Third International Mediterranean Congress on Natural Sciences, Health Sciences and Engineering

MENSEC III

The Future of Organic Agriculture in Mediterranean Basin

CONGRESS PROGRAM

&

ABSTRACT BOOK

University of Donja Gorica

Podgorica, Montenegro

June 18-20, 2019

CONGRESS PROGRAM & ABSTRACT BOOK

THIRD INTERNATIONAL MEDITERRANEAN CONGRESS ON NATURAL SCIENCES, HEALTH SCIENCES AND ENGINEERING (MENSEC III)

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FOREWORD

Third International Mediterranean Congress on Natural Sciences, Health Sciences and Engineering (MENSEC III) with the main theme of "The Future of Organic Agriculture in Mediterranean Basin" is jointly organized by the University of Donja Gorica and Bandirma Onyedi Eylul University and also supported by the following universities: Istanbul Sabahattin Zaim University, International University of Sarajevo and Sivas Cumhuriyet University. The congress will be held in June 18-20, 2019 in Podgorica, Montenegro. In the congress, over 55 oral/poster presentations will be made by scholars from 27 universities from 8 countries (Montenegro, Bosnia and Herzegovina, Croatia, Slovenia, North Macedonia, Italy, Northern Cyprus Turkish Republic and Turkey).

The congress aims to bring together international scholars and researchers in the areas of natural sciences, healt sciences, sport sciences and engineering in order to provide a forum for dialogue and exchange of recent research findings and ideas related to the challenges that Balkan and Mediterranean countries. The Scientific and Organizing Committees are founded by different universities in the region. We have received a large number of applications that has given us the opportunity to choose the most excellent of them in order to reach higher scientific level.

I would like to thank all the participants for their enthusiasm to contribute to this project and their willingness both to keep to tight deadlines and to accept editorial recommendations; to all the Scientific and Organizing Committee members, for their patience, support and tolerance. Special thanks for the rectors of our partner universities for their valuable support. We hope to see you all in our next congress.

Sincerely Yours,

Prof. Dr. Veselin Vukotic, Rector
University of Donja Gorica

Third International Mediterranean Congress on Natural Sciences, Health Sciences and Engineering

MENSEC III

The Future of Organic Agriculture in Mediterranean Basin

University of Donja Gorica

Podgorica, Montenegro

June 18-20, 2019

CONGRESS
PROGRAM

CONGRESS PROGRAM

THIRD INTERNATIONAL MEDITERRANEAN CONGRESS ON NATURAL SCIENCES, HEALTH SCIENCES AND ENGINEERING (MENSEC III)

June 18-20, 2019
University of Donja Gorica
Podgorica, Montenegro

Tuesday, June 18

09:00 - 10:00	Congress Registration
10:00 - 10:30	Opening Speeches by the Representatives of Partner Universities
10:30 - 11:00	Opening Coctail
11:00 - 12:30	Sessions 1A, 1B, 1C, and 1D
12:30 - 13:30	Lunch Break
13:30 - 15:00	Sessions 2A, 2B and 2C
15:00 - 15:30	Coffee Break
15:30 - 17:00	Sessions 3A, 3B and 3C

Wednesday, June 19

10:00 - 12:30	Poster Sessions I
12:30 - 13:30	Lunch Break
13:30 - 17:00	Poster Sessions II

Thursday, June 20

Social Program and Visit to University of Dubrovnik, Croatia*

Tuesday, June 18

SESSION 1A
NATURAL SCIENCES
ROOM: S11
Session Chair: Dr. Michele Faccia

11:00-12:30	**Sanja Radonjic** Vesna Maras Tatjana Kosmerl	The Importance of Total Polyphenols Content in Red Wine
	Michele Faccia Giuseppe Natrella Giuseppe Gambacorta	An Easy and Natural Way for Producing Lactose-Free Mozzarella without Lactase
	Mirlinda Dehari-Zeka Kasum Rr. Letaj Qerim I. Selimi Isa R. Elezaj	Lead (Pb), Zinc (Zn) in the Blood and δ-Aminolevulinic Acid Dehydratase activity (δ –ALAD) in the Primary School Children Living in the Region of Smelter "Trepça"
	Igballe Krasniqi-Cakaj Qerim I. Selimi Isa R. Elezaj Kasum Rr. Letaj	Lead and Zinc Blood levels (BLL and BZnL) and δ-Aminolevulinic Acid Dehydratase (δ-ALAD) Activity in Grazing Cows from Close Vicinity of Former lead and zinc Smelter 'Trepça'
	Gamze Cakitli **Havva Aktas** Sevgin Diblan Levent Yurdaer Aydemir	Determination of Changes in Antioxidant Properties of Dry White Bean Extracts after in Vitro Digestion

SESSION 1B
ENGINEERING
ROOM: S13
Session Chair: Dr. Cahit Gurer

11:00-12:30	**Cahit Gurer** Ayfer Elmaci Burak Enis Korkmaz Sule Yarci	Investigation the Effect of Gradation Change on Electrically Conductivity in Conductive Asphalt Mixtures
	M. Cihan Aydin Ercan Isik Ali Emre Ulu	Physical and Numerical Model Comparison for Dam Spillways
	Aydin Buyuksarac C. Caglar Yalciner M. Cihan Aydin	Pre-restoration Studies of Edirne Hidirlik Bastion
	Ali Emre Ulu **M. Cihan Aydin** Aydin buyuksarac	Analysis of Flow Conditions of a Sample Shaft Spillway with Computational Fluid Dynamics (CFD)
	Cahit Gurer **Huseyin Akbulut** Ayfer Elmaci Burak Enis Korkmaz Sule Yarci	Anti-Icing Methods for Highways and Airfield's Pavements
	Aydin Buyuksarac C. Caglar Yalciner Yunus Levent Ekinci	"EÜAŞ Çan" Thermic Power Plant Moisture Analysis in Areas Provided for Limestone Desulphurization Purposes

SESSION 1C
ENVIRONMENTAL SCIENCE
ROOM: S21
Session Chair: Dr. Ilker Kilic

11:00-12:30	Melike Yalili Kilic	Determination of Consciousness Levels of Associate Students on Environmental Pollution: Example of Bursa Uludag University
	Edip Avsar	Determinantion of The Nemrut Crater Lake Turkey Water Quality
	Can Tas Mehmet Ali Bahce	Requirements of IMO Ballast Water Management Convention and Harmful Species in Mediterranean Ecosystem
	Ilker Kilic	Particulate Matter Concentrations in a Broiler House in Summer Season
	Atlihan Onat Karacali	Climate as an Input in Vernacular Architecture Research

SESSION 1D
IT/MATHEMATICS
ROOM: S22
Session Chair: Dr. Baris Kantoglu

11:00-12:30	**Baris Kantoglu** Irem Duzdar Argun Nurgul Ozturkoglu	Comparison of Classification Methods for Credit Risk Data with Data Mining Softwares
	Abdussamed Erciyas **I. Alper Dogru** Necaattin Barisci	Categorization of Claims and Complaints from Mavimasa (Bluetable) Social Network Address by Using Machine Learning
	Ismail Gulsoy	Electricity Energy Saving Optimization at WWTP Aeration Tank Using Online Sampling and COD Analysis Technique
	Rauf Amirov Sevim Durak	Behavior of Solutions of Singular Shrödinger Equation
	Rauf Amirov Sevim Durak	Eigenvalues of the Singular Shrödinger Operator and Behaviors of the Eigenfunctions

SESSION 2A
HEALTH SCIENCES
ROOM: S11
Session Chair: Dr. Orkun Aydin

13:30-15:00	Duygu Kuzu	Burden of Caregiver for Individuals with Spinal Cord Injury
	Orkun Aydin Kuzeymen Balikci Pinar Unal Aydin	Assessing the Relationship between Neurocognition and Social Functioning in Schizophrenia
	Gunal Bilek Efehan Ulas	Selection of the Correct Skeletons in the CRM and BMA-CRM
	Ertem Umit **Betul Kilinc** Hacer Esref Atik Tosunlar	Body and Mental Health after Sexual Assault, Multidisciplinary Approach
	Pinar Unal Aydin Zeynep Kablama-Yardim	Dissociative Experiences and Childhood Traumas among Prisoners with Substance Use Disorder

SESSION 2B
ENVIRONMENTAL SCIENCE
ROOM: S13
Session Chair: Dr. Serdar Dizman

13:30-15:00	**Serdar Dizman** Feyza Zeynep Asik Recep Keser Filiz Korkmaz Gorur	The Investigation of Tritium Activity Concentrations in the Drinking Water before Nuclear Power Plant in Sinop Province
	Melike Yalili Kilic	Environmental Effects of Heavy Metals and Removal from Industrial Wastewater
	Edip Avsar Ercan Isik	Investigation of the Usage of Bitlis Stone as a Building Material in Terms of Product Toxicity
	Ilker Kilic	Efficiency Assessment of Indoor Environmental Conditions in a Broiler House Using Temperature-Humidity Index

SESSION 2C
NATURAL SCIENCES
ROOM: S21
Session Chair: Dr. Hasan Sungur Civelek

13:30-15:00	**Mucahit Paksoy** Fatma Nur Akdeniz	Contribution of Women to Home Economy Working in Dried Eggplant Production: Case of Gaziantep Province of Turkey
	Oguzhan Caliskan Safder Beyazit Emel Kacal Gokhan Ozturk Omer Faruk Karamursel Derya Kilic	Grafting Success of Sultan Hawthorn Cultivar Grafted on Some Clonal Rootstocks
	Ismail Dutkuner Bilal Sisman Osman Demirel	A Research on the Monumental Trees of Yildiz Park (Istanbul)
	Hasan Sungur Civelek	The Efficacy of Two Different Neem [Azadirachta Indica A Juss (Melacaeae)] Formulations on Leafminers (Diptera: Agromyzidae)
	Can Tas **Mehmet Ali Bahce**	Applicability Analysis of Drills and Trainings Onboard Based on Minimum Resting Time

SESSION 3A
ENGINEERING
ROOM: S11
Session Chair: Dr. Taner Kavas

15:30-17:00	**Taner Kavas** Recep Kurtulmus Abdullatif Durgun Caner Kumru	Ceramic Filter Production by Using Calcium Aluminate Cement for Molten Metal Filtration
	Ferhat Koca Adnan Ozturk Dogan Engin Alnak Cahit Gurlek	Flow Analysis on Cylinder Geometries Designed with Different Spiral Steps
	Abdullah Kapicioglu Hikmet Esen	Exergy Analysis of Horizontal Ground Source Heat Pump Using Al2O3/Ethylene Glycol-Water Nanofluid
	Ferhat Koca Adnan Ozturk	Experimental Flow Analysis on Cylinder Geometries with Using Particle Image Velocimetry

SESSION 3B
NATURAL SCIENCES
ROOM: S13
Session Chair: Dr. Safder Beyazit

15:30-17:00	**Kazim Mavi** Fulya Uzunuoglu	Effects of Pre-sowing Treatments with Allelopathic Material on Seedling Emergence and Performance in Tree Tomato (Solanum betaceum Cav.)
	Gurkan Demiroz **Ismail Dutkuner**	Research on Some Morphological Properties of Stone Pine (Pinus pinea L.) in Milas (Muğla) Region
	Oguzhan Caliskan Safder Beyazit Kazim Gunduz Derya Kilic	Preliminary Results of Mogador Apricot Cultivar under Protected Cultivation
	Safder Beyazit Oguzhan Caliskan Kazim Gunduz Derya Kilic	Protected Fruit Culture in Turkey
	Ismail Dutkuner Kerim Uysal Bedia Arici	A Research on the Monumental Trees of Alanya (Antalya)

SESSION 3C
SOCIAL SCIENCES
ROOM: S21
Session Chair: Dr. Ismail Yilmaz

15:30-17:00	**Emine Yilmaz** Gulen Ozdemir	Importance and Effectiveness of Professional Organization in terms of Rural Development
	Ismail Yilmaz Emine Yilmaz	Functional Foods and Importance in Consumer Preference
	Hasan Sungur Civelek	The Parasitoid Complex of Liriomyza Huidobrensis (Blanchard, 1926) in Cucumber Greenhouses in Izmir Province, Western Turkey
	Emine Yilmaz Gulen Ozdemir	Sustainability in Rural Development and Young Farmer Approach
	Hasan Sungur Civelek	Biodiversity of Agromyzidae (Diptera) of Economic Importance in Turkey by Using Molecular Tecniques

Wednesday, June 19

POSTER SESSION

	Liridon Cocaj Fitore Kurtaj Arleta Rifati-Nixha Mustafa Arslan	Synthesis of Some New Carbamoyl Derivatives of Acrylic Acid
	Elda Lamce Llambrini Sota Eris Ali	A Glance over Generating Functions
	Festim Halili Erleta Alihajdaraj Natyra Berisha Leonora Shoshi	Artificial Intelligence in Work Process Automation
	Daut Rexhepaj Alban Hyseni	Some Characteristic Data of Amphibians and Reptiles in the Mirusha Protected Area

SESSION 1A

Time: 11:00-12:30

The Importance of Total Polyphenols Content in Red Wine

Mrs. Sanja Radonjic, **University of Donja Gorica**
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Dr. Tatjana Kosmerl, University of Ljubljana
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Numerous factors impact the quality of wine. The major contributors to the sensory properties and one of essential compounds in wine are phenolic compounds. These compounds represent one of the most important groups in wine, determining not only the wine colour, but influencing the taste (bitterness and astringency) and fragrance. They also contribute to the wine chemical properties as they interact with other compounds including other polyphenols, polysaccharides and proteins. It is known that they act as antioxidant with mechanisms involving free-radical scavenging that have positive role in human health. The correlation between total polyphenols content and antioxidant potential was confirmed in literature as strongly positive dependent. Besides, the adjustment of SO_2 levels in wines are in correlation with total phenolic content, showing that smaller adjustments are needed with higher content of total phenolic compounds. It is shown that higher content of phenolic compounds ensures wine microbiological and oxidative stability, significantly reduces the load of wine with total sulphite and is involved in the stabilization of colour during wine aging. This research will contribute to the improvement in the knowledge of the technological importance of total polyphenols content in wine, i.e. the relationship with wine quality parameters will be considered, as the understanding of this issue is one of the major challenges in oenology research.

Keywords: Red Wine, Total Phenolic Content, Antioxidant Potential, Wine Quality.

Presentation Type: Oral Presentation

Lead (Pb), Zinc (Zn) in the Blood and δ-Aminolevulinic Acid Dehydratase Activity (δ – ALAD) in the Primary School Children Living in the Region of Smelter "Trepça"

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The aim of this study was the evaluation of chronic effects of environmental contamination with Pb and Zn in their blood level and δ-aminolevulinic acid dehydratase activity in the primary schoolchildren living in village Zhazhë – 5 km far from former smelter "Trepça" and in the village Koliq un-contaminated area 40 km far from the contaminated area. Blood lead level (BLL) in primary schoolchildren in Zhazhë (11.0 ± 4.2 μg/kg) was significantly higher (P<0.002) compared with BLL in primary schoolchildren (6.9±1.6 μg/kg) from Koliq village. Zinc blood level (ZnBL) in the schoolchildren of Zhazhë was lower (4.5±1.0 mg/L) compared with ZnBL in Koliq. (5.7±3.6 mg/L). The δ -ALAD activity in the blood of primary schoolchildren in Zhazhë was significantly inhibited (P<0.001) in comparison with δ -ALAD activity in the blood of schoolchildren from Koliq. There was established poor negative relationship between BLL and δ -ALAD activity (r=-0.162; P<0.677) in the children of Zhazhë, and poor positive correlation between BLL and ALA-D activity (r= 0.226; P<0.437) in reference group. There was established significantly positive correlation between ZnBL and δ -ALAD activity in primary schoolchildren of Zhazhë (r=0.368; P<0.03) and primary schoolchildren of Koliq (r=0.697; P<0.005).The results of this study shows that blood δ -ALAD activity can be used as sensitive marker for evaluation of adverse effects of subclinical blood lead levels in children, and the close vicinity of former smelter "Trepça" still represent threat for health of schoolchildren of this area.

Keywords: Schoolchildren, Lead, Zinc, Blood, δ –ALAD, "Trepça".

Presentation Type: Oral Presentation

An Easy and Natural Way for Producing Lactose-Free Mozzarella without Lactase

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Lactose intolerance has given rise to an important new segment market of dairy products. In Europe, the limit for “lactose-free” labeling has been fixed at 0.1% per 100 g or mL by EFSA. Despite the dairy industries are continuously engaged in developing new products without lactose, the process for eliminating the disaccharide has unchanged since the 1950s. It is based on the “pre-digestion” of milk by exogenous β-galactosidase (lactase); this enzyme is manufactured at industrial level by recombinant DNA technology using several type of microorganisms. One of the most popular products of this category is lactose-free mozzarella, a fresh pasta filata cheese that is also manufactured and sold as organic product. Even though the use of lactase at present is permitted, a question has been raised about its use in the organic cheesemaking protocols. The present communication describes the development a new method for producing this cheese without using lactase. It is very simple, since only contemplates a modification of the technological operations, and does not require any kinds of additive or coadjuvant. Samples of the new type of mozzarella (NLFM) manufactured by direct acidification at laboratory level were subjected to chemical and sensory analyses. Besides demonstrating that the EU limit for labeling was fully respected, the analyses revealed that the new product was almost sugar-free, differently from standard (SM) and “classic” lactose-free (LFM) mozzarella. Even though some differences were observed in the volatile compounds and soluble fractions, the sensory QDA profile of NLFM was similar to SM. In conclusion, the new protocol could be appreciated by consumers since it can be perceived as more natural than the "classic" technology.

Keywords: Lactose Intolerance, Mozzarella, Innovative Delactosation, QDA Profile.

Presentation Type: Oral Presentation

Lead and Zinc Blood levels (BLL and BZnL) and δ-Aminolevulinic Acid Dehydratase (δ-ALAD) Activity in Grazing Cows from Close Vicinity of Former lead and zinc Smelter 'Trepça'

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In order to determine actual lead and zinc exposure from residual amounts of lead (Pb) and zinc (Zn), in the close vicinity of lead and zinc smelter "Trepça", the blood lead and zinc levels and δ-ALAD activity in cows grazing in that vicinity was analyzed. The grazing cows from lead exposed area were from village Kelmend up to 1.000 m from the former lead and zinc smelter "Trepça", while the control grazing cows were from village Koliq – 40 km from the smelter area. The blood lead level in the grazing cows from the Kelmend village were significantly higher ($P<0.001$; 40.3 ± 21.7 μg/kg) in comparison with level in blood of grazing cows from control area. There was established significantly negative correlation ($r=-0.812$; $P<0.004$), between blood lead level and δ-ALAD activity in grazing cows from Kelmend, while weak positive correlation ($r=.0.205$; $P<0.295$), between BLL and δ-ALAD activity in grazing cows from Koliq. The blood Zn level in the grazing cows from Kelmend and Koliq were statistically not significant (3.0+0.6 mg/L; 3.1 mg/L respectively). There was also established positive correlation (not significant), between blood zinc level and δ-ALAD activity in crazing cows from both groups ($r= 0.297$, $P<0.375$; $r=0.224$, $P<0.244$; respectively).The results of our study shows that examination of Lead and Zinc and δ-ALAD activity in cows grazing in the vicinity of a lead smelter could be a useful biological indicators in the establishment of the elapsed time, after the reduction of lead emissions, before lead contaminated soil could be proclaimed as safe for humans and domestic animals. The close vicinity of former smelter "Trepça" poses threat for human and animal health.

Keywords: Lead, Zinc, δ-ALAD, Cows, Blood, “Trepça”.

Presentation Type: Oral Presentation

Determination of Changes in Antioxidant Properties of Dry White Bean Extracts after in vitro Digestion

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In this study, it is aimed to determine the changes in antioxidant properties of dry bean extracts after in vitro digestion. For this purpose, water soluble hydrocolloid extract and alkali water soluble hydrocolloid extract (rich in protein) of dry white beans were produced and their total phenolic content (TPC), total flavonoid content (TFC), water soluble protein content (WSPC), free radical scavenging activity (FRSA) and iron chelating activities (ICA) were determined. Alkali water soluble hydrocolloid extract had 3.5, 0.9, 3.5, 2.6, and 2.3 times higher TPC, TFC, WSPC, FRSA, and ICA values than water soluble hydrocolloid extract, respectively. In vitro digestion process of dry white bean extracts signifcantly affected the antioxidant activity of extracts. This study showed that in vitro digestion revealed more realistic results for the antioxidant potential of dry white bean extracts and allowed to better evaluate the bioactive potential of dry white bean. This study was supported by Adana Science and Technology University Scientific Research Coordination Unit. Project Number 18103028.

Keywords: White Bean, Antioxidant activity, Phenolic Content, In Vitro Digestion.

Presentation Type: Oral Presentation

SESSION 1B

Time: 11:00-12:30

Investigation the Effect of Gradation Change on Electrically Conductivity in Conductive Asphalt Mixtures

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Snow and icing on road surfaces endanger traffic safety, and in some cases, it can even cause traffic interruption in highways sections such as bridges, tunnels, and entrances. Especially in structures such as bridge, icing is occurred much faster. Therefore, the use of methods of active anti-icing methods, which will prevent icing before it occurs, is becoming increasingly important in such road sections. Because of the passive anti-icing methods such as salting can damage asphalt pavements and bridge bearing systems so they are not preferred for bridge pavements. In this study the most commonly used bridge pavement type stone mastic asphalt mixtures were transformed into electrically conductive and two different graded conductive SMA Marshall specimens were prepared, resistivity measurements were performed and the obtained values were compared. The test results showed that the gradation change was effective on electrical conductivity.

Keywords: Electrically Conductivity, Stone Mastic Asphalt, Bridge, Anti-icing.

Presentation Type: Oral Presentation

Physical and Numerical Model Comparison for Dam Spillways

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Dam spillways are very important hydraulic structures for safety of the dams. The design of these structures is commonly tested by physical hydraulic models before construction. Physical models not only very cost and time consuming but also can contain significant scale effects. This study presents physical and computational fluid dynamics models comparison based on a short literature revive and some CFD model results. The results show that the scale effect of Froude models are insignificant for flow characteristics such as free surface, velocity and pressure profiles of water flow. However the air aeration performance of the spillway aerators using for protecting spillway surface from cavitation is significantly affected by physical modes scale named scale effects, while numerical model results with full-scale are compatible with the prototype measurements. Therefore, it is concluded that the full-scaled CFD model verified can be useful to design of the spillway aerator especially instead of small scaled physical models.

Keywords: Cavitation, Aeration, Spillway, CFD, Scale Effects.

Presentation Type: Oral Presentation

Pre-Restoration Studies of Edirne Hidirlik Bastion

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The Hıdırlık Bastion is the biggest bastion in Edirne with its approximately 1800 meters perimeter. Main Entrance Building, Ward Building, Artillery Rooms, Artillery Batteries, Trench and Courtyard. The first fortification construction in Edirne started against the danger of Russian occupation in 1829. The largest of the signs defending Edirne in the Balkan War, the Hıdırlık Bastion has an important place in the First Balkan War that took place in 1912. The Hıdırlık Bastion lost its importance after the Balkan wars. Although it was used in places over time, it was not able to resist the damage caused by unconscious use and after World War II Tabya was never used. In the boards with a military defense structure, the main thing is robustness and functionality. The form, width, height and strategic importance of the place or hill to be defended is of paramount importance in creating the plan and architecture of the bastions rather than a stylistic concern. In addition to its historical significance, the Hıdırlık Bastion, which is the first monumental monument, is located in the Hidirlik district in the Edirne city center. It has been observed that the basin has been severely damaged within the time, the stones were disassembled and they were depressed. During the restoration works of the Hidirlik Bastion, geophysical surveys were carried out in a total of 9 areas, including the magnetic and ground penetratring radar methods at the exit of the basement tunnel, in the sections of which are not visible or covered. Geophysical studies conducted in the basement gave results that supported each other and the locations of the compartments with no entrance in the basement were determined. Under the ground artillery batteries, chimneys, cisterns and ducts of ventilation ducts found in the chambers of the hall were found to be. Studies in all areas have been transformed into maps. According to the maps, restoration and excavation planning could be done.

Keywords: Edirne, Hıdırlık Bastion, Geophysics, Ground Penetrating Radar, Magnetics, Restoration.

Presentation Type: Oral Presentation

Analysis of Flow Conditions of a Sample Shaft Spillway with Computational Fluid Dynamics (CFD)

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Shaft (drop) type spillways are generally used as a spillway option when land and stream conditions do not allow the construction of spillways on the right or left coast of the dam body. Shaft spillways are usually connected via an elbow to the existing outflow tunnel to avoid the cost of an additional tunnel. The most important part of this type of spillways is the dimensioning of the shaft inlet. After determining the amount of flow required to pass through the shaft, the most appropriate design is determined. Recently, Computational Fluid Dynamics (CFD) methods developing with computational and numerical technics have been used in the hydraulic applications. The flow properties in theses hydraulic structures can be detailed by means of this technics. The using of CFD presents a powerful tool using together with experimental model tests. In this study, the subjects used in the design of shaft type spillways are investigated. In addition, the cases that occurred at the maximum flow rate of a shaft spillway obtained in the laboratory were modeled in the numerical environment by using Computational Fluid Dynamics (CFD), and the flow conditions of the shaft inlet, the velocity in this area and the amount of flow passed were evaluated.

Keywords: Spillway, Shaft Spillway, CFD, Flow-3D.

Presentation Type: Oral Presentation

Anti-Icing Methods for Highways and Airfield's Pavements

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With the increase of the human population, the need for travel has also increased and safe, uninterrupted and fast transportation has become increasingly important in every climate condition. In winter, snow, ice storm, icing, etc. cause significant problems in road transport, and can lead to traffic congestion and flight cancellations at airports such as bridges, tunnels and vertical curves, leading to cost and spiritual losses. Therefore, the removal of snow or icing on the road surface and airfield in a timely manner and the safe opening of asphalt pavements is one of the most important issues since early times. The anti-icing methods can be divided under two parts as passive and active. In this paper, the anti-icing methods and the advantages and disadvantages of the methods are mentioned. The application details of the active anti-icing methods, which are being applied more and more nowadays, are mentioned.

Keywords: Anti-Icing Methods, Highways, Airfields, Passive Anti-Icing Methods, Active Anti-Icing Methods.

Presentation Type: Oral Presentation

"EÜAŞ Çan" Thermic Power Plant Moisture Analysis in Areas Provided for Limestone Desulphurization Purposes

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In the EÜAŞ Çan Thermal Power Plant, which is located in Çan district of Çanakkale province, the desulphurisation process is carried out by flue gas desulphurisation method in order to keep the amount of sulfur dioxide (SO2) gas generated when coal is burned under the limit values set forth in the Regulation on Large Combustion Plants. For this purpose, limestone is used as desulfurization material. The limestone used is obtained from three different limestone areas. Production processes in limestone quarries are carried out by open operation method and blasting is performed during the material purchase. The materials taken from the limestone fields are crushed and sieved in the crushing-sieving mill and then shredded and transferred to the thermic power plant. Due to the general character of the limestone formations in this region, the fractures are very fractured and cracked, and the cracks have reached the slit size and the slits are filled with clay and silt. During the operation, the blasting process is disintegrated and disintegrated with the dislocation of limestone layers, clay and silt. This situation does not cause problems during the rainy seasons, adhering to the limestone crumbs during the rainy periods, causing an increase in humidity. On the other hand, it causes a change in the composition of limestone due to silica contained in clay and silt. Geophysical studies were carried out on the limestone operation sites in order to identify the existing problem and to identify the real dimension of the difficulties associated with the operation. Within the scope of the studies, geophysical methods were widely used for measurements by underground radar (GPR) and electrical resistivity methods. The results show that the contamination of the clay on the limestone is caused by natural rainfall.

Keywords: Power Plant, Limestone, “Çan”, Desulphurization, Geophysics.

Presentation Type: Oral Presentation

SESSION 1C

Time: 11:00-12:30

Determination of Consciousness Levels of Associate Students on Environmental Pollution: Example of Bursa Uludag University

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Environmental problems have become one of the critical issues of discussion today by the growth of population, industrialization, urbanization and the use of pesticides. Environmental problems, which are caused by pollution in water, air, soil, solid waste, visual, odor and noise areas, are increasing with the lack of environmental consciousness in the society. Family, educational institutions, mass media, and non-governmental organizations have important roles in the development of environmental awareness. Environmental consciousness has a dynamic structure that can develop throughout life. It is of utmost importance that university students, who will take part in the solution of current and future environmental problems and have an essential place in transferring information to future generations, can apply environmental knowledge to their daily lives and to be able to comprehend the dimensions of the danger posed by environmental pollution and to raise awareness in this sense. In this study, a survey was conducted to determine the awareness of associate students studying at Bursa Uludag University Gorukle Campus on environmental pollution and the obtained data were evaluated.

Keywords: Bursa, Consciousness Level, Survey, University.

Presentation Type: Oral Presentation

Determinantion of the Nemrut Crater Lake's (Turkey) Water Quality

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Nemrut Crater Lake is Turkey's largest the world's second largest crater lake. It lies within the borders of Bitlis Province to the west of the Van Lake basin. The average depth is 100m. Since 2013 Ramsar Wetland has been declared and taken under protection. The announcement of a geopark area is on the agenda. The most important source of feed is snow and spring water. The lake level is almost constant and the precipitation and evaporation balance have been established. For this reason, water quality is not changed much, but due to its volcanic nature it is thought to have a unique water quality. The aim of the study is to monitor and determine the specific water quality of Nemrut Crater Lake. For this purpose, 2 samples were taken from 5 points in June and August in 2018 and the water quality was examined and evaluated. It was found that the pH of the water was almost 8.5, it included Arsenic and Boron and the TOC level was very low.

Keywords: Nemrut Cater Lake, Water Quality, Heavy Metals.

Presentation Type: Oral Presentation

Requirements of IMO Ballast Water Management Convention and Harmful Species in Mediterranean Ecosystem

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Nearly 90% of the world trade is carried out by sea. As of 1st January, 2018, around 90 thousand ships with a total capacity of 1.6 billion tonnes are traveling around the world. Due to the cargo operations, the vessels are receiving sea water from the ballast tanks when their hatches or tanks are empty. They have to unload the seawater at the port where they will load their hatches or tanks. Ships which are operating in different geographies of the world have a hidden danger because of the water they receive from different seas and regions. The sea water that they receive from the region contains species which belong to that region. This water which pump out in the area of the loading port can be very dangerous for the species and ecosystem in there. Scientists have seen Asian origin phytoplankton in the North Sea for the first time in 1903 and but the problem was reviewed in 1970. In late 1980, Australia and Canada made attention to Maritime and Environmental Protection Committee of the International Maritime Organization (IMO) relevant with invasive species. With the increasing trade volume and the number of ships, the number of areas which is affected by the invasive species carried by the ballast water of the ships is increasing and they pose a great threat ecologically and economically. In this study, the Ballast Water Management Convention, which came into force on September 8, 2017, clarified the procedures to be taken by the ships before reaching the loading ports and the methods of removing the harmful species from water in the ballast tank. Information about the harmful species in the Mediterranean ecosystem was given.

Keywords: Ballast Water, Ecosystem, Harmful Species.

Presentation Type: Oral Presentation

Particulate Matter Concentrations in a Broiler House in Summer Season

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The aim of this study is to determine the summer time concentration of particulate matter (PM) in a commercial broiler houses in the Bursa region of western Turkey. In this study, PM concentrations and indoor environmental conditions such as temperature, relative humidity was measured continuously for four consecutive days in summer months. A pDR-1500 Aerosol Monitor (Thermo-Fisher Scientific, USA) was used for particulate matter concentrations measurements. The daily average exhaust PM concentrations overall of study were measured as 1.25 mg/m^3. The maximum and minimum concentrations were obtained third measurement day as 14.44 and 0.07 mg/m^3 . The obtained PM concentrations were exceed limit values (20µg/m^3) for livestock houses published in European Directives "Air Quality Directive".

Keywords: Broiler, Concentration, Particulate Matter.

Presentation Type: Oral Presentation

Climate as an Input in Vernacular Architecture Research

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Vernacular architecture research must evaluate abstract factors affecting the design (the climate, the economy, and the culture) as the inputs and the concrete results of the design (the material, the technique, and the form) as the outputs. Climate, in this sense, is the genesis term that needs to be discussed first in vernacular architecture concept. The planet Earth has distinct climate zones because of several geographic factors. Each climate zone has endemic biomes consisting of biological species adapted perfectly to local conditions. Human, on the other hand, is the only biological species that spread all corners of the planet before completing biological adaptation. Therefore, in order to survive, people created several tools, clothes, and architecture - what we prefer to call material culture. Vernacular architecture, which means any process of space definition without employment of a professional designer, in climate sense, obviously works as a thermal tool. For instance, both the igloo in circumpolar region and the Bedouin tent in the Sahara Desert are ideal devices. The former "cold" and the latter "hot-arid" are the most extreme two of the five climatic zones. Whether the mankind achieved to survive in the uttermost conditions, it is much easier to do so in other mild ones. "Hot-humid", "warm-humid", and "warm-arid" climates are easier to control, and people are freer to discuss other needs they expect architecture to meet. During the design phase of modern architecture, climate is often ignored for sake of other so-called urgent factors and for climatization of volumes, heating in winter and cooling in summer, many uneconomical and unhealthy devices are installed into the structure. For vernacular architecture, on the other hand, climate is obviously unignorable. Modern architect faces an unsatisfactory client when modern structure errs with climate. However, when a vernacular structure does so, users will face merciless nature.

Keywords: Vernacular Architecture, Primitive Architecture, Climatic Architecture, Climatic Design.

Presentation Type: Oral Presentation

SESSION 1D

Time: 11:00-12:30

Comparison of Classification Methods for Credit Risk Data with Data Mining Softwares

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Credit Risk Management is a system that aims to prevent potential risks arising from the uncertainty of the environment in the financial sector. There is a need for a method of classifying complex data to enable banks to have data about credit history of their lending customers and to make objective evaluations. Data mining, as in most business sectors, is a method that provides accurate decision making by obtaining information through the analysis of the data sets it has formed. In the finance sector, data mining has areas of application in the areas of credit risk assessment, fraud prevention, offering the best solutions according to the customer portfolio and financial performance optimization. In this study, it is aimed to construct and present a model of credit risk assessment data set in open source UCI machine learning datasets with 4 different classification algorithms and 3 different open source data mining software. The decision trees in the credit risk assessment process will give an idea of the advantages and constraints between the decision trees, K-NN, Naive Bayes and logistic regression. The results obtained by applying these classification algorithms in different data mining software were compared. Data mining software used for this purpose is determined as WEKA, KNIME and Rapidminer. The results showed that the same algorithms had similar results. The accuracy of the logistic regression method was the highest in classification algorithms. It is expected that this study will contribute to the estimation of customer risks in credit risk management to finance sector managers and also to be useful to academic studies in this area.

Keywords: Credit Risk Management, Data Mining, Classification Methods.

Presentation Type: Oral Presentation

Categorization of Claims and Complaints from Mavimasa Social Network Address by Using Machine Learning

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Nowadays, consumers and citizens apply primarily to social media to report their dissatisfaction with the products and services. Due to the high use of social media, the time required to respond to complaints and requests made by the institutions and companies via social media should be very short. It is only possible for users to be satisfied. In this study, it is aimed to classify the complaints and requests coming from Mavi Masa Twitter address (@ mavimasa) automatically by using machine learning methods. The highest accuracy rate was obtained with Random Forest method with 81.46%.

Keywords: Machine Learning, Complaint and Demand Categorization, Mavi Masa.

Presentation Type: Oral Presentation

Electricity Energy Saving Optimization at WWTP Aeration Tank Using Online Sampling and COD Analysis Technique

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In this study, the equipment which increase the cost of operating wastewater treatment plant (WWTP) and the electricity consumption values of these equipment are examined. In general, more than 50% of the electrical energy consumed in the WWTP was observed to be caused by aeration tank. In this study, input parameters (BOD, COD, SSM, pH, flow rate etc.) used for WWTP operation were followed up for one year. After the analysis, it was determined that there was a direct connection between the energy consumption and the output parameter COD removal. In view of this analysis, an electrical energy saving optimization study was performed. In this study, it has become possible to measure the parameters of pollution (ATT output values) according to today's information technologies and to monitor these values online in the operation of existing wastewater treatment plant. By taking the COD value as a reference, it is determined that the amount of air that will be required for the aeration tank is calculated as 2 hours by the programming and optimization within the scope of this study.

Keywords: WWTP, Energy Saving, Aeration Tank, Optimization.

Presentation Type: Oral Presentation

Behavior of Solutions of Singular Shrödinger Equation

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Recently, rapid developments in the natural sciences, especially in Quantum theory, have been important for learning different characteristics of singular Sturm-Liouville operators. For example, the energy levels of hydrogen atoms and atoms with similar atomic structure, the problems of finding wave functions corresponding to these levels, are reduced to the problem of learning the behaviour of eigenvalues of the Shrödinger operator with the potential of Columb and the corresponding eigenfunctions corresponding to these eigenvalues. Therefore, some features of the Shrödinger operator with special type singular potential will be examined in the presented study. Let us consider $\sigma(x) \equiv \int_0^x q(t)dt \in BV[0,1]$, the boundary value problem that is generated by the

$$\ell(y) \equiv -y'' + q(x)y = \lambda y$$

differential equation in the $[0,1]$ interval and the

$$y(0) = 0, y(1) = 0$$

boundary conditions. In this study, it is proved that Gronwall's theorem is valid for discrete integral equations given in the space of limited oscillating functions. Then the proof of the existence and uniqueness of the solution of the given problem will be given.

Keywords: Singular Shrödinger Equation, Limited Oscillating Functions, İntegral Equation.

Presentation Type: Oral Presentation

Eigenvalues of the Singular Shrödinger Operator and Behaviors of the Eigenfunctions[1]

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Let us show the boundary value problem $L(q)$ with the

$$-y'' + q(x)y = \lambda y$$

differential equation in the $[0,1]$ range, and the

$$y(0) = 0, y(1) = 0$$

boundary conditions in $\sigma(x) \equiv \int_0^x q(t)dt$. It is important to examine this operator as the solution to many problems of quantum physics is closely linked to the learning of the spectral properties of the operator $L(q)$. Singular Shrödinger operators are characterized by the assumption that, in classical theory, the function $q(x)$ is not summable in the range $[a, b]$ for example it has singularity that cannot be integrated in at least one of the end points of the range or at one of its internal points, or that the range (a, b) is infinite range. In the present study, firstly, the operator of $L(q)$ will be proved to be well-defined in the class of distribution functions with first-order singularity, which is the larger class of functions. In the following step, the concepts of eigenvalue and eigenfunctions are defined for the well-defined $L(q)$ operator and the representations for their behaviour are obtained.

Keywords: Singular Shrödinger Operator, Eigenvalue, Eigenfunction.

Presentation Type: Oral Presentation

[1] This work is supported by the Scientific research Project Fund of Sivas Cumhuriyet University under the project number "F-564".

SESSION 2A

Time: 13:30-15:00

Burden of Caregiver for Individuals with Spinal Cord Injury

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Because of one family member have spinal cord injury this effects entire family. Current researches have been conducted on caregivers of individuals with different kind of disabilities such as dementia. But there are a few research about SCI caregivers. The purpose of this research is defines anxiety, depression and burden of SCI caregivers. Zarit Burden Inventory, PHQ (for depression) and GAD-7 (for anxiety) were utilized to 60 SCI caregivers. Results indicated that caregiving have some negative effects over mental health.

Keywords: Caregiver Burden, Spinal Cord Injury.

Presentation Type: Oral Presentation

Assessing the Relationship between Neurocognition and Social Functioning in Schizophrenia

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Executive functions generally are referred to as "supervisory" cognitive processes because they involve higher level organization and execution of complex thoughts and behavior. Many domains of executive function are impaired in patients with schizophrenia. Our aim is to find out whether neurocognitive abilities are responsible for social functioning in schizophrenia. We recruited 34 schizophrenia patients and 30 healthy control for the study. The Social Functioning Scale, Wisconsin Card Sorting Test and Positive and Negative Syndrome Scale were administered to the participants. The results showed that the higher neurocognitive functions are asscociated with several aspects of social functioning. Moreover neurocognitive ability predicted the social functioning in patient group. The findings revealed that the improvements in neurocognitive capacity are crucial for enhancing the level of social functioning in schizophrenia.

Keywords: Schizophrenia, Neurocognition, Executive Function, Social Functioning.

Presentation Type: Oral presentation

Dissociative Experiences and Childhood Traumas among Prisoners with Substance Use Disorder

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The aim of this study is to evaluate the substance use disorder (SUD) regarding dissociative experiences and childhood traumas among prisoners. Additionally, SUD, dissociative experiences and childhood traumas have examined in terms of the demographic variables. By that, this study aims to fill the area about dissociative experiences, childhood traumas and substance use disorders in the forensic system in Turkey. In this study, a quantitative study is conducted. The research was conducted in Turkey. In this study, Socio-demographic History Form that is prepared by the researcher was applied. The psychometric evaluation was based on the Dissociative Experiences Scale (DES) and Childhood Trauma Questionnaire (CTQ-28). This study was conducted among 43 prison inmates were diagnosed with substance use disorder and 44 prison inmates were not diagnosed with substance use disorder. Results indicate that there is a statistically significant relationship between dissociative experiences and SUD among prisoners. A statistically significant relationship has been found between suicide attempt and childhood trauma. Between the suicide attempt and SUD, a statistically significant relationship has been found.

Keywords: Dissociative Experiences, Childhood Trauma, Substance Use Disorder, Crime**.**

Presentation Type: Oral Presentation

Body and Mental Health after Sexual Assault, Multidisciplinary Approach

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Sexual assault, analysed under crimes committed against sexual inviolability, is a global problem threatening men and women of all ages. It has been established that sexual assault sets the ground for physiological, psychological and social problems on many children and teenagers. Many accute and long term traumatic mental and bodily effects have been observed such as; sexual defects, personality disorders, STDs, anxiety disorders, eating and sleeping problems, suicidal thoughts and suicide attempts. In this project, bodily injuries and mental disorders that can happen on children and adults after sexual assault and sexual assault victims have been studied in a multidiciplinary threatment approach. The project planned as a literature research, will evaluate crisis intervention after sexual assault in Turkey.

Keywords: Sexual Assault, Body Health, Mental Health.

Presentation Type: Oral Presentation

Selection of the Correct Skeletons in the CRM and BMA-CRM

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The clinical trials are the most effective approach for comparing and examining experimental drugs, medical treatments, or clinical interventions on humans. The outcome of the clinical trials has an important impact on clinical practice. In phase I clinical trials, some of the most popular approaches are CRM (Continual Reassessment Method) and BMA-CRM (Bayesian Model Averaging with Continual Reassessment Method). In these designs, the skeletons play critical role in predicting target toxicity rates. The BMA-CRM design requires multiple skeletons in order to cover different scenarios. In contrast, the CRM requires only a single skeleton. In this study, we investigate the importance of the skeletons in these designs. We implement several scenarios to show how selection probabilities can be change based on skeleton.

Keywords: Phase I, Clinical Trials, Adaptive Designs, Drug Discovery.

Presentation Type: Oral Presentation

SESSION 2B

Time: 13:30-15:00

The Investigation of Tritium Activity Concentrations in the Drinking Water before Nuclear Power Plant in Sinop Province[2]

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The measurement of radioactivity in drinking water allows the determination of the exposure of humans to radiation by the habitual consumption of water. Therefore, the radioactive contaminants found in the water must be below certain limits. One of the radioactive isotopes found in water is tritium. Tritium (^{3}H) is a radioactive isotope of hydrogen with a half-life of 12.32 years decaying to ^{3}He by emitting low energy beta radiation with an average energy of 5.7 keV. It is found in nature and it can also be produced by human activities. In this study, a total of 9 drinking water samples were collected from Sinop province and districts. The tritium activity concentrations in water samples were measured by liquid scintillation counter (LSC). LSC is the most commonly used technique for determining tritium in low-level environmental samples. The Minimum Detectable Activity (MDA) value for used method was found as 1.47 Bq/L. The tritium activity concentrations of all samples are above the MDA. The maximum and mean values of the tritium activity concentrations in the drinking water were found to be 3.17 ± 0.47 Bq/L (26.86 TU) and 2.69 ± 0.43 Bq/L (22.81 TU), respectively. These results are much lower than the values recommended by relevant organizations in Turkey. In addition, some radiological parameters (daily intake of radionuclides, annual effective dose equivalent and lifetime cancer risk) for the water samples were calculated and compared with the values recommended by international organizations.

[2] This study was supported by The Scientific and Technological Research Council of Turkey (TÜBİTAK) under project no. 117Y285.

Keywords: Radioactivity, Tritium, Drinking Water, Sinop, Turkey.

Presentation Type: Oral Presentation

Environmental Effects of Heavy Metals and Removal from Industrial Wastewater

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Most of the wastewater exposed as a result of industrial activities include heavy metals. Heavy metals have become an important issue in recent years due to their involvement in surface waters and groundwater and the potential risks of living things. Non-biodegradable heavy metals tend to accumulate in the living organism. Although some of the heavy metals are required at certain concentrations for necessary activities, they show various toxic properties at high concentrations. Other alternative methods are preferred because physical and chemical methods used in heavy metal removal from wastewater cannot completely remove heavy metals. The oxidation, reduction, precipitation, membrane filtration, ion exchange, electrochemical processes, biological processes, and adsorption are in these methods. Although all of these technologies are used, adsorption is the most suitable method for removing heavy metals from wastewaters. Compared to conventional methods, the adsorption process has the advantage of low operating costs, minimization of disposed chemical and biological sludge volume, and high efficiency in detoxification of very dilute wastes. In this study, the information about heavy metals originating from industries is given. Also, due to the harmful effects of heavy metals on the environment and human health, the adsorption process used for removal of heavy metals from industrial wastewater before discharge is detailed.

Keywords: Adsorption, Heavy Metal, Treatment, Toxicity.

Presentation Type: Oral Presentation

Investigation of the Usage of Bitlis Stone as a Building Material in Terms of Product Toxicity

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In this study, the toxicity characteristics of Bitlis Stone, which is unique to Bitlis region and used as building material, was investigated. Toxicity Characteristic Leaching Procedure (TCLP) is developed to investigate the mobility of both organic and inorganic analytes present in wastes. The experimental study was carried out according to the EPA Test Method 1311 TCLP procedure. Metal concentrations were measured on an ICP MS apparatus according to the EPA 200.8 method. When the results are compared with TCLP limits, it is seen that the limit values for cadmium and lead heavy metals are exceeded. In this case, it is considered that this material can release these heavy metals to the environment in extreme conditions which may pose a risk.

Keywords: Bitlis Stone, TCLP, Heavy Metals.

Presentation Type: Oral Presentation

Efficiency Assessment of Indoor Environmental Conditions in a Broiler House Using Temperature-Humidity Index

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Indoor environmental conditions are a major factor for the broiler in terms of bird welfare. Optimum temperature and relative humidity conditions in indoor environment in broiler houses should be provided to prevent heat stress, good feed conversion ratio, higher productivity and less mortality. The goal of this study was to assess efficiency of indoor environment conditions in a broiler house operated in Bursa region using temperature humidity index (THI). The average mean and maximum THI values were 28 and 31, respectively and it varied from 25 to 31. According to THI results obtained in this study, indoor environmental conditions in monitored broiler house were insufficient for broiler in all measurement days.

Keywords*:* Broiler, Heat Stress, Temperature-Humidity Index.

Presentation Type: Oral Presentation

SESSION 2C

Time: 13:30-15:00

Contribution of Women to Home Economy Working in Dried Eggplant Production: Case of Gaziantep Province of Turkey

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Drying vegetable production is one of the most important agricultural activities where women participated in rural areas of Turkey. In this study, it was aimed to determine the contribution of women in dried eggplant production to home economy and to determine their socio-demographic characteristics in Gaziantep Province of Turkey. For this purpose, a face to face survey was conducted with 84 women in January - February period of 2018. According to the research results; it was found the average age of the women who participated in the survey was 35.46 and 40.5% were primary school graduates. The average family income level of the women was obtained as 2053.47 TL/ month. Also, it was determined that women worked in dried eggplant production 8,5 hours daily and 57 days in the season which lasted four months. It was found that women contributed to the household economy seasonally 4375 TL from dried eggplant production. Women stated that due to the dried eggplant production their social activities developed as well as contribute to neighborly relations, cooperation and sources owned.

Keywords: Dried Eggplant, Home Economics, Rural, Turkey.

Presentation Type: Oral Presentation

Grafting Success of Sultan Hawthorn Cultivar Grafted on Some Clonal Rootstocks

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Using clone rootstock is very important for reducing the size and shortening juvenile period of trees. The study was conducted to investigate the different clonal rootstocks on the grafting success in Sultan hawthorn cultivar (*Crataegus azarolus* L.). Scions of Sultan cultivar were grafted on apple (M9, MM106, MM111), pear (Fox11, OHF87), quince (Quince A, BA29), pyracantha clonal rootstocks, and hawthorn seedling rootstock (control) with whip grafting method on May 21 in 2018. The grafting take and bud sprout percentages were observed. The results of the study showed that graft success of Sultan cultivar was affected by the rootstocks. The higher percentage of grafting take was recorded on Fox11 (87.50%) and MM111 (66.67%) rootstocks. In addition, the bud sprout percentage was highest in M9 rootstock (81.48%). The results showed that some apple, pear, quince and pyracantha clonal rootstocks were found to be hopeful as rootstock for the hawthorn. However, graft incompability of between the hawthorn and these rootstocks should be examined by histologically or other methods.

Keywords: Hawthorn, Clonal Rootstock, Grafting Success.

Presentation Type: Oral Presentation

A Research on the Monumental Trees of Yildiz Park (Istanbul)

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This study was conducted in Yıldız Park in Istanbul in 2014. The aim of this study was to determine monumental or worth preserving trees. As a result of this study, 192 trees were detected. 20 of the determined trees are monumental trees and other 172 trees are worth preserving trees. There are 9 species as monumental tree in the study area. The most monumental trees are Pistacia atlantica (7 trees). All the monumental trees are healty.

Keywords: Monumental Tree, Istanbul, Yıldız Park.

Presentation Type: Oral Presentation

The Efficacy of Two Different Neem [*Azadirachta Indica* A Juss (Melacaeae)] Formulations on Leafminers (Diptera: Agromyzidae)

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This study compared two different commercial neem insecticides with cyromazine for efficacy in controlling larval leafminers of *Liriomyza huidobrensis* and *L. trifolii*. Commercial cucumber greenhouses in Menderes (Izmir) and Ortaca (Mugla), Turkey were used for these trials. Replicated plots (15 m^2 each) were randomly established in each greenhouse and treated with NeemAzal T/S, Organica Neem Oil, or Trigard (cyromazine), all at manufacturer recommended rates, or left as untreated controls. Insecticides were applied when the average leaf density was 3-4 larvae/leaf. Leaf samples were taken at 3, 7, 10 and 14 days post-treatment, and live larvae were counted with a dissecting microscope. Both neem insecticides were effective against *L. huidobrensis* for 7 days; at 14 days, Neem Oil was significantly less effective than NeemAzal and both were significantly less effective than Trigard ($P < 0.001$). At 14 days post-treatment, the density of larvae in Trigard treated leaves was less than 3 larvae/leaf. Neem insecticides were only effective against *L. trifolii* for less than 7 days; there was no significant difference between their efficacy ($P > 0.05$). Trigard was effective against *L. trifolii* for about 14 days (larval densities were 3-4/leaf).

Keywords: Neemazal, Neem Oil, Cyromazine, *Liriomyza Huidobrensis*, *Liriomyza Trifolii*, Cucumber, Greenhouse, Turkey.

Presentation Type: Oral presentation

Applicability Analysis of Drills and Trainings Onboard Based on Minimum Resting Time

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Ships spend a large part of their commercial life in the open sea. Seafarers who works on these ships also maintain a large part of their working time in the open sea as isolated from shore lives. For this reason, the seafarers should be capable of dealing with any emergency situation on board. These competencies are gained through training and certification, which are determined by some national and international rules. This gained competencies are strengthens by periodical drills and trainings onboard. But nowadays, the workload of the seafarers is increasing due to reasons such as the faster operation of the ships, the longer port operations, the shorter the voyage, the reduction of the number of personnel, the complexity of the ships with the technological devices and the increase of the maintenance needs. In the world there are national and international rules that should be applied on the subjects such as working hours and living conditions. But given the current workload, many seafarers cannot be rested as deservedly. If training and training is added to the intensive workload, maximum working time is exceeded. In this case, the seafarers are forced to give up training or their rest time. In this study, the seafarers working and resting hours were evaluated based on drills and trainings in terms of international arrangements.

Keywords: Seaman, Drill, Training, Rest Hours, STCW, MLC.

Presentation Type: Oral Presentation

SESSION 3A

Time: 15:30-17:00

Ceramic Filter Production by Using Calcium Aluminate Cement for Molten Metal Filtration

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Ceramic filters have extensively been preferred in foundry processes including gray & nodular, steel, aluminium and magnesium materials. Filtration is carried out to keep solid particles like inclusion or oxides away from melt cast in these processes. Ceramic filters provide a great deal of advances such as ensuring homogeneous melt flow by minimizing turbulence effect and enduring high temperatures with excellent thermal shock resistance. With this motivation, we studied ceramic filter product made of refractory cement based material apart from commercially available ones like silicon carbide, alumina or zirconia. First, CA-80 class cement was supplied and water addition was done with respect to varying water/cement ratios of 0.25 to 0.50. Next, replica method was followed as 10, 20 and 30 ppi sponges were seperately plunged into cement and water slurries. The plunged sponges were compacted by roller to facilitate adhesion. The samples were stringed up in air for 24 h, and then the sponges were plunged into slurries one more time. Lastly, these samples were heated at different temperatures from 700 to 1500 °C with different heating rates of 1 to 5 °C/min. It was measured that minimal and maximal compressive strength values were 0.44 and 0.98 MPa, respectively while commercially available ceramic filters have 0.9 to 1.5 MPa. Further, it was found that our samples had satisfactory thermal resistance in comparison to the commercially available ones, namely 1200 °C. It was concluded that CA cement based ceramic filters can effectively be produced with favorable features.

Keywords: CA Cement, Ceramic Filter, Compressive Strength, Replica, Thermal Shock.

Presentation Type: Oral Presentation

Flow Analysis on Cylinder Geometries Designed with Different Spiral Steps

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Flow applications on cylinders have been the focus of research for solving many technical problems in engineering. This flow condition is popular not only with its academic appeal, but also because of its technical problems related to energy saving and structural design. This kind of flow is important for many practical applications, such as electronic components, heat exchanger systems, aerodynamic structures, flow separators in polymer processing applications etc. Before the experiment is made, detailed design of the geometries that are designed before the problems can be avoided. At this point, it is possible to test before the use of different types of geometries with analysis programs which are extracted thanks to the rapidly developing computer technology. In this study, Computational Fluid Dynamics (CFD) software, ANSYS package program was used. Spiral geometries were formed on different number of steps on 3D cylinder body and flow analysis was performed with 0.1 blockage ratio (cylinder diameter / channel length). For a determined Reynold (Re) numbers (depending on fluid velocity and cylinder diameter); downstream flow characters were examined, drag (Cd) coefficients were obtained and compared with each other and studies in the literature.

Keywords: Cylinder, Spiral Body, CFD Analysis, Drag Coefficient.

Presentation Type: Oral Presentation

Exergy Analysis of Horizontal Ground Source Heat Pump Using Al_2O_3/Ethylene Glycol-Water Nanofluid[3]

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Heat transfer plays an important role for ground source heat pumps. However, low heat transfer rate of liquids (water and ethylene glycol etc.) prevents performance increase. Since a solid metal has a greater thermal conductivity than a fluid, the suspension of metallic nanoparticles into the fluid can help to increase the thermal conductivity of this fluid. For the design of energy systems, exergy analysis is a powerful tool for optimization and performance evaluation. Furthermore, exergy analysis of heat pump system helps to identify energy loss and possible improvements. Therefore, it is important to perform exergy analysis on GSHPs in order to see performance values. In this study, an exergy analysis of a ground source heat pump system used for heating purposes was performed. Various operating parameters of the system were examined and the exergetic efficiencies of the system were determined. Also, exergy transport and destruction were determined by the parameters obtained from experimental results. The GSHP system which has been examined was established in Sivas Cumhuriyet University in Turkey. The exergetic efficiencies of the system were calculated to be 75.3% and 75.9%, respectively, for base fluid (ethylene glycol-water) and nano fluid (Al_2O_3/ethylene glycol-water (Al_2O_3 volume concentration 0.1%)). The results show that the use of nano fluid increases exergy efficiency.

Keywords: Exergy Analysis, Ground Source Heat Pump, Alumina Oxide, Nanofluids.

Presentation Type: Oral Presentation

[3] This work is supported by the Scientic and Technological Research Council of Turkey (TUBITAK) under project no: 118M140.

Experimental Flow Analysis on Cylinder Geometries with Using Particle Image Velocimetry[4]

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Particle Imaging Velocity Measurement (PIV) is one of the most commonly used techniques of flow visualization methods. In this study, PIV technique was used as experimental method. D = 44 mm, h = 440 mm (height-diameter ratio, h / D = 10) with values finite-circular bare cylinder and formed by a specified number of steps on the roll effect to the circular spiral protrusion of the flow structure was examined. The spiral protrusion have a semi-circular structure with a diameter of 4.4 mm in d / D = 0.1 ratio. Reynolds number is determined as Red = 10000 based on the free flow velocity and the cylinder diameter. As a result of the experiments, the instantaneous velocity fields <V> were obtained, using these data; time average velocity areas <V>, streamlines < Ψ > and vortex curves < ω > were drawn. Moreover, unlike the flow structure formed in the downstream region of the bare cylinder, it has been shown that different vortex centers are formed in the spiral surface cylinder.

Keywords: PIV, Particle Image Velocimetry, Past Flow Cylinder, Passif Tecnique.

Presentation Type: Oral Presentation

[4] This work is supported by the Scientific Research Project Fund of Sivas Cumhuriyet University under the project number "M-728".

SESSION 3B

Time: 15:30-17:00

Effects of Pre-sowing Treatments with Allelopathic Material on Seedling Emergence and Performance in Tree Tomato (*Solanum betaceum* Cav.)

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The Allelopathy is defined as the direct or indirect effects of one plant or organism on another through the release of secondary metabolites (allele-chemicals) in to the environment. These allelo-chemicals influence can be stimulatory or inhibitory. In most of the researches until today, the obstructive effect of allelo-chemicals has been studied. However, the stimulating effect of allelo-chemicals is very important for organic agriculture. Seeds of tree tomato (Tamarillo, *Solanum betaceum* Cav.) were primed with allelopathic plant extract ferula gum (FER, 0.2 g gum/L, 25 °C, 24h), lantana herbal tea (LAN, 4 g dried petal /L, 25 °C, 24h), and marigold herbal tea (TAG, 4 g dried petal/ L, 25 °C, 24h) along with unsoaked control to study the effect of seed priming. The pre-sowing influence of allelopathic material (TAG, LAN and FER) on the emergence percentage, mean emergence time, emergence index, T50, seedling height (cm), seedling fresh weight (mg) and seedling dry weight (mg) investigated in tree tomato seeds. The seeds which were harvested at mature fruits, are used in experiment. The results revealed that pre-sowing treatment with allelopathic plant extract showed higher seedling emergence and performance. The greatest advantage of pre-sowing treatment was observed in PAT treatment. Allelopathic PAT treatment resulted in 15% higher seedling emergence rates, 3.3-day faster mean emergence time, 153 mg heavier seedling weights, and higher emergence index with respect to untreated seeds. In addition, Allelopathic FER and LAN treatment were better than control. Consequently, pre-sowing treatment with allelopathic plant materials, an inexpensive, organic, eco-friendly, effectives, and simple technique, has been proposed to improve seedling emergence and performance in tree tomato. Also, these materials checked for antibacterial effects of seed sowing.

Keywords: Organic Priming, Tamarillo Seedling, Stimulatory Effect, Allelo-Chemicals.

Presentation Type: Oral presentation

Research on Some Morphological Properties of Stone Pine (*Pinus pinea* L.) in Milas (Muğla) Region

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This researche Milas (Muğla) province, 350-650 m. in height, which occur naturally in the forests of Stone Pine has been realized. Research in the field and at each elevation in total three different heights so that a total of 30 trees in the trees 10 height, diameter at breast height, age were measured. Study statistically significant sample cone length from trees, pine cones weight, seed size, seed weight were measured. Accordingly, the average size of the trees measured 12.96 m. average diameter at breast height 43.19 cm. the mean age was measured as 57.62. Cones average height 12.28 cm. average grain size 7.4 mm. average 12.7 cm. cone weight, average seed weight was measured as 31.5 cm.

Keywords: Stone Pine, *Pinus pinea* L., Morphology, Milas.

Presentation Type: Oral Presentation

Preliminary Results of Mogador Apricot Cultivar under Protected Cultivation

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This study was carried out to evaluate the Mogador apricot cultivar under protected cultivation in Hatay, Turkey. The Mogador cultivar was planted at plastic cover and open area with planting spaces of 2.5x3.0 m in May 2017. Phenological variables such as first blossoming, full bloom, end of bloom and harvest time and pomological variables such as fruit weight, fruit diameter, fruit length, flesh/seed percentage, total soluble solids (TSS), pH and acidity were investigated. Fruit color measurements were performed by Minolta color (CR-300). In addition, yield per tree was evaluated. The results showed that protected cultivation provided precocity of 10-15 days when compared to open field. We indicated that fruit quality characteristics of Mogador cultivar was higher in the open area than protected cultivation, however, early ripening of Mogador cultivar under plastic cover allows a highly profitable fruit growing.

Keywords: Apricot, Protected Cultivation, Precocity, Fruit Quality.

Presentation Type: Oral Presentation

Protected Fruit Culture in Turkey

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This study was performed in order to uncover the potential of the protected fruit cultivation in Turkey. Protected fruit cultivation has increased in recent years, especially because it provides earliness in the world. Turkey is one of the world's most important countries engaged in protected plant production and is leaded in Europe with Spain. In the last decade, the cultivation of protected fruit has significantly increased by 85%. In Turkey, protected fruit cultivation mainly in the Mediterranean region (88.4%) and Aegean Region (11.5%) are continuing. Bananas and strawberries are an important fruit species with culturing in the protected in Turkey and grape, apricot, plum and peach-nectarine are followed to them. The fruit species are grown in high tunnel (banana, strawberry, plum), low tunnel (strawberry), plastic greenhouse (banana, strawberry, grape, apricot, plum, peach-nectarine) and glass greenhouses (strawberries) and their percentages are 30.85%, 7.21%, 61.81% and 0.16% respectively.

Keywords: Protected Cultivation, Fruit Growing, Earliness.

Presentation Type: Oral Presentation

A Research on the Monumental Trees of Alanya (Antalya)

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This study, between 2012 and 2014, aims that 105 trees, including 5 of them has been already registered monumental tree, locational detection with GPS (Global Positioning System) and current condition and age, determination of length and diameter which are located in boundaries of Alanya (Antalya). Each of the trees inventory has been recorded seperately. According to study results, in these cities, there are 105 tree; including 5 of them which are oriental plane (*Platanus orientalis*), had been registered monumental tree by governmental agency, has been evaluated and they are considerable as a monumental tree and worthy of preservation. At the same time, as a result of study, there are 22 different tree species have been detected and the most common species is Oriental Plane (*Platanus orientalis*) that are counted 51 in Alanya.

Keywords: Monumental Trees, Alanya.

Presentation Type: Oral Presentation

SESSION 3C

Time: 15:30-17:00

Biodiversity of Agromyzidae (Diptera) of Economic Importance in Turkey by Using Molecular Tecniques *

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The *Liriomyza trifolii, L. congesta, Agromyza apfelbecki* and *Chromatomyia horticola* species have become important vegetable pests in the agricultural areas in Turkey. These species are not easily differentiated by their morphological characteristics. The aim of the present study was to obtain genetic markers to unambiguously distinguish these species and gain insight into genetic variation between the individuals of *L. trifolii* strains collected from various geographic locations in Turkey. Thus, four random primers were employed to generate RAPD markers. Different RAPD profiles were observed for the different species indicating that the RAPD-PCR analysis can be applied as a useful tool in quickly screening the strains to aid in discriminating these species that was routinely done via classical methods. Identification of biotypes of the species is crucial in order to designing control strategies to avoid the spread of the pests because of economic losses caused by the damages to vegetable crops. Our results show that RAPD is promisingly an effective, fast and economic way, hence proposed as a valuable alternative to traditional identification of the insect species and strains.

Keywords: Agromyzidae, Leafminer, Molecular Identification; RAPD.

Presentation Type: Oral Presentation

* This study was supported by TUBITAK, 106T122 project.

Functional Foods and Importance in Consumer Preference

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The term of functional food identifies foods that contribute positively to health. Functional foods; it is all about food, fortified, enriched foods and dietary supplements, and these foods have the potential to improve mental and physical condition and reduce disease risks. Functional foods are also used instead of healthy foods, medicinal foods, designer foods, special nutritional foods and pharmacological foods. The term functional food is a term that emphasizes the relationship between food and health. The results have shown that there are many positive effects on health. There are three basic requirements for a food to be considered functional. These; foods (capsules, tablets or non-dust) are derived from natural contents, consumed as part of daily nutrition, include regulating specific processes in humans that delay the aging process, prevent disease risk and improve the immune system. They should draw attention to the high growth rates, although there is a brief history of functional food products in the world and in Turkey compared with other food products. The desire for good nutrition, protection from diseases and the increase of the elderly population increase the demand for functional foods. In this article, functional foods and the factors that affect the functional food preference of consumers are examined.

Keywords: Functional Food, Consumer Preference, Nutrition.

Presentation Type: Oral Presentation

Sustainability in Rural Development and Young Farmer Approach

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In recent years, the decrease in agricultural population and the migration of young people from rural areas have increased rapidly in our country. In order to ensure economic sustainability in agriculture, it is important that the young population stays in the countryside. For this reason, as in many countries around the world, many models and supporting tools are being developed in our country to keep the young population in rural and agriculture. In our country, the Decision on the Support of Young Farmer Projects within the scope of Rural Development Supports numbered 2019/8540 published in the Official Gazette No. 29636 for young farmers is an important regulation in this regard. The limitation of social opportunities in rural areas, the inadequacy of the opportunities, the fragmentation of the enterprises and the shrinking of them, the inability to obtain sufficient income as a result of all these break the youth from agriculture and the countryside. For these reasons, future applications and measures to be taken in this regard gain importance in terms of sustainability in rural areas. Within the scope of the Young Farmers Project, 47,775 projects, which were accepted in 3 years between the years 2016-2017-2018, were given a total of 1,434,900 000 TL grant support. Under the program, project-based project topics; it covers subjects related to animal production, plant production, regional products, medicinal and aromatic plant production, processing, storage and packaging.

Keywords: Rural Development, Agriculture, Young Farmer.

Presentation Type: Oral Presentation

The Parasitoid Complex of *Liriomyza Huidobrensis* (Blanchard, 1926) in Cucumber Greenhouses in Izmir Province, Western Turkey

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Liriomyza huidobrensis (Blanchard) (Diptera: Agromyzidae) is an important pest in cucumber greenhouses in Kumluova (Fethiye, Muğla)) Turkey. This study was carried out during the spring and autumn seasons of 2016 and 2017 in cucumber greenhouses. Leaves were sampled weekly and kept in the laboratory to observe and count emerging leafminers and parasitoid adults. During this study five parasitoid species were collected. The braconids, *Bracon intercessor* Nees von Esenbeck and *Opius meracus* Fischer, occurred only in the spring. The eulophids, *Diglyphus crassinervis* Erdos, *Diglyphus isaea* (Walker) and *Neochrysocharis formosa* (Westwood), occurred in both the spring and autumn seasons. *Diglyphus isaea* and *N. formosa* were the predominant parasitoid species found.

Keywords: *Bracon intercessor, Diglyphus crassinervis, Diglyphus isaea, Liriomyza huidobrensis, Neochrysocharis formosa, Opius meracus,* Cucumber, Turkey.

Presentation Type: Oral Presentation

Importance and Effectiveness of Professional Organization in terms of Rural Development

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Today, when the world economy is becoming more effective on countries, the measures that countries can take to protect their economies and producers are gaining importance. In particular, the organization of producers is economically meaningful. Today, farmers' organization in any part of the world is looking for a variety of ways to sell the product and enter those markets. For this reason, in order to protect our own producers and to have a say in the products we produce in the world, professional organizations are becoming organizations producing important policies. In particular, the development of political mechanisms for the development of agricultural policies and the development of political mechanisms in order to achieve the development of rural policies is necessary for our producers to come to the place they deserve in the world. Therefore, this study will discuss what can be done to increase the effectiveness of professional organizations in rural development.

Keywords: Rural Development, Organization, Agricultural Chambers, Farmers.

Presentation Type: Oral Presentation

POSTER SESSION

Synthesis of Some New Carbamoyl Derivatives of Acrylic Acid

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This work has been done for the purpose of new medicine or drug identification which should substitute many antibiotics from which nowadays many bacteria are developing immunity. Therefore, the main purpose of this work has been the synthesis of some new components which would contribute at some point in our country as well. Acrylic acid (IUPAC: propenoic acid) is an organic compound with the formula CH_2=CHCOOH. It is the simplest unsaturated carboxylic acid, consisting of a vinyl group connected directly to a carboxylic acid terminus. This colorless liquid has a characteristic acrid or tart smell. It is miscible with water, alcohols, ethers, and chloroform. While the carbamoyl derivatives are the univalent carboacyl group formed by loss of -OH from the carboxy group of carbamic acid. We have used derivatives of various heterocyclic compounds such as amine and maleic anhydride to synthesized dhe carbamoyl derivatives of acrilic acid. The making of this work has been done in three phases: In the first part we will summaries some of the most important recent research, in the part of new carbamoyl derivatives of acrylic acid. İn the second part we will have given the results of our research which contain the new component synthesis whose structure will be defined according to spectral data: IR, ^{1}HNMR, and ^{13}CNMR. İn the third part we will describe in detail the experimental conditions of new components synthesis and their spectroscopic properties.

Keywords: Carbamoyl, Acrylic Acid, Maleic Anhydride, Amine.

Presentation Type: Poster Presentation

A Glance over Generating Functions

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The most powerful way to deal with sequences of numbers, as far as anybody knows, is to manipulate infinite series that ”generate” those sequences. In mathematics, a generating function is a way of encipher an infinite sequence of numbers by treating them as the coefficients of a power series. We hope that our presentation may be interesting enough, and that it may help some readers to understand the nature of them, including ordinary generating functions, exponential generating functions, Dirichlet generating functions and solving recurrences.

Keywords: Generating Functions, Infinite Sequences, Power Series, Recurrences.

Presentation Type: Poster Presentation

Artificial Intelligence in Work Process Automation

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Artificial Intelligence (AI) nowadays has become a part of nearly every working process. The evolvement of the AI in processes automation is progressing fast and is becoming a substitute by creating more effective and precise work, thus generating more sustainability on the industries worldwide. *"AI is usually defined as the science and engineering of imitating, extending and augmenting human intelligence through artificial means and techniques to make intelligent machines" Zhongzhi SHI*. The emphasizes of the displacement with AI in effect of work automation is creating machines and AI replacing works in specific tasks that manpower have used it to perform. This displacement effect inclines the reduction of the demand for working force, yet in the other-hand it has counteracted productivity effect resulting increased incomes by process automation as well as demanded increase of workforce for non-automated tasks generated via automation processes. The more powerful countervailing force against automation is the creation of new labor-intensive tasks, which reinstates labor in new activities and tends to in-crease the labor share to counterbalance the impact of automation. The more dominant countervailing energy against automation is the formation of new work concentrated assignments, which reestablishes work as new activities and has in affected in the counterbalance process automations. The paper will present the counterbalance and the positive effects that AI has brought to the industries over the past decades.

Keywords: AI, Automation, Demand, Work-Force, Displacement, Technology, Productivity.

Presentation Type: Poster Presentation

Some Characteristic Data of Amphibians and Reptiles in the Mirusha Protected Area

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During the six months period (April - October 2018), mainly during the day, the authors developed field research for the purpose of compiling an inventory of batrachofauna and herpetofauna in the protected area Ujëvarat e Mirushës, which is located in the triangle between the municipalities of Klina - Rahovec - Malishevë. The exploration area is characterized by dry rocky terrain, limited mountain areas and riverbanks, which flows throughout the entire length of the area. In total, three types of amphibians (32 individuals) and six species of reptiles (60 individuals) were found during this field research in the above mentioned area. Medotology: Consequently researches using not-standardized methods are frequently found in the literature. The animals described are captured, photographed, marked and released into their natural habitats, without affecting their habitual stability. Therefore, with these data we have shown that these species are present in this area as well as the great importance of this area due to the high diversity of amphibians and reptiles and imposes the need to ensure the survival of these species with monitoring long-term use of this area and the protective measures applied.

Keywords: Amphibians, Reptiles, Kosovo, Distribution, Mirusha.

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