatic method.         T       T Baizakov <sup>1</sup> , R Yunusov <sup>1</sup> , Sh Yusupov <sup>1</sup> , Z Kilichev <sup>2</sup> , and Yu Xasanova <sup>2</sup> 'Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan         "Itel of presentation: Methods of using ecological sources of clean energy in the cultivarion of bell pepper seedlings         Abstract: Development of ways to use solar energy as a source of clean energy. Development of scientific foundations for the widespread use of solar cells, their new capabilities, development of methods for increasing efficiency. With the development on new innovative technologies, it is necessary to study the operating conditions of autonomous power sources that can be used by consu		conductive cable. The peel of the plant is the sheath of the cable, the fire (core) is the
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Paper ID 153       the values of total water use, scarcity of water, irrigation, irrigation norms and number of irrigations bioclimatic method.         Paper ID 153       T Baizakov <sup>1</sup> , R Yunusov <sup>1</sup> , Sh Yusupov <sup>1°</sup> , Z Kilichev <sup>2</sup> , and Yu Xasanova <sup>2</sup> <sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>2</sup> Karshi Engineering and Economics Institute, Karshi, Uzbekistan         Title of presentation: Methods of using ecological sources of clean energy in the cultivation of bell peper seedlings         Abstract: Development of ways to use solar energy as a source of clean energy. Development of scientific foundations for the widespread use of solar cells, their new capabilities, development of methods for increasing efficiency. With the development of new innovative technologies, it is necessary to study the operating conditions of autonomous power sources that can be used by consumers, their period of operation, and their in-depth structure. This article describes the role of greenhouses in agricultural production and the structure of autonomous power sources and their principles of operation.         Ulbosin Eshbaev <sup>12</sup> , Akbarjon Nishonov <sup>1</sup> , and Aziz Saodatov <sup>1</sup> <sup>1</sup> Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan <sup>2</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan <sup>2</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan aftect the eradation characteristic of the image. This article states about static modeling.		conditions of the experimental plot and biological features of the garden is determined by
Paper ID 153       Title of presentation: Methods for increasing efficiency. With the development of scientific foundations for the widespread use of solar cells, their new capabilities, development of methods for increasing efficiency. With the development of autonomous power sources that can be used by consumers, their period of operation.         Paper ID 153       Title of presentation: Development of methods for increasing efficiency. With the development of new innovative technologies, it is necessary to study the operating conditions of autonomous power sources that can be used by consumers, their period of operation.         Paper ID 154       Title of presentation: Development of methods for increasing efficiency. With the development of new innovative technologies, it is necessary to study the operating conditions of autonomous power sources that can be used by consumers, their period of operation.         Ubosin Eshbaev <sup>1,2</sup> , Akbarjon Nishonov <sup>1</sup> , and Aziz Saodatov <sup>1</sup> 'Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan <sup>2</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan <sup>2</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan affect the gradation characteristic of the image. This article states about static modeling.		the values of total water use, scarcity of water, irrigation, irrigation norms and number of
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<ul> <li>Paper ID 153</li> <li>Paper ID 153</li> <li>Paper ID 154</li> <li>Paper</li></ul>		Title of procentations. Matheda of using coolegical sources of class another in the
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<ul> <li>Paper ID 154</li> <li>Paper ID 154</li> <li>Paper ID 154</li> <li>Period presentation: Development of mathematical models of print quality by Box-Wilson</li> <li>Abstract: The transfer coefficient of ink to the printed material was determined by comparing the mass of the printed material before and after printing. The specifics of the interaction of the printed surface with the surface of the paint layer and the influence of the printing on paper also affect the gradation characteristic of the image. This article states about static modeling.</li> </ul>		Abstract: Development of ways to use solar energy as a source of clean energy.
<ul> <li>Paper ID 154</li> <li>Paper ID 154</li> <li>Capabilities, development of methods for increasing critericity. with the development of new innovative technologies, it is necessary to study the operating conditions of autonomous power sources that can be used by consumers, their period of operation, and their in-depth structure. This article describes the role of greenhouses in agricultural production and the structure of autonomous power sources and their principles of operation.</li> <li>Ulbosin Eshbaev<sup>1,2</sup>, Akbarjon Nishonov<sup>1</sup>, and Aziz Saodatov<sup>1</sup></li> <li><sup>1</sup>Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan</li> <li><sup>2</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan</li> <li>Wilson</li> <li>Abstract: The transfer coefficient of ink to the printed material was determined by comparing the mass of the printed material before and after printing. The specifics of the interaction of the printed surface with the surface of the paint layer and the influence of technological factors on the graphic distortion of the image when printing on paper also affect the gradation characteristic of the image. This article states about static modeling.</li> </ul>		canabilities development of methods for increasing efficiency. With the development of
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<ul> <li>Paper ID 154</li> <li>Paper</li></ul>		autonomous power sources that can be used by consumers their period of operation and
<ul> <li>Paper ID 154</li> <li>Paper ID 154</li> <li>Hield Int-depth structure. This article describes the fole of greenhouses in agricultural production and the structure of autonomous power sources and their principles of operation. Ulbosin Eshbaev<sup>1,2</sup>, Akbarjon Nishonov<sup>1</sup>, and Aziz Saodatov<sup>1</sup> <sup>1</sup>Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan         <sup>2</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>2</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>2</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>3</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of textile and Light Industry, 100100 Tashkent, Uzbekistan         <sup>4</sup>Tashkent Institute of textile and textil</li></ul>		their in depth structure. This article describes the role of greenhouses in agricultural
Paper ID 154Ulbosin Eshbaev <sup>1,2</sup> , Akbarjon Nishonov <sup>1</sup> , and Aziz Saodatov <sup>1</sup> Image: Paper ID 154Image: Paper ID 154Paper ID 154Title of presentation: Development of mathematical models of print quality by Box-WilsonAbstract: The transfer coefficient of ink to the printed material was determined by comparing the mass of the printed material before and after printing. The specifics of the interaction of the printed surface with the surface of the paint layer and the influence of technological factors on the graphic distortion of the image when printing on paper also affect the gradation characteristic of the image. This article states about static modeling.		neduction and the structure of autonomous power sources and their principles of operation
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		affect the gradation characteristic of the image. This article states about static modeling







	preliminary analysis of the color perception of offset printing on papers including synthetic polymers. On the basis of the model of color perception obtained as a result of research in
	offset printing on printed materials, the optimal choice is developed, which allows to make an objective assessment and predict the color perception of the printed materials
	Nodira Savdalieva <sup>1</sup> , Dilfuza Khudavberdieva <sup>1</sup> , Feruza Isamukhamedova <sup>2</sup> , and Illarion
	Shin <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	<sup>2</sup> Uzbek State University of World Languages, 100138 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Integrated studies of the physical and mechanical properties of cotton fabric
Paper ID 155	Abstract: The nature of the adhesive forces of the K-4 preparation is manifested in the
	occurrence of hydrogen bonds between molecules, as a substance with a sufficiently
	developed ability to form hydrogen bonds with cellulose. By the method of a one-factor
	experiment, the regularities of the influence of the concentration of the preparation alkaline-
	hydrolyzed PAN product on shrinkage, the total opening angle and weight gain of the fabric were revealed. It was found that the concentration of the preparation equal to 75 g/l
	provides the minimum shrinkage and rinsability of the sizing, as well as at the same time the
	largest value of TOA.
	Nodira Yusupova <sup>1*</sup> , Sanovar Khamrayeva <sup>1</sup> , Jur'atbek Jabbarov <sup>1</sup> , Nigora Jabbarova <sup>1</sup> ,
	and Saida Djabbarova <sup>-</sup> <sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	Tushkeni Insinine of Texine and Light Industry, 100100 Tushkeni, Ogoekistan
	Title of presentation: Structure of the costume texture thickness investigation
	Abstract: The costume fabric is woven on the basis of tandoor sarja braids. Such textures
Paper ID 156	are superficial in the body. When washing a suit sewn from the surface tissue of the body, in
	rupture. This article presents the results of research on improving the quality in particular
	increasing the resistance to abrasion of cotton fabrics such as costume cloth. It is noted that
	the resistance of the fabric to abrasion depends on the indicators of its structure, that is, on
	the degree of mutual bending of the warp and weft threads or the supporting surface of the
	tabrics. Karim Sultanau <sup>1*</sup> Sahida Jamailaua <sup>1</sup> Bakhadir Baymuratau <sup>2</sup> and Shamaidin
	Tulanov <sup>2</sup>
	<sup>1</sup> Institute of Mechanics and Seismic Stability of Structures, Uzbekistan Academy of
	Sciences, Tashkent, Uzbekistan
	<sup>2</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Experimental determination of cotton yarn strength at different speeds of movement obtained by various technological methods
Donon ID 157	Abstract: Our results on the strength parameters of cotton yarns manufactured by carded
raper ID 157	and combed systems by ring and rotor spinning (CD-carded ring-spun, OE-carded rotor-
	spun, CM-combed ring-spun) are presented. Experiments to test yarns for strength were
	conducted on a "Statimat C" tensile installation at speeds of the lower end of the yarn from 100 mm/min to 1000 mm/min. From the diagrams of yarn stratching to breaking the
	changes in breaking load specific breaking load critical strain values at which the varn
	breaks, time of stretching before breaking, depending on the strain rate for the considered
	types of yarns, were determined. The analysis of the experimental results obtained shows
	the quantitative and qualitative characteristics of the change in strength parameters of three
	varieties of yarns. Bakhodir Baymuratoy <sup>1*</sup> Shamsidin Tulanoy <sup>1,2</sup> Karim Sultanoy <sup>1,2</sup> and Sabida
	Ismailova <sup>1</sup>
Paper ID 158	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkemt, Uzbekistan
	<sup>2</sup> Institute of Mechanics and Seismic Stability of Structures of the Academy of Sciences of the
	Republic of Uzbekistan, 100128 Tashkent, Uzbekistan









	<b>Title of presentation:</b> Strain characteristics of cotton yarns depending on the strain rate and
	methods of their manufacture
	Abstract: One of the main reasons for the nonlinearity of the tension diagrams of cotton
	yarns is the variability of their moduli of elasticity and plasticity under strain. The changes
	in strain moduli obtained from the tensile diagrams confirm this. The strain curve has ten
	parameters, the values of which depend on the method of yarn manufacture and the strain rate. Decad on the results of processing the tension discreme of actton yarn obtained by
	rate. Based on the results of processing the tension diagrams of could yarn, obtained by
	carded and combed systems by ring and rotor spinning (CD-carded ring-spin, OE-carded rates from 0.0022 g 1 to 0.022 g 1 the values
	of these ten peremeters were determined and enslyzed. Their quantitative and qualitative
	dependence on the method of their menufacture and strain rate are shown
	Salokhiddin Vunusov <sup>1</sup> Azamat Sultonov <sup>2</sup> Mashkhur Pakhmatov <sup>2</sup> Tojiddin
	Bohomurotov <sup>3</sup> and Mirkhosil $\Delta \sigma$ zamov <sup>3</sup>
	<sup>1</sup> Branch of Russian State University of Oil and Gas 100125 Tashkent Uzbekistan
	<sup>2</sup> "Rukhara agroklaster" LLC 200103 Rukhara Uzbekistan
	<sup>3</sup> Tashkent Institute of Textile and Light Industry 100100 Tashkent Uzbekistan
	Tushkem Institute of Textile and Eight Industry, 100100 Tushkem, Ogoekistan
	Title of presentation: Results of studies on extending the time operation of gin and linter
	grates
	Abstract: Results of studies on extending the time operation of gin and linter grates by
Donon ID 150	mardeling of the working area by high-frequency current are given in article. Mathematical models for calculation of her parameters of the mode of hardening of the working area of
Paper ID 159	ain and linter grates are made. As a result of the executed researches the following
	conclusions are drawn: change of a gap between grates in a grate lattice leads to change of
	parameters of process of ginning and finally to deterioration of products. Mathematical
	models for calculations of parameters of process of hardening of the working area of grates
	are received. On the received mathematical models key parameters of hardening process
	current of high frequency which have the following values are calculated: depth of the
	tempered layer $-2.0$ mm, the optimum frequency of current $-60000$ , specific power $-500$
	$W/cm^2$ , hardening time – 10, studying hardness tempered and not tempered sites of grates
	by method of Rockwell showed increase in hardness of the tempered site to HRC 55 against
	HRC 45 at not tempered by the working area.
	Azamat Sultonov <sup>1</sup> , Mirsolikh Agzamov <sup>2</sup> , Mashkhur Rakhmatov <sup>1,2</sup> , Mirkhosil
	Agzamov <sup>2</sup> , and Khasan Nosirov <sup>2</sup>
	<sup>1</sup> "Bukhara agroklaster" LLC, 200103 Bukhara, Uzbekistan
	<sup>2</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	Title of presentation. Development of the saw cylinder for gins and linters with use of new
	elements of the design
Paper ID 160	Abstract: Article issues of decrease in amplitude of dynamic fluctuations of saw cylinders
- <b></b>	of gins and linter for the purpose of reduction of a deviation of saws from the plane of
	rotation and contact with saws of grates are consecrated. Mathematical models for
	calculation of flexural fluctuations of a shaft of a saw cylinder, taking into account intensity
	of placement of the mass moments of inertia, a technique of the solution of the equation of
	flexural fluctuations of a saw cylinder with variable intensity of weight and flexural rigidity
	of sections are given. Data on a new design of saw cylinders with use between the saw
	laying made on a polymeric basis and equipped with steel pins.
	Mirkhosil Agzamov <sup>1</sup> , Ibrat Radjabov <sup>1</sup> , and Djaloliddin Yuldashev <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100, Tashkent, Uzbekistan
Paper ID 161	Title of presentation: Research of the reasons of increased drop in cotton seeds after
	generation with reduced density of raw roller
	Abstract: Results of researches on definition of influence of density of the raw roller on
	pubescence of cotton seeds are given in article. The received mathematical model for







	calculation of contact pressure and movement of the raw roller in the form of a system from six equations with six unknown. The numerical results calculated on the computer. Sizes of shift and contact pressure for the set physic-mechanical and geometrical parameters of a system are determined. It is established that contact pressure significantly depends on elasticity (density) and angular speed of the raw roller. On the basis of the graphic data of
	contact pressure and contact movement of the raw roller received results of calculations the conclusion that with reduction of density of the raw roller conditions of capture of a short cotton slice worsen. The fact that the contact pressure and movement fluctuate during time is the reason of it, i.e. in the beginning the short cotton slice contacts to a saw, but during
	fractions of a second this contact is lost, also contact pressure similarly changes. Results of theoretical researches proved increase in a full pubescence of seeds after gin with reduction of density of the raw roller, i.e. one of the reasons of it is deterioration in conditions of capture of short cotton slices a saw - fluctuations of contact pressure and contact movement of the raw roller
	Mirsolikh Agzamov <sup>1</sup> , Mashkhur Rakhmatov <sup>2</sup> , Mirkhosil Agzamov <sup>1</sup> , Odiljon Olimov <sup>1</sup> ,
	and <i>Khasan</i> Nosirov <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100, Tashkent, Uzbekistan <sup>2</sup> "Bukhara agroklaster" LLC, 200103, Bukhara, Uzbekistan
	<b>Title of presentation:</b> Search for ways to increase yield and improve product quality in the process of saw ginning
	Abstract: This article presents the results of research on increasing fiber yield and
	improving product quality by using a new design of the vas deferens from the working
Paper ID 162	chamber. It has been experimentally established that the most rational in terms of yield and quality of fiber, seeds and gin productivity is the position of the seed comb when the axes of
	its pegs are directed 5-10 degrees above the axis of the saw cylinder. The smallest value of
	complete hairiness of seeds after gin was obtained when installing a lamellar seed comb. Its
	average value was 13.8%. At the same time, the fiber yield was maximum - 34.66%, and the
	highest productivity - 8.5 kg of fiber per saw per hour. The influence of the distance
	between the ends of the seed comb pegs and grates at their values of 10, 20, 30 mm on the gipping indices was investigated. A distance of 20 mm is recognized as optimal taking into
	account all indicators - fiber yield, complete pubescence, productivity, quality of fiber and
	seeds. An experimental working chamber equipped with lamellar combs was made. It has
	been tested in the production conditions of a pilot cotton mill.
	Nozimjon Jurabayev <sup>1</sup> , Shakhboz Shogofurov <sup>1</sup> , Kurbonali Kholikov <sup>1</sup> , and Umarjon Meliboev <sup>1</sup>
	<sup>1</sup> Namangan Institute of Engineering and Technology, 160115 Namangan, Uzbekistan
	Title of presentation: Study of the fabric structure influence on the physical-mechanical
	and technological properties of knitted products
Paper ID 163	<b>Abstract:</b> Three kinds of knitted fabrics with high shape retention capacity equipment LONG-XING SM 252 (China) 12-grade flat needle loom were produced their
	technological characteristics were compared, and graphical records were supplied in this
	article based on experimental samples of knitted rubber fabric. The developed variants of
	knitted fabric differ from each other in pattern type, report, shape retention feature and a
	number of other indicators. Physical and mechanical properties of the obtained samples were determined experimentally on modern equipment installed in the testing laboratory of
	the Namangan Institute of Engineering Technology.
	Anvar Djuraev <sup>1</sup> , Ruzimurad Rosulov <sup>1</sup> , Javlon Kholmirzaev <sup>2</sup> , Husan Diyorov <sup>3</sup> , and
	Umid Berdimurodov <sup>3</sup>
Paper ID 164	I ashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan <sup>2</sup> Namangan Institute of Engineering and Construction, 160101 Namangan, Uzbekistan
	<sup>3</sup> Termiz Branch of Tashkent State Technical University, 190100 Termiz, Uzbekistan
	Title of presentation: Development of effective construction and justification of







	parameters of the cleaner of fibrous material <b>Abstract:</b> This article provides a general scheme of the principle of operation of a fibrous material cleaner from coarse and fine litter. Based on the compilation of dynamic and mathematical models, its numerical solution, the regularities of the movement of the working bodies of the purifier are presented. Analyzes of the laws of motion and graphic dependencies substantiated the main parameters of the purifier. Recommendations are given for widespread use in fiber-cleaning production.
	Kamol Akhmedov <sup>1*</sup> , Savnila Matismailov <sup>1</sup> , Botir Mardonov <sup>1</sup> , and Alisher Yuldashev <sup>1</sup>
Paper ID 165	<ul> <li><sup>1</sup>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan</li> <li>Title of presentation: Theoretical and experimental analysis of the process of discretization of cotton fiber in OE spinning</li> <li>Abstract: This article examines the influence of the parameters of the coating teeth of the discrete drum on the quality of the OE yarn. Based on the analysis of the conditions for retention of fibers by the covering teeth of the discrete drum, equations were obtained to determine the angle of inclination of the teeth. To determine the effect of the coating parameters of the discrete drum teeth on yarn quality, experiments were performed using the Full Factor Experiments mathematical planning method, and a regression equation was obtained for each variable. As a result, the optimal values of the discretization drum coating teeth of the OE spinning machine were determined.</li> </ul>
	Illerion Shin <sup>1</sup> Zokhir Shadmanaulay <sup>1</sup> Sakhrahian Nazaray <sup>1</sup> and Nigara
	Inarion Shini , Zokini Shoumonquiov , Sakin objon Nazarov , anu Nigora
Paper ID 166	Iskandarova <sup>1</sup> <sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan Title of presentation: Processing of teeth of saw blades of cotton processing machines with a stream of compressed air with abrasive particles Abstract: In the article, it is presented materials on abrasive blasting of teeth of saw blades of cotton processing machines with particles of black silicon carbide. The micro-profile of the surface, characterized by the height and pitch of irregularities, after microcutting with abrasive particles is able to intensify the process of fiber separation by activating the tank surfaces of the teeth. This machining process is also accompanied by deformation hardening of the surface layer of the teeth, leading to an increase in the wear resistance and durability of the saws.
	Nigora Ergasheva <sup>1</sup> , Illarion Shin <sup>1</sup> , Fotima Nigmatova <sup>1</sup> , and Zamira Nazarova <sup>1</sup>
Paper ID 167	<sup>T</sup> <i>Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan</i> <b>Title of presentation:</b> Investigation of the deformation and strength characteristics of the thread connection in the manufacture of products from fur waste <b>Abstract:</b> By the method of mathematical planning of the experiment, regression equations were obtained for the breaking load and the breaking relative elongation of the thread connection of a special furrier's seam in the manufacture of products from fur waste. As input factors were taken: the number of stitches in 1 cm., Thread thickness, needle diameter. The features of the behavior of the strength model of this thread connection are revealed.
	Sadoqat Rahmatova <sup>1</sup> , Nozimjon Jurabayev <sup>1</sup> , and Qurbonali Holikov <sup>1</sup>
Paper ID 168	<ul> <li><sup>And</sup> <sup>And</sup> <sup>An</sup></li></ul>







	Sanovar Khamrayeva <sup>1</sup> , Dilfuza Kadirova <sup>1</sup> , and Sayidvoris Rakhimkhodjayev <sup>1</sup> <sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
Paper ID 169	<b>Title of presentation:</b> Study on the mechanics of textile thread in woven <b>Abstract:</b> Specialists in the weaving industry are often interested in the question of what tension of the warp and weft threads must be set on the weaving machine to produce a particular fabric. Along with this, they are interested in the question of what is the relationship between these parameters and the structure of the fabric, how much it is necessary to increase or decrease the tension of the warp and weft threads when changing the assortment of fabric. These problems arise because the correct thread tension on weaving machines increases the productivity of equipment and labor, and also improves the quality of the fabrics produced. The current state of the mechanics of a weighty deformable flexible thread on a plane and other forms of guides do not take into account the rigidity of the threads on the friction surface, since this parameter is determined by the type and type of threads, the linear density of the threads and the elastic properties of the threads. Therefore, the article analyzes the work on the mechanics of textile yarn and studies of the tension of the yarns were carried out depending on the radius of friction, angle of friction, coefficient of friction and stiffness of the yarns.
	<b>Umida Yusupalieva<sup>1</sup>, Saypila Matismailov<sup>1</sup>, and Alisher Yuldashev<sup>1</sup></b> <sup>1</sup> Department of Spinning Technology, Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
Paper ID 170	<b>Title of presentation:</b> Study of the influence of cotton fiber indicators on yarn quality <b>Abstract:</b> In order to determine the relationship between the fiber properties of the yarn quality in the article, experiments were conducted using a passive method of mathematical planning and a regression equation was obtained for each optimal parameter. Based on the experiments, it was found that a decrease in fiber micronaire, an increase in tensile strength, fiber length and uniformity, leads to an increase in the specific tensile strength of yarn, a decrease in the coefficient of variation in tensile strength and the number of breaks in the yarn.
	Gulom Allaniyazov <sup>1</sup> , Kurbonali Kholikov <sup>2</sup> , Gulfiya Gulyaeva <sup>3</sup> , Nuriddin Musaev <sup>3</sup> , and
	<b>Mirabzal Mukimov</b> <sup>3</sup> <sup>1</sup> Nukus State University, 230105 Nukus, Uzbekistan <sup>2</sup> Namangan Engineering Technological Institute, 190110 Namangan, Uzbekistan <sup>3</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
Paper ID 171	Title of presentation: Study of technological parameters and material consumption of two-
	layer knitted fabric <b>Abstract:</b> This article presents the results of a study of technological parameters and material consumption of new structures of two-layer knitted fabric. To study the technological parameters of new variants of two-layer knitted fabric on a Long Xing 252 SC flat-fanged machine, five variants of two-layer knitted fabric were developed, which differed from each other in the weave structure.
	<b>Ruzimurad Rosulov<sup>1</sup></b> , Anvar Djuraev <sup>1</sup> , Husan Diyorov <sup>2</sup> , and Umid Berdimurodov <sup>2</sup>
Paper ID 172	<sup>2</sup> <i>Termiz Branch of Tashkent State Technical University, 190100 Termiz, Uzbekistan</i> <sup>2</sup> <i>Termiz Branch of Tashkent State Technical University, 190100 Termiz, Uzbekistan</i> <b>Title of presentation:</b> Theoretical study of the influence of the length of the spike on the cleaning effect of the fine litter cleaner <b>Abstract:</b> In the article, a schematic diagram and principle of operation of the recommended raw cotton cleaner from fine litter are provide. The article presents the results of theoretical studies of the effect of the length of the pegs on the cleaning effect of the raw cotton cleaner. Based on the study of the law of movement of raw cotton on the surface of the splitter, graphical dependences of the change in the length of the splitter on the change in the mass of cotton are constructed. Substantiation of the length of the drum heads of the







	corresponding areas for cleaning cotton from fine litter.
	Sardor Karimov <sup>1</sup> , Adham Rafikov <sup>1</sup> , and Nabijon Nabiev <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	Title of presentation: Physicochemical properties of graft copolymers of collagen and
Paper ID 173	fibroin with polyacrylic acid
	Abstract: Certain physicochemical properties of the synthesized graft copolymers of raw
	skin collagen and natural silk fibroin with polyacrylic acid have been determined. The
	dependence of the solubility, density, and thermal properties of copolymers on the ratio of
	components and synthesis conditions has been established.
	Azamat Gulamov <sup>1</sup> , Komil Avazov <sup>1</sup> , and Bekzod Abrayqulov <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	Title of presentation: Research of quality silk cocoon making technology
	Abstract: This article presents the period of wrapping a silkworm in a cocoon during the
Paper ID 174	season of making cocoons, as well as the results of experiments on their collection and
•	analysis, existing problems. Based on the results, proposals were made to improve the
	system of attracting the population to entrepreneurship and the development of
	entrepreneurship. In particular, the effectiveness of organizing capacities for the production
	of raw silk by cocooning a silkworm at home, serving the enterprises of the silk cluster, is
	explained.
	Azamat Gulamov <sup>1</sup> , Komil Avazov <sup>1*</sup> , and Bekzod Abrayoulov <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry, 100100 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Studying the effect of drying technology on silk cocoon shell and
	chrysalis features
	<b>Abstract:</b> This article proposes the influence of the cocoon drying technology on the
Paper ID 175	properties of the shell and pupa of the silkworm. We also analyzed the change in the initial
	weight of the cocoons treated at different temperatures, the microscopic view of the cocoon
	shells. Cocoons grown at different times of the year were taken as the object of the study
	As a result of the treatment of the cocoon nuna with an infrared ray, hot air and chemical
	methods, the yield, color properties and solubility of the cocoon shell were compared and
	analyzed
	Asror Daminov <sup>1</sup> Rektosh Donivorov <sup>2</sup> Matluha Donivorova <sup>2</sup> Divor Kosimov <sup>1</sup> Zukhra
	Astor Dammov, Dectosh Domyorov, Matuba Domyorova, Diyor Rosmov, Zukira Sultonbekova and Abboshek Nalibaev <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Textile and Light Industry 100100 Tashkent Uzbekistan
	<sup>2</sup> Jizzakh Polytechnic Institute 200103 Jizzakh Uzbekistan
	Jizzakh I biylechnic Institute, 200105 Jizzakh, Ozbekistan
	<b>Title of presentation:</b> Experimental determination of the wave height of the base and varus
	in the tissue and a new method for measuring the tissue thickness without contact
Paper ID 176	Abstract. In many spinning and weaving processes fibers and threads are bent. To be more
	precise: in the textile industry there is no technological process in which fibers, threads or
	textiles do not pass through a curved surface. Therefore, this article highlights the research
	work on a new method of contactless determination of the wave height and thickness of the
	work on a new method of contacteess determination of the wave neight and the kness of the wave neight and the kness of the wave neight and the kness of the
	technologies. Experiments of research work are considered on the example of crêpe de
	Chine fabric
	Abdurakhim Kuchhoav <sup>1</sup> Oyhak Amirov <sup>1,2</sup> Culnoza Saliyaya <sup>3</sup> Dakhatay Kamimaya <sup>1</sup>
	Humovun Sabirov <sup>1</sup> Mahamadi Abramatov <sup>4</sup> and Roymakhmat Kakhramanov <sup>2</sup>
Paper ID 177	<sup>1</sup> Institute of Zoology Academy of Sciences of Uzbekistan 100053 Tashkent Uzbekistan
	<sup>2</sup> Tashkent State Agrarian University 100140 Tashkent province Uzbekistan
	<sup>3</sup> Jizzakh State Pedagogical Institute 130100 Jizzakh Uzbekistan
	<sup>4</sup> Termer State University 190111 Termer Uzhekistan
	τοτιπός, διαιό υπινοι διίν, τροτττ τοτιπός, υζυσκιδιαπ
	Title of presentation: Morphological and molecular identification three species







	<i>Teladorsagia</i> (Nematoda: Trichostrongylidae) in sheep, Uzbekistan <b>Abstract:</b> Comparative studies of three species <i>T. circumcincta</i> , <i>T. trifurcata</i> and <i>T.</i>
	<i>davtiani</i> , which are preliminarily different morphs of the same species, have been carried
	out in this paper. Insignificant differences in morphological sizes and characters between $m_{\rm s}$ males were identified and fragments of ITS-2 ribosomal DNA of three species of the genus
	<i>Teladorsagia</i> were investigated. There were no sequence differences between T.
	<i>circumcincta</i> and <i>T. trifurcata</i> . Minor differences were noted between <i>T. circumcincta</i> and
	T. davtiani species at the level of 0.8%. With complete similarity between T. circumcincta
	and T. trifurcata and a low percentage of differences between T. circumcincta and T.
	davtiani in different specimens, they represent different morphological forms of one species
	of T. circumcincta.
	Favzullaev <sup>2</sup>
	<sup>1</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan
	<sup>2</sup> Kashkadarya Grain and Legume Research Institute, Karshi, Uzbekistan
	<b>Title of presentation:</b> Scientific basis of appropriate sowing of wheat varieties on irrigated
	land of UZDEKIStan Abstract: In the irrigated lands of Tashkent province, regionalized wheat variaties are
	usually planted at a rate of 250 kg/ha, but it would be possible to increase yields and grain
Paper ID 178	quality if a scientifically based optimal sowing rate was recommended for each variety.
	Another opportunity to increase wheat yields in the region is the development of seed
	production. Numerous studies and practices have shown that it is possible to increase wheat
	yields by 20-25 by sowing wheat seeds. In this regard, the most pressing issue is to increase
	the level of seed germination. In this article, it is important to study the scientifically based
	guality in order to take full advantage of the potential of regionalized varieties of wheat in
	irrigated lands. The determination of the most optimal planting norms, taking into account
	their biological properties, is based on research.
	Saidahon Ahmedova <sup>1</sup> , and Muzaffar Asrarov <sup>1</sup>
	<sup>1</sup> National University of Uzbekistan named after Mirzo Ulugbek, Tashkent 100174,
	Uzbekistan
	Title of presentation: Evaluation of the hepatoprotective and antioxidant properties of an
	aqueous extract of plant polyphenols ( <i>helichrysum maracandicum</i> )
Donon ID 170	Abstract: This study investigated in vivo and in vitro the effects of helmar 2 polyphenol
Paper ID 179	extracts isolated from the plant Helichrysum maracandicum in the conditions of toxic
	hepatitis poisoned by carbon dioxide (CCl4) in rats. The experiments were performed on
	healthy male rats and grouped hepatitis model animals with CCl4. In toxic hepatitis, helmar $2$ nolymboral extracts at a dose of 20 mg/kg showed an inhibitory effect on hepatic
	mitochondrial lipid peroxidation Evidently the inhibitory effect of polyphenol extracts on
	the peroxidation of hepatic mitochondrial lipids was very close to that of the
	hepatoprotective drug silymarin.
	Anvar Anarbaev <sup>1</sup> , Obid Tursunov <sup>1,3,4</sup> , Dilshod Kodirov <sup>1</sup> , Zayniddin Sharipov <sup>1</sup> ,
	<b>Farrukh Mukhtarov</b> <sup>3</sup>
	Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent Uzbekistan
	<sup>2</sup> Institute of Energetic Problems, Uzbek Academy of Science, 100084 Tashkent, Uzbekistan
D ID 101	<sup>3</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
Paper ID 181	<sup>4</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
	<sup>5</sup> Tashkent State Technical University, 100097 Tashkent, Uzbekistan
	Title of presentation: Changes of chemical reactions in soil during electric processing by
	means of UV-radiation
	Abstract: The technology of electro-processing by UV-radiation soil of agricultural plants







	is considered. The mechanism of the effect of UV irradiation to change by redox reactions a
	chemical potential of the soil is shown. As the result of experimental researches, optimum
	parameters for processing soils with ultraviolet radiation lamps for increasing the absorption
	of the most mobile manganese forms in plants are defined.
	Anvar Anarbaev <sup>1</sup> , Obid Tursunov <sup>1,2,3</sup> , Dilshod Kodirov <sup>1</sup> , Ibrokhim Khudaev,
	Khayrulla Isakhodjayev <sup>1</sup> , and Sayid Islikov <sup>3</sup>
	<sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000
	Tashkent, Uzbekistan
	<sup>2</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>3</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
Paner ID 182	
1 aper 10 102	Title of presentation: Pre-sowing activation of seeds by ultraviolet (UV) radiation
	Abstract: The mechanism of influence the UV- radiation biological processes into seeds of
	agricultural plants is considered. The technical parameters of installation for pre-sowing
	treatment seeds with ultraviolet radiation lamps for increasing the permeability of biological
	membranes of cells in seed are defined. The results of experimental researches on have
	established that for processing of seeds cotton pre-sowing treated with ultraviolet rays,
	increasing of their germination and productivity of agricultural crops are shown.
	Shaukat Khakimov, Sayyora Rajapova, Faffukh Amirkulov, Elyor Islomov
	<sup>1</sup> Institute Tashkent state transport university, 100167 Tashkent city, Uzbekistan
	Title of presentation. Road Intersection Improvement – Main Step for Emission Reduction
	and Fuel Economy
	<b>Abstract:</b> This article demonstrates the changes made in the intersection model using PTV
	Vissim have an impact on reducing an amount of GHG and fuel consumption. One of the
Paper ID 183	most problematic intersections in Namangan, Uzbekistan, was selected and traffic flow
1	during peak hours was studied in order to prepare the simulation of the intersection. The
	article offers two types of solution as so to lessen the amount of toxic gases and fuel
	consumption. In the first solution, the situation was improved by optimizing the phase of the
	traffic light and by changing the cycle duration. The second solution was to reduce the
	amount of toxic gases and fuel consumption from vehicles by changing the geometric
	dimensions of the intersection. After the implementation of both solutions, the current state
	of LOS was raised from D to A level.
	Yu Kenjaev <sup>*</sup> , and A Tursunkulova <sup>*</sup>
	National University of Uzbekistan named after Mirzo Ulugbek, 1001/4 Tashkent,
	Uzbekistan <sup>2</sup> Taabkant State Aenanian University, 100140 Taabkant Urbehistan
	Tashkeni Siale Agrarian University, 100140 Tashkeni, Uzbekisian
	Title of presentation: Changes in soil physical properties under the effect of irrigation
	<b>Abstract:</b> The mechanical composition of soils in the middle reaches of the Zarafshan
Paper ID 184	River (Jambay Samarkand Payarik Ishtikhon Kattakurgan and Narnay districts) and the
	processes of formation of soil layers under the influence of irrigation water of general
	physical properties were scientifically analyzed. In this case, the inflow of the Zarafshan
	River played an important role in the formation of light agroirrigation strata. An increase in
	nutrients and humus with an increase in the amount of physical sludge over a long period of
	time (35–40 years) is positively assessed for thickening of the soil layer, but leads to an
	increase in bulk mass of 0.15–0.3 g / $cm^3$ and soil compaction.
	Kh G Ayasov <sup>1*</sup> , E Akhmedov <sup>2</sup> , and S Khidirov <sup>2</sup>
	<sup>1</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>2</sup> Tashkent State Agrarian University, 111218 Tashkent, Uzbekistan
Paper ID 185	
-	<b>Little of presentation:</b> Effects of certain mineral fertilizers on the biological mass of <i>Indications Tinctonia</i> and <i>Impatience Palagming</i> plants.
	<i>Inalgojera Incloria</i> and <i>Impatiens Balsamina</i> plants
	Abstract: The article describes the effect of mineral fertilizers on the cultivation of dyed
	indigotera ( <i>Inalgotera tinctoria L.</i> ) and nenna ( <i>Impatiens balsamina L</i> ), the amount of their







	application and the ratio of basic nutrients (nitrogen, phosphorus and potassium) related. It
	has been established that the adequate development of Indigofera and henna plants depends
	on the ratio of mineral fertilizers used.
	S F Amirov <sup>1</sup> , A Kh Sulliev <sup>1*</sup> , A T Sanbetova <sup>2</sup> , and Islom Kurbonov <sup>1</sup>
	<sup>1</sup> Tashkent State Transport University, Tashkent, Uzbekistan
	<sup>2</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000
	Tashkont IIzhokistan
	Tushkeni, Ozbekisian
	Title of magantations. Study on the himenometrical transvertices signify with distributed
	The of presentation: Study on the ofparametrical transudations circuits with distributed
D ID 104	parameters
Paper ID 186	Abstract: This paper highlights the methods of resenting mode in the transudation with
	distributed parameters. The transient parameters of the power supply were analyzed. It was
	discovered that resonance is provided in a small range of movement of the moving
	component of the sensor in known turbofan engines, indicating that the known techniques
	of sustaining the resonance mode are flawed. Further study should focus on developing
	novel methods for preserving resonance mode over the entire range of change of the
	converted value general principles of turboiet engine construction and a complete
	examination of their resonant circuits according to the findings
	$\mathbf{S}$ Aminov <sup>1</sup> D Bustomov <sup>1*</sup> N Vuldochov <sup>1</sup> U Momodoliov <sup>1</sup> and M Kunhonovo <sup>1</sup>
	S Amirov, D Kustamov, N Tuluasnev, U Mamadanev, and M Kurbanova
	Tashkent State Transport University, 100107 Tashkent, Uzbekistan
	Title of presentation: Study on the Electromagnetic current sensor for traction electro
	supply devices control systems
Paper ID 187	Abstract: This article is devoted to the new electromagnetic sensor design of large direct
	and alternating currents with expanded functionality for the electro supply devices control
	and management systems on electrified railways. It's analyzed that its nonlinear magnetic
	circuit with longitudinal magnetization based on the magnetization curve approximation.
	Also it's shown that developed sensor sensitivity depends on working air gap sizes and
	modulating magnetic field induction
	$\Delta$ Mirzabaev <sup>1,2*</sup> $\Delta$ Isakov <sup>1</sup> $\Omega$ Soliev <sup>3</sup> M Makhkamova <sup>4</sup> and D Kodirov <sup>1</sup>
	<sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers 100000
	Tashkeni Institute of Imgation and Agricultural Mechanization Engineers, 100000 Tashkent Uzbekistan
	<sup>2</sup> International Solar Energy Institute ISEL 100084 Tashkent Uzbekistan
	<sup>3</sup> Tashkant State Technical University, 100007 Tashkant, Uzbekistan
Doman ID 100	<sup>4</sup> "MID SOLAD" LLC 100076 Trahlant U-halistry
Paper ID 188	MIR SOLAR LLC, 1000/0 Iashkeni, Ozbekisian
	Title of presentation. Maior tranda abaracterizing salar energy development in Uzbalistan
	The of presentation: Major trends characterizing solar energy development in Uzbekistan
	Abstract: This paper examines the main trends in the development of solar energy in
	Uzbekistan. It also describes various schemes for powering deep-water pumps using PV
	power plants and analyzes the payback period of small autonomous (off-grid) solar systems.
	Akram Mirzabaev <sup>1,2</sup> , Sherzod Mirzabekov <sup>3</sup> , Temur Makhkamov <sup>4</sup> , Odil Soliev <sup>3</sup> , Oskar
	Sitdikov <sup>+</sup> and Dilshod Kodirov <sup>+</sup>
	<sup>4</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000
	Tashkent, Uzbekistan
	<sup>2</sup> International Solar Energy Institute ISEI, 100084 Tashkent, Uzbekistan
	<sup>3</sup> Tashkent State Technical University, 100097 Tashkent, Uzbekistan
	<sup>4</sup> "MIR SOLAR" LLC, 100076 Tashkent, Uzbekistan
Paper ID 189	
	Title of presentation: The impact of renewable energy sources on power flows in the
	electric power system of Uzbekistan
	Abstract: This paper analyzes the variations in power flows along the main power
	transmission lines of the electric power system of Uzbekistan. taking into account the power
	generation by large PV power plants (PVP), which will be commissioned by 2024. The
	namer concludes with recommendations on the modernization of the electric power
	paper concludes with recommendations on the modernization of the electric power
	conomy.







	A Rakhmatov
	Department of Power Supply and Renewable Energy Sources, Tashkent Institute of
	Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Study on the increase in power supply reliability for the consumers
D ID 100	of electricity
Paper ID 190	Abstract: The issues of increasing the reliability of power transformers used in power
	supply systems for agriculture and water management were discussed in this article. The
	degree of damage to the insulation of power transformers by the physical and chemical
	materials on the assessment of the state of insulation by the degree of damage to the
	insulation of individual units of the power transformer were presented.
	A Rakhmatov <sup>1*</sup> , and A Sanbetova <sup>1</sup>
	<sup>1</sup> Department of Power Supply and Renewable Energy Sources, Tashkent Institute of
	Irrigation Engineers and Agricultural Mechanization, 100000 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Study on modeling of the air ionization process in the technology of
	long-term storage of fruit and grape
Paner ID 191	Abstract: This article presents the results of modeling the process of air ionization in the
	technology of long-term storage of fruits and grapes in fruit storage facilities. Also was
	determined the main forces acting on ions in the ionization zone, in the volume of the fruit storage and on the surface of the processed product in order to establish the ionization
	modes and design the discharge gap of the ionizer. Based on the results of the research the
	issues of the ionizer placement in the volume of the fruit storage have been resolved. The
	results of theoretical studies have been verified experimentally and the corresponding
	dependencies of the parameters of ionized air was obtained.
	O Tursunov <sup>1,2,5,4*</sup> , J W Dobrowolski <sup>1</sup> , O Khujaev <sup>3</sup> , N Abduganiev <sup>2</sup> , O J Nazarova <sup>3</sup> , and
	<b>D J Yuldosheva</b> <sup>-</sup>
	and Environmental Engineering AGH University of Science and Technology 30-059
	Krakow, Poland
	<sup>2</sup> Department of Power Supply and Renewable Energy Sources, Tashkent Institute of
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	Research Institute of Forestry, 111104 Tashkent, Uzbekistan <sup>4</sup> Culistan State University, 120100 Culistan, Uzbekistan
	Guisian Siale Oniversity, 120100 Guisian, Ozbekistan
	Title of presentation: Study on the perspectives of application of eco-friendly laser
	biotechnology for environmental protection in Uzbekistan
	Abstract: Since few decades, the world is encountering unusual and daunting
Paper ID 192	and water an emerging international crisis in water availability long-term damage to
	ecosystems and substantial loss of biodiversity, waste production and disposal, damaged
	aquatic ecosystems, impacts of chemicals use and toxic substance disposal, as well as land
	degradation and deforestation. Accordingly, Uzbekistan has also been encountering some
	environmental issues, such as global Aral Sea crisis, soil erosion and desertification,
	illustrates the major environmental challenges and risks in Uzbekistan as well as the
	possible application of environmentally friendly laser biotechnology for more efficient and
	rationale protection of ecosystems and wide-scale reclamation of deteriorated areas.
	Comprehensive use of laser irradiation can be effectively applied in environmental
	protection engineering and technologies for sustainable development in selected regions.
	Laser infadiation or photosumulation is a neoteric area and process of environmental biotechnology. In this process, coherent laser light is employed to optimize the natural
	processes involved in the bioremediation of xenobiotics or bioaccumulation of metals.







	Additionally, laser biotechnology could be broadly used for more efficient reclamation of
	contaminated soil wastewater treatment as well as for increasing the growth rate of
	irradiated plants and their resistance to various macro- and micro pollutants in the air soil
	and water
	Elmurod Bozorov
	Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000
	Tashkent IIzhekistan
	Tushkeni, Ozoekistan
	<b>Title of presentation:</b> Field study on application of electric pulse processing device in the
	cultivation of tomatoes and cucumbers
	<b>Abstract</b> . This article explains the main diseases of tomato and cucumber plants that grow
	in greenhouses and fields. At present, the protection of the environment, especially from the
	effects of various chemical toxins is one of the main problems of land and water resources
	of the world civilization. During the global financial and economic crisis, our country is
	currently using high-quality land resources introducing advanced science and technology
	agricultural technologies and cultivation of low quality crops. Some of the important issues
Donor ID 103	agricultural technologies and cultivation of low-quality crops. Some of the important issues
Taper ID 195	afficient use of land by the public in general. Electric pulse processing should be used for
	growing vagatables and malons. Disasses of nometodes attach and sattle in the root system
	of plants. Inside, plant roots, nematodes form tumors and folds, do not nourish young
	soldlings destroy minoral nutrients and eventually soldlings. We offer an electrical impulse
	to treat nematode diseases of the roots of tomato and cucumber plants and to obtain the
	results of electrotechnical experiments. To get the results of this experiment faster, we can
	clearly see that the results of experiments conducted in the scientific laboratory of the
	Institute of Plant Protection using electron microscopy in the processing of root stalks of
	tomato and cucumber plants were infected with nematodes. The use of an electric pulse
	device in the cultivation of tomatoes and cucumbers has been considered in the fight against
	nematode diseases caused by plants and its roots, and the results of preliminary studies have
	been presented
	$\Omega$ Khujaev <sup>1*</sup> D Obidianov <sup>1</sup> $\Omega$ Tursunov <sup>1,2,3</sup> and $\Omega$ Nazarova <sup>1</sup>
	<sup>1</sup> Research Institute of Forestry 111104 Tashkent Uzbekistan
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	Irrigation and Agricultural Mechanization Engineers 100000 Tashkent Uzbekistan
	<sup>3</sup> Gulistan State University 120100 Gulistan Uzbekistan
	Guisian State Oniversity, 120100 Guisian, 620existan
	<b>Title of presentation:</b> Types and composition of diseases and pests of restructured forest
	and pasture plants in the dry part of the Aral Sea
	<b>Abstract:</b> Studies on the dried bottom of the Aral Sea have shown that dominant disease
Paper ID 194	from 3 species of them in Haloxylon plant is Podosphaera leucotricha and the dominant
	species from 34 species of pests is Big Dwarf Haloxylon Locust (D. albidula) and Small
	Haloxylon Locust (D. annulata roseipen). Chemical and biological control measures were
	taken against this disease and pests. When using anti-inflammatory drugs Redomil gold,
	Dnox, Fundazol and Sporagin, their effectiveness is as follows: Redomil gold - 68% sp
	(2.0–2.5 kg / ha), Fundazol - 50% ke (2.01 / ha), Dnox - 40% ke (2.01 / ha) and Sporagin
	(4.0, 1/ha) were tested using fungicides in the norms. Of the drugs used in the experimental
	variant, Redomil gold, 68% s.p. (2.0-2.5 kg / ha) was the highest biological efficacy against
	powdery mildew in the variant in which the fungicides were applied, was 91.3%.
	Shakhnoza Gaipova <sup>1,2</sup> , Akbarali Ruzibayev <sup>1</sup> , Zulfiya Khakimova <sup>1</sup> , Shakhnozakhon
	Salijanova <sup>1</sup> , and <i>Asliddin</i> Fayzullayev <sup>1</sup>
	<sup>1</sup> Tashkent Chemical-Technological Institute, 100011 Tashkent, Uzbekistan
Donon ID 105	<sup>2</sup> Ministry of Innovative Development, 100174 Tashkent, Uzbekistan
r aper ID 195	
	Title of presentation: Formulation of mayonnaise recipe enriched with biological active
	compounds of sesame cake
	Abstract: Today, scientific schools have been formed to improve the recipe and technology







	of mayonnaise. In the present study, a byproduct of an oilseed source, namely sesame cake, containing unique antioxidant compounds, such as lignans, is studied as a biologically active additive that can be used in the place of starch and synthetic antioxidants in mayonnaise. Sesame seed purchased from local markets. Sesamol standard was obtained from Sigma Chemical Company (USA). The experimental results have shown that regarding the taste, color, mouthfeel, and overall acceptability, the samples containing 10% caseme cake powder obtained the highest score. It is therefore recommended to use sesame
	cake powder at the concentration of 8-10% in mayonnaise formulation. The findings of this research could be useful for food industries to improve their products qualitatively
	Sevarakhon Khodjaeva <sup>1,2</sup> , Marufdjan Musaev <sup>2</sup> , and Shonazar Akhmedov <sup>1</sup> <sup>1</sup> Joint Stock Company "Hududgazta 'minot'', 100115 Tashkent, Uzbekistan <sup>2</sup> Tashkent State Technical University named after Islam Karimov, 100174 Tashkent, Uzbekistan
D ID 10/	<b>Title of presentation:</b> Studying safety and risk management in the gas transmission system using GIS technology
Paper ID 196	Abstract: In this current research, the combination of gas transportation system in line with analytical process was applied to conduct an assessment on the risk management of gas transferring pipe lines. By this process, classification and qualification of the numerous types of transportation risks would be accessible. Index and transportation index indicate risk probability and risk severity, respectively. In this regard, total risk is calculated based on the multiplication of all risk probability using geographical information systems (GIS) classified risks that have been throughout the pipeline route using attributive information. This information also gave database alternative monitoring of gas transportation.
	Nurbek Rizaev <sup>1</sup> and Sakhobiddin Kadirov <sup>2</sup> <sup>1</sup> Tashkent Institute of Finance, 100000 Tashkent, Uzbekistan
Paper ID 197	<sup>2</sup> <i>Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan</i> <b>Title of presentation:</b> Methodology of intangible assets efficiency analysis <b>Abstract:</b> This article addresses the issues of methodology for the analysis of the effective use of intangible assets. In the analysis of the efficiency of intangible assets, scientific conclusions and practical recommendations are formed, which allow determining its indicators of profitability, turnover, profitability, and on this basis to make management decisions in agriculture.
	<b>N T Tashpulatov, R A Zakhidov</b> Department of Power Supply and Renewable Energy Sources, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
Paper ID 198	<b>Title of presentation:</b> Study on electric pulse destruction of diseased nematodes <b>Abstract:</b> The article presents the results of research on the use of electric discharges of current for the destruction of worms, larvae and galls of pathogenic nematodes. Nematodes consisting of round worms in the process of their vital activity penetrates the roots, stems and leaves of the plant, disrupting the integrity of tissues, cells and cellular structures, feeding on plant sap leads to lagging behind growth and development, contributes to the spread of various diseases, causes rot and infection. They can be found even in fruits and seeds of plants. Most often, worms form a kind of swelling growth in the roots, in the stems in the leaves and in the fruits, the growths of which are called galls. When unfavorable conditions arise, they move at an accelerated rate in the soil, maintaining their vitality. Therefore, their destruction using well-known methods such as agro technical, thermal biological, chemical, etc. is laborious and ineffective. The article describes an alternative electro technological method for the destruction of nematodes using electric current discharges, which provides the required destruction effect at the lowest cost.









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	Tashkant Uzhakistan
	Τασηκετά, Οζθεκισιαή
	Title of presentation: Determination of the technical condition of electrical equipment in
	power supply systems
Paper ID 199	Abstract: This article describes the methods and means for determining the technical
-	condition of electrical equipment in power supply systems, particularly in transformer
	substations. There are many ways to determine the technical condition of electrical
	equipment However their implementation requires complex and additional equipment and
	devices. In addition, these tests must be corried out when the nerver supply system is off
	devices. In addition, these tests must be carried out when the power supply system is off.
	This will lead to a decrease in the quality of electrical energy. Determination of the
	technical condition of electrical equipment using thermal imagers is performed under the
	voltage and in operating modes, the measurement process does not affect the parameters of
	the power supply system. The results of research in energy enterprises of the Syrdarya
	region are presented
	$\frac{1}{2} \sum_{i=1}^{n} \frac{1}{2} \sum_{i=1}^{n} \frac{1}$
	A Anarbaev, O Tursunov, D Kodirov, I Alienova, and D Nazaraliev
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	<sup>2</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>3</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
	Title of presentation: Determination of model parameters of water putritional processes in
Paper ID 200	The of presentation. Determination of moder parameters of water-nutritional processes in
_	son for murogen compounds
	Abstract: Studies of development of an integrated model that allows calculating the whole
	range of processes necessary for predicting and managing the water and nutrient regimes of
	reclaimed soils are considered. Calculated values of the maximum concentrations of nitrate
	nitrogen in the topsoil during the growing season of plant for Tashkent's region are shown.
	Values of field moisture canacity and wilting moisture of the main varieties of irrigated
	soils are defined
	A Anaphage <sup>1*</sup> O Turgun an <sup>1,2,3</sup> D Kadinan <sup>1</sup> U Taghana <sup>1</sup> O Damanan <sup>4</sup> and A Daminan <sup>1</sup>
	A Anaroaev, U Tursunov, D Kodirov, U Tasneva, Q Davronov, and A Davirov
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	<sup>3</sup> Gulistan State University, 120100 Gulistan, Uzbekistan
	<sup>4</sup> Fergana Polytechnic Institute, 150107 Fergana, Uzbekistan
	Title of presentation. LIV treatment of agricultural plants in territories subject to selination.
Paper ID 201	fine of presentation: OV treatment of agricultural plants in territories subject to samation
-	
	Abstract: An assessment of the influence of electrotechnology of ultraviolet irradiation of
	seeds and pre-sowing soil treatment and the creation, on their technological basis, of
	management and control of salt and nutritional regimes of irrigated soils has been carried
	out. Relative yield of field crops versus the concentration of toxic salts in the soil solution at
	full moisture capacity are shown. By results of experimental researches acting of UV
	irradiation on the amount of ammonifying bacteria in the soil under cotton for increasing the
	accumulation of the most mobile nitrate forms of nitragen are defined
	Alishan Safararal Harmalla Dardan az Daral Marra dar <sup>3*</sup> Malakharla Chariman <sup>3</sup>
	Alisher Safarov <sup>*</sup> , Hayrulla Davionov <sup>*</sup> , Kasul Mamedov <sup>*</sup> , Makhbuba Chariyeva <sup>*</sup> ,
	Dilshod Kodirov <sup>*</sup>
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	Bukhara, Uzbekistan
Paper ID 202	<sup>2</sup> Department of Alternative Energy Sources, Karshi Engineering-Economics Institute.
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	<sup>3</sup> Department of Enerov Rukhara Engineering Technological Institute 200100 Rukhara
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	ULUCKISIUM Department of Dower Supply and Departments Services Tackbart Institute of
	Department of Tower Supply and Renewable Energy Sources, Tashkent Institute of









	Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
	Title of presentation: Design and modeling of dynamic modes of low speed electric
	generators for electric power generation from renewable energy sources
	Abstract: This article provides information on the current state and prospects for the
	development of renewable energy sources in the world and in our country, as well as on the
	choice of efficient power generators to ensure stable operation at low flows of micro
	hydroelectric and wind power plants. When designing a simulation model and a theoretical
	study of the dynamic modes of an electric generator, Solidworks and Matlab/Simulink
	electric generator (voltage current frequency electromagnetic power etc.) depending on
	its geometric dimensions, the number of permanent magnes, the connection diagram and the
	number of turns of the stator winding, the minimum distance between the stator and the
	rotor. According to the results of scientific research, an electric generator was developed
	with a power of 600 W, with the number of permanent magnets 32, the number of windings
	in each phase of the stator 4, the number of turns in each winding 200, the stator and rotor of which rotote in opposite directions. It was found that with opposite rotation of the stator
	and rotor relative to each other, the electromagnetic torque and electromagnetic power of
	the generator increase by 20% compared to a rotating rotor and a stationary stator of an
	electric generator. It is scientifically substantiated that by using this type of electric
	generator in micro hydroelectric power plants and wind power plants, it is possible to
	significantly increase the efficiency of installations at low currents. A part $act1*$ O Truck $act1+2,3$ D K dinov <sup>1</sup> L tractille $act1$ A Dath motor <sup>1</sup> and K
	A Anarbaev, O Tursunov, D Kourrov, J Izzaunaev, A Kakimatov, and K Shipilova <sup>1</sup>
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	<sup>2</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	Gulistan State University, 120100 Gulistan, Uzbekistan
Paper ID 203	Title of presentation: Intensification of nitrification processes in soil by ultraviolet (UV)
	<b>Abstract:</b> This study highlights the application of UV radiation for soil treatment with
	regard to agricultural plant growth intensification. The influence of the parameters of
	ultraviolet radiation (intensity and wavelength) on the value of the redox potential in the soil
	was quantified. The experimental tests carried out in soils, plants, seeds with ultraviolet
	were defined
	D Yuldosheva <sup>1*</sup> , O Khujaev <sup>1</sup> , R Gulmurodov <sup>2</sup> , and Sh Gulmurodova <sup>2</sup>
	<sup>1</sup> Research Institute of Forestry, 111104 Tashkent, Uzbekistan
	<sup>2</sup> Tashkent State Agrarian University, 100140 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Study on protective measures against diseases of almonds caused by
	fungi: A case study in Tashkent region of Uzbekistan
Paner ID 204	Abstract: Among the fruit trees, almond has a special place and is an ancient and traditional
	type of fruit crop for many countries of the world. Leading research centers around the
	world have conducted research to study the prevalence, development, damage, and control measures of the almond tree fungi Stigmina carpophila and Monilinia cinerea, which cause
	widespread perforated spot and moniliosis burns. As a result, it was possible to preserve the
	almond crop lost under the influence of these diseases. Even today, research aimed at
	developing effective measures to control the fungal diseases of the almond tree remains
	relevant. <b>A</b> $\mathbf{R}_{2}\mathbf{u}^{1}$ <b>I</b> $\mathbf{R}_{2}$ and $\mathbf{C}$ $\mathbf{P}_{2}\mathbf{u}^{3}$
D	<sup>1</sup> Department of Hydraulic Engineering and Melioration. Kazakh National Agrarian
Paper ID 205	University, Almaty 050000, Republic of Kazakhstan
	<sup>2</sup> Department of Irrigation and Melioration, Tashkent Institute of Engineers of Irrigation







	and Assignitude Mash anisation, 100000 Takkant Ush shiston
	<sup>3</sup> Kazakh National Agrarian University, Almaty 050000, Republic of Kazakhstan
	Title of presentation: Study on the influence of rice paddies' water layer temperature on rice yield
	<b>Abstract:</b> Studies on Akdala rice system found that rice plants sensitive to meteorological
	conditions. Climate change leads to changes in crop structure. The temperature of the rice
	field air and water has a special influence on the structure of the rice crop. It is established
	that the temperature of the water layer in rice paddies in the irrigation period does not
	exceeds 29 <sup>°</sup> C, which is below the threshold of 35 <sup>°</sup> C, when the flow and discharge of water
	from the paddies are recommended. The temperature of water in rice paddies, the surface
	layer was determined by an express thermometer, at the depth of the water layer 5, 10, 15
	and 20 cm by Savin Thermometers, soil – thermometers TM-5.
	Snavkat Muzararov, Aziz Badaev, Orli Kilicnov, Vladien Balitskiy
	Tashkeni Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent Uzbekistan
	Tushkelli, Ozbekistali
	Title of presentation: Study on electrosynthesis of ozone in the low-temperature plasma medium
	Abstract: This article analyzes the state of the art of ozone electrosynthesis, reveals the
	shortcomings of existing methods of ozone electrosynthesis, and identifies research
	directions. A theoretical analysis of ozone electrosynthesis processes using sinusoidal
Paper ID 206	voltages and periodic acute-angled voltage pulses with an amplitude factor of more than 5 is
	carried out. The calculation of the electric intensity values in the elements of the ozone
	generator when powered by sinusoidal and impulse voltage is highlighted. Experimental studies have confirmed the results of theoretical studies and revealed the reasons for the
	heating of the dielectric barrier with sinusoidal power supply. It was found that when
	powered by a pulsed voltage, due to a significant increase in the amplitude value of the
	electric field strength, the conductivity of the discharge gap increases sharply with the
	formation of low-temperature plasma and intense ultraviolet radiation, which leads to a
	sharp increase in the energy parameters of the ozone electrosynthesis process and the
	absence of the dielectric barrier heating process.
	Snavkat Muzaiarov, Kavsnan Turdanev, Lonta Batirova, Aziz Babayev
	Tashkent Institute of Intigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Improving reliability of power supply and the quality of electrical
	energy and safety in rural settlements
	Abstract: This article analyzes the state of the issue of power supply in a rural settlement
	on the example of the Shampan village of the Tashkent region. In particular, the number of
	10 / 0.4 kV transformer substations and the length of 10 and 0.4 kV networks. Collected
Paper ID 207	statistical materials on the voltage level of subscribers, the total load of transformers and the
	state of the issue of power supply to the settlement. To increase the reliability of power
	supply, it is recommended to use self-supporting insulated wires (SIP) for voltages of 0.4
	and 10 kV. To improve the quality of power supply, reduce the one-time power of the
	transformer substation to 25 kVA and include in the project the installed capacity of one
	house equal to 4 kW. To ensure electrical safety, a circuit has been developed with a neutral
	isolated from the ground with two neutral wires: working and protective. Protection circuits
	against single-phase earth faults have been developed. Switching in 10 kV networks is
	reduction in the cost of losses in $10/0.4$ kV networks has been carried out
	Sh M Muzafarov <sup>1*</sup> , A G Babaev <sup>1</sup> , O G Kilichov <sup>1</sup> , and L A Batirova <sup>1</sup>
Paper ID 208	<sup>1</sup> Tashkent Institute of Irrigation and Agricultural Mechanization Engineers. 100000
	Tashkent, Uzbekistan









	Title of presentation: Disinfection of drinking water with ozone by the method of electrodispersion Abstract: This article analyzes the existing methods for disinfecting drinking water with ozone and identifies their disadvantages. The substantiation of the method of water disinfection with ozone using electrodispersion is given. The description of the technological scheme of water disinfection using the method of electrodispersion is given. The description of the design of the electric spray is given. The results of production tests of a device for water disinfection on the water of open reservoirs and artesian wells are presented. Z.G.Yunusova <sup>1</sup> , F.Kh. Rakhimov <sup>1</sup> , and M.Kh.Zhabiev <sup>1</sup>
Paper ID 209	<b>Title of presentation:</b> Study on knitted filled knits for fruit juice filtering <b>Abstract:</b> This article discusses the essence of the formation of knitted filled filter cloths, in which the mass fraction of the filler exceeds more than 50% of the total surface density. The new method was tested in the production environment of the 'Gani Rakhimov Ishonch' enterprise (Samarkand) by modernizing the existing equipment, and also a pilot batch of products and final products were produced for filtering fruit juices.
Paper ID 210	<ul> <li>Palvan Kalandarov<sup>1,5</sup>, Ziyoviddin Mukimov<sup>2</sup>, Obid Tursunov<sup>3,4,5</sup>, Dilshod Kodirov<sup>3</sup></li> <li><sup>1</sup>Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan</li> <li><sup>2</sup>Tashkent State Agrarian University</li> <li><sup>3</sup>Department of Power Supply and Renewable Energy Sources, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan</li> <li><sup>4</sup>Research Institute of Forestry, 111104 Tashkent, Uzbekistan</li> <li><sup>5</sup>Gulistan State University, 120100 Gulistan, Uzbekistan</li> <li><sup>5</sup>Gulistan State University, 120100 Gulistan, Uzbekistan</li> <li>Title of presentation: Study on dielcometric moisture control method based on capacitive transducers</li> <li>Abstract: This article investigates the concept and definition of moisture and its function in regulation and control, where the role of moisture at all stages of the technical process is an important part. Approximation of the actual physical entity by its electrical model in the form of replacement schemes is evaluated by the primary transducers of moisture translated into electrical value, the basis of which is a capacitive sensor-capacitor in the electrical field</li> </ul>
	of which is a certain volume of the studied content. Indirect methods based on the calculation of the dielectric permeability of moisture content of the studied substance are evaluated in order to choose the process, evaluate the dielectric method, consider the design and installation of bulk material moisture management devices based on this method, and draw conclusions on the advantages and disadvantages of the dielectric method.
Paper ID 212	<ul> <li><sup>1</sup> Tashkent State Technical University named after I.A. Karimov, 4, University street, Olmazar District, Tashkent, 100 174 Uzbekistan</li> <li><sup>2</sup> Physical-Technical Institute of Academy of Sciences of the Republic of Uzbekistan, 2B, Chingiz Aytmatov street, Tashkent, 100 084, Uzbekistan</li> <li><sup>3</sup>National research institute of renewable energy sources under the Ministry of energy of the Republic of Uzbekistan, 2B, Chingiz Aytmatov street, Tashkent, 100 084, Uzbekistan</li> <li>Title of presentation: Adjustments to the indicators of the heating and cooling degree-days for regions of the Republic of Uzbekistan</li> <li>Abstract: This paper identifies the indicators of the calculated heating and cooling degree- days for the territory of Uzbekistan. The revealed values of the maximum and average daily outside air temperature were taken into account based on the collection, processing and analysis of the latest archives of climatic data. These data was obtained from open sources of weather stations, suitable for servicing scientific data, in order to enter adjustments to</li> </ul>







	forecasts in the design of heat and cold supply systems in buildings and structures, which, in
	turn, mitigate the effects of climate change. <b>P</b> Baratov <sup>1*</sup> T Ban <sup>2</sup> V Chullivov <sup>1</sup> Vu Shovimov <sup>3</sup> and M Abdullovov <sup>1</sup>
Paper ID 213	<sup>1</sup> Electrical Engineering and Mechatronics Department, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 100000 Tashkent, Uzbekistan <sup>2</sup> Agricultural and Biosystems Engineering Department, North Dakota State University, 1221 Albrecht Blvd, Fargo ND 58102, USA <sup>3</sup> Electromechanical Engineering Department, Almalyk branch of Tashkent State Technical
	University, 110100 Almalyk, Uzbekistan
	<b>Title of presentation:</b> Modeling and simulation of water levels control in open canals using Simulink
	<b>Abstract:</b> This paper discusses the question of modeling and simulation of water levels control in open canals as a key decition of water and energy resources scarsity in the vegetation period of agricultural irrigation. The mathematical model of the water levels control in open canals is developed and the outcomes are evaluated using by Matlab's tool Simulink. In addition, the paper proposes that the pivot weir or overshot gate for water levels control in open canals is simple in terms of precise and quality control of the upstream and downstream water levels control. Then dynamic equation of control object
	that describes dynamic state of the water levels control. Then dynamic equation of control object that describes dynamic state of the water levels control was obtained. A functional diagram has been developed and PID control was applied for the water levels control in the open canals. PID control was applied for the water levels control in the open canals to know how faster response the object to disturbance. Based on functional diagram the model of the matter many heiling Simplich emission and elevels descented the demonstrated the
	system was built in Simulink environment and obtained the dynamic response. <b>D</b> $\mathbf{L}$ $\mathbf{V}$ $V$
	<b>F i</b> Kalandarov, $\Sigma$ i Mukimov, Kii Abdunaev, Nouri Avezov, O Fursunov, D Kodirov <sup>1</sup> , N Toshpulatov <sup>1</sup> , and S Khushiev <sup>1</sup>
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	Title of magantation. Study on micromany maintum maganess of amin many
	Abstract: This article discusses the possibility of implementing the microwave method for
Paper ID 214	controlling the moisture content of agro-industrial products, which allows it to be used to
	control technological processes in grain processing industries and to control materials in
	ree space, converting the parameters of waves passed through the material's wave into an electrical signal. A functional diagram of the developed moisture mater is proposed on the
	basis of the method its electrodynamics' characteristics are determined. Experimental data
	was obtained for samples of cotton seeds with specified moisture values. A method for
	measuring grain moisture in continuous production have been proposed, which gives a
	possibility to reduce the components of the measurement error caused by the uneven
	distribution of moisture in the grain, the inhomogeneity of the material in terms of density
	and temperature. $O \subseteq L = compare^{1} D L K = compare^{2} E A Compare^{1*} M A h dulle or 3 N A himore 3 O$
	O S Logunova, P I Kalandarov, E A Garbar, M Abdullaev, N Alimova, O Matchanov <sup>2</sup> and Kh Abdullaev <sup>2</sup>
Paper ID 215	<sup>1</sup> Magnitogorsk State Technical University named after G. I. Nosov, 455000
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	Tashkent State Technical University, 100095 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Study on signs of defects in the image of the surface of flat-rolled products
	Abstract: Currently, more and more challenges of modern industrial enterprises require an
	increase in the reliability of the information on the quality of products. This becomes







	possible when using digital technologies to assess the quality of products. The cited publication discusses the technology for recognizing defects in the surface of sheet products in images obtained from cameras of the strip inspection system during rolling. The authors proposed a classification of the signs of defects in the image and highlighted the most significant of them also suggested using geometric, optical and spectral features for images of flat-rolled products containing defects of different classes. The research results at this stage, obtained during the processing of digital images, showed that to identify a defect and reduce false-positive and false-negative alarms of the automated defect identification system, it is required to conduct a study of interval estimates and make decision-making rules based on intersection and merging of intervals; introduce additional classes that allow the introduction of signs that characterize the irregularity of the shape of defects and the
	characteristic location; the use of new technologies of soft computing will reveal the hidden patterns of the manifestation of defects in the images of the surface of the steel strip
	<b>I</b> Sh Bozorova <sup>1*</sup> M I Ourbanov <sup>2</sup> O I Pirimov <sup>1</sup> and O Tursunov <sup>3,4,5</sup>
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	<sup>5</sup> Gulistan State University 120100 Gulistan Uzbekistan
Paper ID 216	
- up	Title of presentation: Arenothiophenes in oil basic sulfoxides synthesis and oxidation
	receiving sulfoxides from oil
	Abstract: Some of the sulfide compounds were converted to sulfoxides by the action of a
	30% solution of hydrogen peroxide on the acid catalyst of a molecule of bicyclic sulfide
	organic compounds in the paraffin distillate of the oil. The resulting sulfoxides were treated
	with 70% sulfuric acid and sulfate compounds of sulfoxides were obtained. In order to
	confirm the composition and structure of these compounds, chemical reactions of the
	corresponding sulfoxides on the basis of benzothiophene derivatives were carried out.
	M S Yakubov <sup>1</sup> , K H Turdibekov <sup>1</sup> , A Kh Sulliev <sup>1</sup> , I A Karimov <sup>1</sup> , S S Saydivaliyev <sup>1</sup> , and
	<b>S S Xalikov</b>
	Tashkent State Transport University, 100007 Tashkent, Uzbekistan
	<b>Title of presentation:</b> Improvement of the information-measuring complex for diagnostics of traction power supply objects at high-speed traffic
	Abstract: This paper considers the improvement of the information-measuring complex for
Donor ID 217	diagnostics and monitoring of traction power supply equipment under high-speed traffic,
	distribution of objects energy modes and functional relationships. The analysis of the
	transmission and conversion of measuring analogue information into a digital one.
	considering the maximum frequency of the primary signal spectrum components according
	to the sampling and quantization parameters to determine the time of the signal converted
	into a digital form is made. Functional dependencies and an algorithm for measuring
	information processing, considering the multilevel structure of traction power supply, which
	allow increasing the reliability and accuracy of diagnosing the main objects in high-speed
	traffic, are obtained.
	Maria Radkevich <sup>1</sup> , Malokhat Abdukodirova <sup>1</sup> , Kamila Shipilova <sup>1</sup> and Bakhromjon
	<b>Abdullaev<sup>2</sup></b>
	Tashkent Institute of Irrigation and agriculture Mechanization Engineers, Uzbekistan
Paper ID 222	- SE "Institute of hydrogeology and engineering geology", Uzbekistan
-	<b>Title of presentation:</b> Determination of the Optimal Parameters of the let Aeration
	Abstract: To ensure effective aeration of the biological wastewater treatment process. easy-
	to-operate and not too energy-intensive units are needed. Let aerators have such canabilities







#### CECAE 2021

In this study, the authors searched for the best hole shape for the aeration nozzles. It was determined that a nozzle with an elongated hole has the largest size of the actively aerated zone. Experimental studies of nozzles of a diameter of 56 mm with nozzles of elongated shape showed that the best characteristics of mass transfer are provided by nozzles with a total area of holes of 356 mm<sup>2</sup> at a flow rate of 10 ... 12 m/s. For practical calculations, an equation was obtained for the dependence of the oxygen transfer coefficient  $K_{L\alpha(20)}$  on the complex criterion *vn*, and a method for calculating aeration units was developed, which is applicable for aerators with elongated holes.

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Use the same link during the second day of the conference also.

All presenters will have access to demonstrate their presentations (pdf or ppt files) on their PC screen.

Regarding the time, to be sure of the time in the agenda is correct, please keep in mind that Conference starts:

14 October 2021 at 10:00 a.m. (Tashkent, Uzbekistan, GMT+5) 15 October 2021 at 10:00 a.m. (Tashkent, Uzbekistan, GMT+5)

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