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**Edited by**

**Prof. Dr. Özer Çınar**

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## **Welcome to ICSD 2016**

*On behalf of the organizing committee, we are pleased to announce that the 2thInternational Conference on Sustainable Development (ICSD-2016) is held from October 19 to 23, 2016 in Skopje-MACEDONIA. ICSD 2016 provides an ideal academic platform for researchers to present the latest research findings and describe emerging technologies, and directions in Sustainable Development issues. The conference seeks to contribute to presenting novel research results in all aspects of Sustainable Development. The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Sustainable Development. It also provides the premier interdisciplinary forum for scientists, engineers, and practitioners to present their latest research results, ideas, developments, and applications in all areas of Engineering and Natural Sciences. The conference will bring together leading academic scientists, researchers and scholars in the domain of interest from around the world. ICSD 2016 is the oncoming event of the successful conference series focusing on Sustainable Development. The scientific program focuses on current advances in the research, production and use of Engineering and Natural Sciences with particular focus on their role in maintaining academic level in Engineering and Applied Sciences and elevating the science level. The conference's goals are to provide a scientific forum for all international prestige scholars around the world and enable the interactive exchange of state-of-the-art knowledge. The conference will focus on evidence-based benefits proven in clinical trials and scientific experiments.*

**Best regards,**

**Chairman of Conference**

**Prof. Dr. Özer ÇINAR**

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## ANTIOXIDANT POTENTIAL OF SOUR CHERRY FRUITS

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### Abstract:

The past decade brought an increased consumer awareness for the health protective properties of fresh food. In that way, the antioxidants from dietary plants play a significant role, since they contribute the reduction of risks for many modern age chronic diseases. The investigations so far, have shown that phenolic compounds have strong antioxidant capacity due to their ability of scavenging free radicals. Stone and berry fruits are recognized as rich sources of phenolics, and among them the sour cherry fruits take important part of the population diet in South-eastern Europe. Depending on the variety, sour cherries are consumed fresh or processed as juices, nectars, jams, marmalades, and even wines and liqueurs. The differences in phenolic profiles amongst the sour cherry varieties and their products have great impact on total antioxidant activity.

In this study the antioxidant potential of sour cherry fruits from different varieties that are grown on the territory of the Republic of Macedonia was investigated. First, methanolic extracts using ripe sour cherry fruits of the varieties Oblachinska (from Skopje and Shtip area), Ciganchica and Marena (both from Shtip area) were prepared. Antioxidant activity was evaluated by DPPH assay, and the results were expressed as amounts of fresh fruit necessary to inhibit 50% of DPPH radicals (I50%). In order to quantify the phenolic compounds, HPLC analyses of the extracts were conducted at 530, 350 and 280 nm for anthocyanins, flavonols and phenolic acids, and flavan-3-ols, respectively. Also, they were identified using LC-ESI-MS system. According to the results anthocyanins, with proportion of more than 60%, predominate in the total phenolics content, followed by the colorless phenolics (flavan-3-ols, flavonols and phenolic acids). Although, sour cherry fruits of Ciganchica variety revealed the highest antioxidant activity, there is no significant difference between I50% values for the sour cherries of all four examined varieties.

**Keywords:** Sour Cherry, Antioxidant Activity, DPPH Radical, Phenolics

## POLYPHENOLS IN TRADITIONAL SOUR CHERRY LIQUEURS

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### Abstract:

The polyphenols are important widespread group of secondary metabolites in plants. They are responsible for the color and flavor of fresh and processed foods. Moreover, today these phytochemicals became significant part of common human diet, because of their antioxidant, anti-inflammatory and anticancer effects. In that way, fruits are proven and reliable sources of polyphenolics, and one of the well-known fruits worldwide are sour cherries. They are rich with sugars, acids, vitamins, minerals, and different polyphenols. Besides consumption in fresh and processed form, sour cherries are also used for preparation of liqueurs. This process includes maceration of fruits in alcohol with sweetener addition, which induce extraction of components present in sour cherries. The phenolic contents in finished product depend on the composition of raw material, applied preparation technique, presence of other substances, and finally the storage conditions.

In the present work the polyphenolic compounds of two traditionally obtained sour cherry liqueurs were evaluated. The liqueurs were prepared of ripe fruits, with addition of sucrose and food grade ethanol. The maceration process was performed with exposure on direct sunlight for the first liqueur, and storage in dark at room temperature for the second one, in period of 40 days. After aging of 6 months in dark fruits were separated from the liquid. The obtained liqueurs were analyzed on HPLC-PDA system, and the individual components were identified with LC-ESI-MS system. In both sour cherry liqueurs the presence of 39 phenolic compounds was identified, however the phenolic profiles of the liqueurs differed significantly due to preparation conditions, and they were also different from that of sour cherries used as raw material. It was estimated that in the moment of analysis the total phenolics recovery was only 11.5% for the liqueur prepared with exposure to sunlight during maceration, and 15% for the one where maceration was carried in dark.

**Keywords:** Liqueur, Sour Cherry, Polyphenols, HPLC, LC-MS

## E-COMMERCE DEVELOPMENT IN TOURISM SECTOR

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### **Abstract:**

Technology development, including Internet usage, recently represents a large increase in all industries, especially in the tourism industry. Tourism as an industry in itself, firstly its function was based only in the way "client-agent" and vice versa, but last times with the way of the electronic penetration form "client-agent" has shown a significant reduction compared to electronic form.

The electronic form or otherwise called the website, offers so many opportunities which are faster and are spread all around the world. Considering the advantages that the internet has, one of the most important factors is that costumers are spending less time getting their information faster comparing with the earlier form when customers were forced to visit the tourist agencies to be informed. Also there is existing an easier way including the payment system which is already almost made via electronic system.

All kinds of information that a company can offer are data about the company itself, information about products or offers, different payment forms, and various services as contact with its representatives, which creates a close and a long relationship between the company and the client. We can also call as priority the time during the workers' working time, because those who are looking for information from the Internet have as much time as they want instead of those who go in the company which have in their disposition a certain time.

From the last statistics we have a drastic increase of the e-commerce in the tourism industry. Great Britain is defined as one of the countries with a grater usage of the e-commerce. We have also some details about the South East European countries including Macedonia and their usage of the e-commerce in tourism sector.

From all these we can conclude that nowadays any industry cannot function without internet.

**Keywords:** E-Commerce, Tourism Industry, Its Usage, Advantages, Clients



# **HYDROGEN PRODUCTIVITIES OF RHODOBACTER CAPSULATUS WILD TYPE AND HUP- MUTANT UNDER LOW AND HIGH LIGHT INTENSITY**

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## **Abstract:**

Biological hydrogen production is an environmentally friendly process. Purple non sulfur bacteria (PNSB) can produce hydrogen by photofermentation, in which organic acids are oxidized under anaerobic and nitrogen-limited environment, with light as the source of energy. The intensity of the incident light is an important parameter for photofermentative hydrogen production. For large scale biohydrogen production, PNSB can be employed in outdoor photobioreactors, using natural sunlight as the light source, where bacteria can be exposed to high light intensities which may inhibit or slow down hydrogen production. Rhodobacter capsulatus is a PNSB that has been frequently studied for its versatile metabolism, nitrogen fixation and hydrogen production. It can grow and produce hydrogen efficiently on dark fermenter effluents containing acetate (Ozgun et al, 2010, Afsar et al. 2011). Previous studies with other PNSB showed that light intensities above 4000 lux adversely affect hydrogen production in lab scale photobioreactors (Uyar et al. 2007) and the optimum light intensity for R. capsulatus under continuous illumination was found to be 4000 lux (Akman et al. 2015).

In this study, hydrogen productivities of the wild type (DSM1710) and uptake hydrogenase deficient (hup-) mutant of R. capsulatus were investigated under low (2000 lux) and high (7000 lux) light intensities in alternating 12 hours of light and dark periods in the medium containing 30 mM of acetate and 2mM glutamate. Hydrogen production, bacterial growth, bacteriochlorophyll a content, organic acid utilization and production were monitored periodically.

The results reveal that 7000 lux light intensity favors hydrogen productivity of R. capsulatus when exposed to alternating light-dark periods. The mutant (hup-) R. capsulatus shows even better hydrogen production performance under these conditions. This study indicates that the hup- strain of R. capsulatus can be used for efficient hydrogen production on acetate using this illumination protocol.

**Keywords:** Biohydrogen, Rhodobacter Capsulatus, Light Intensity

## LINKING URBAN SECURITY AND REGIONAL DEVELOPMENT: OPERATIONALIZING SECURITY-DEVELOPMENT NEXUS WITHIN REGIONAL DEVELOPMENT AGENCIES

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### **Abstract:**

There has been a consensus within development community on linking security and development since 1990's. This approach requires that both development and security policy making processes be merged to yield policy coherence. The idea of Regional Development Agency (RDA) rests upon the premise that development can be realized on regional basis. But there has been no example as to how these two policy areas are to be converged within RDAs. Here, it is endeavored to constitute a conceptual framework to operationalize security-development nexus within RDAs. In order to integrate urban security concerns into regional development and operationalize security-development linkage, this paper aims at; a.) Conceptualizing linkages between urban security and regional development based on literature review, b.) Discussing RDAs' structural and functional aspects in terms of urban security, c.) Defining potential structural and functional components to be embedded within RDAs. This paper follows the methodology of Content Analysis. Here it is argued that it is likely to define structural and functional components as parts of RDAs for operationalizing security-development nexus by using the methodology of Content Analysis. The research starts with coding data regarding linkages between urban security and regional development in literature. Second, it uncovers themes regarding these linkages. Third, the codes and themes are organized so as to classify data. Finally, findings are discussed to assert potential structural and functional components for RDAs.

**Keywords:** Regional Development, Urban Security, Regional Development Agencies, Security-Development Nexus

## MODIFIED PWM TO REDUCE SWITCHING LOSSES IN STANDBY UPS SYSTEMS FOR SUSTAINABLE ENERGY

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### Abstract:

The sustainable energy transmission plays an important role for all energy generation methods such as wind energy, solar cell and hydroelectric stations. The environmental effects in electrical energy systems create serious voltage variations. The variations in voltage magnitude of electrical grids affect the operations of electrical devices and lead to losses and malfunction with negative effects of the devices. Electronic-based devices called as “uninterruptible power supplies (UPS)” are used to fulfill stability operation of electrical appliances without being the affected by the voltage variations. The most well-known and simple system topology is Standby UPS used for sustainable energy operation. In Standby UPS, Sinusoidal PWM is the most commonly used technique to generate switching signals. However, SPWM based UPS causes high switching losses due to continuous operation, and this condition influences the battery life and discharging time. In order to reduce the switching losses in these systems, modified SPWM is performed in UPS. In this study, the operation principle and analysis of modified PWM based UPS are also introduced by modeling of simulation study. The proposed system is designed according to appropriate values such as 220 Vrms/50 Hz and 1 kVA. Besides, the performance results for different case studies are analyzed by using PSCAD/EMDTC 4.2.1.

**Keywords:** Sustainable Energy, Standby UPS, Modified PWM, Voltage Variations, Simulation

## A COMPREHENSIVE REVIEW OF POWER QUALITY PROBLEMS AND SOLUTION TECHNIQUES IN GRID CONNECTED WIND SYSTEMS

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### Abstract:

In this study, a comprehensive review of power quality problems shown in grid connected wind energy systems (GCWESs) are presented and discussed. Voltage, current, frequency deviations and waveform distortions that cause equipment failure, economical loss and several negative effects are known as power quality problems in electrical systems. In GCWES, grid connection is an important issue which causes problems together with increasing higher power ratings of wind turbines. However, the integration of electrical grid and wind turbine in high power ratings creates serious problems, and affects stability of the wind system. The influence between grid and wind turbine in grid-tied wind systems significantly effects power quality of turbine generator. In power quality issue, the most common problems are known as voltage variations, voltage dips and harmonics. These problems cause damage of power equipments, losses in electrical components, malfunction of devices and instability problems in systems. In addition to the sources and effects of these problems, solution techniques for compensation are also explained in detailed. In order to compensate these problems, there are electronic based several solution techniques for sustainable energy in GCWESs. Crowbar, static compensator, dynamic voltage restorer, superconducting fault current limiter are known solution techniques to control stability and mitigate the negative effects of power quality problems in GCWESs.

**Keywords:** Grid Connected Wind Energy Systems, Power Quality Problems, Solution Techniques, Review, Stability

## THE PERFORMANCE IMPROVEMENT OF DVR BASED GRID CONNECTED WIND ENERGY SYSTEMS FOR SUSTAINABLE ENERGY

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### Abstract:

Grid connected wind energy systems become an important renewable energy source to reduce the demand of electricity usage with the development of technology and reduction of fossil fuels. In grid connected wind systems, the interaction of grid and wind system influences all system parameters and causes serious problems at generator side of wind turbine which affects the stability. Among these problems, voltage dips are the most important problems which must be compensated to provide voltage stability. Voltage dips are defined as reduction of voltage magnitude between 10% and 90% for a short duration. This voltage disturbance at grid-side induces high stator/rotor currents with losing the stability of generator. In order to mitigate the negative effects of voltage dips, custom power devices are used to keep grid-side voltage constant. The most well-known custom power devices are Dynamic Voltage Restorers (DVR) to fulfill voltage stability in grid connected wind systems. DVRs are series electronics devices located between grid and wind turbine. During voltage dips, DVR generates and injects controlled voltage to grid for system stability. However, the injected voltage must be sinusoidal and low harmonic distortion. In conventional DVRs, LC filter is used to eliminate harmonic distortions. But, flickers and oscillations are observed at voltage waveforms of these conventional structures. This condition distorts the quality of injected voltage and stability of system. In this paper, the improvement of injected voltages is proposed by using LCL filters in DVR so as to eliminate the disadvantages of LC filters. In order to verify the effectiveness of LCL filter, the performance results are analyzed and compared with LC filter based DVR system.

**Keywords:** Grid Connected Wind Energy Systems, Renewable Energy, Dynamic Voltage Restorer, LCL Filter

## IMPROVED SRF TO EXTRACT HARMONICS IN ACTIVE POWER FILTERS FOR SINGLE PHASE SYSTEMS

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### Abstract:

Recently, power quality problems have become a serious issue with the increase of nonlinear loads. Among power quality problems, voltage harmonics is an important disturbance which distorts the waveform due to integer multiple components of fundamental voltage frequency. These disturbances cause several serious problems which are equipment failure and economical loss in industrial/commercial consumers. There are several power electronics based devices called as custom power devices for compensation process. The most effective way to eliminate voltage harmonics is the installation of a series active power filter (APF) in the system. Series APF is connected in series between nonlinear load and grid to compensate voltage harmonics in distribution system.

In this paper, SRF technique is improved to extract harmonics signals in single phase systems for APF systems. Traditional SRF Theory is the most widespread harmonics extraction method in three phase systems. The main drawback of this method is not applicable for single phase systems. To eliminate the drawback of traditional SRF, this study proposes improved SRF (ISRF) to extract voltage harmonics in both single phase and unbalanced three phase systems. The proposed method is tested in series APF to compensate the voltage harmonics at load voltage. THD level is reduced to 2.37% from 13.14% which is fairly lower explained in IEEE 1159-2009 standards. The performance results verify the efficacy and accuracy of proposed controller by using PSCAD/EMTDC.

**Keywords:** Improved SRF; Series APF; Single Phase System; Voltage Harmonics

## EFFECTS OF DEFICIT IRRIGATION ON SOME PHYSIOLOGICAL PARAMETERS OF PUMPKIN SEED

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### Abstract:

The present study was conducted to investigate the effects of different irrigation water levels on some physiological parameters (leaf water potential, chlorophyll content, carotenoid content, leaf water content, leaf relative water content) of pumpkin seed. Experiments were carried out over the experimental fields of Erciyes University Agricultural Research Center in 2015. Six different irrigation water levels based on supply of deficit water (I100, I80, I60, I40, I20 ve I0) were applied in experiments. Leaf water potential (LWP) seasonally varied between 1.3-2.7 bar. The differences in chlorophyll contents of the treatments were found to be significant ( $P < 0.05$ ). The lowest chlorophyll content was obtained from I0 treatment with 1229.15 mg g<sup>-1</sup> KDA and the greatest value was obtained from I100 treatment with 1550.85 mg g<sup>-1</sup> KDA. Significant differences were also observed in carotenoid and leaf relative water content (LRWC) of different irrigation treatments ( $P < 0.01$ ). The lowest carotenoid content was observed in I0 treatment with 341.08 mg g<sup>-1</sup> KDA and the greatest value was observed in I100 treatment with 412.52 mg g<sup>-1</sup> KDA. LRWC varied between 119.30-128.58% and leaf water content (LWC) varied between 59.55-78.13%. The differences in LWC values of the treatments were not found to be significant.

**Keywords:** Deficit Irrigation, Drip Irrigation, Pumpkin Seed.

## NEW TECHNOLOGIES IN IRRIGATION MANAGEMENT: USE OF LAND-BASED REMOTE SENSING IN WATER MANAGEMENT

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### **Abstract:**

The amount of water to be applied and timing of this application are two critical issues in water management. Irrigation programming is usually performed by using soil, plant and meteorological data. Soil monitoring is a time-consuming and expensive process. In irrigation programming with meteorological data, plants characteristics are not taken into consideration. However, irrigation programming through monitoring the plants has recently become a significant issue together with the developments in electronic devices. The methods depending on monitoring of water stress induced physiological impacts/symptoms have successfully been implemented. There are some recent studies in Turkey carried out with remote sensing methods on different plants in different regions. In this study, general information was provided about land-based remote sensing methods and their potential use in irrigation water management practices.

**Keywords:** Spektroradiometer, Vegetation Indices, Infrared Thermometer



## QUANTITATIVE AND QUALITATIVE ASPECTS OF REMITTANCES, COMPARATIVE ANALYSIS OF ALBANIA AND MACEDONIA

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### **Abstract:**

The issue of emigration is a very important concern for Albania and Macedonia due to the fact that a high percentage of their population has left the countries in the last two decades, making these two countries one of the countries with the highest emigration percentage flows in the world. Migrant remittances are an increasingly important source of income for both countries. For these two economies, remittances are the largest type of international financial inflow and are larger than either capital inflows or official development assistance. These remittance inflows have allowed domestic consumption and investment to be substantially higher than what would have been possible otherwise and have contributed significantly to the developmental prospects of these two economies. In addition, the outflow of labor from these economies has helped to relieve chronically high unemployment which has characterized them since the transition process began in the early 1990. This paper analyses the quantitative and qualitative aspects of the remittances flows and highlight migration issues that are of specific context for Albania and Macedonia, respectively.

**Keywords:** Remittances, Migration, Quantitative, Qualitative, Albania, Macedonia

## EFFECT OF SOCIAL CAPITAL ON INNOVATIVE FORMATIONS AND INNOVATIVENESS ABILITY OF INSTITUTIONS: A RESEARCH ABOUT A STATE AND A FOUNDATION UNIVERSITY PROVIDE TRAINING IN KONYA

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### Abstract:

Globalizing world, advancing technology, changing working conditions and organizational structures highlight concepts such as innovation in businesses and social capital which fulfil these innovations as factors which have an important role in developing environment. With this study, universities and its staff which are keystone of the changing and development process will be included into the research.

Aim of this research is to examine effects on social capital and innovative practice as part of directors of the universities in Konya. In this study, which is the first stage of the research, a state and a foundation university which are considered as a dynamics in Konya are taken as a basis. Within the research findings, obtained data which are about effect of social capital on emerging of innovative practice will be investigated. According to obtained data, it will be determined that whether study will be extended or not aimed at other universities in the city. With these obtained findings, this study is expected to contribute in accordance with suggestions which are made to directors and researchers.

**Keywords:** Social Capital, Innovative Formations, Innovativeness Ability

## WATER QUALITY ASSESSMENT OF HAVSA STREAM BASIN CREEKS: SUSTAINABLE APPROACHES

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### Abstract:

Havsa Stream, which is located on north – west part of Marmara Region, is one of the most important branches of Ergene River and under effect of an intensive agricultural pressure. In the present study, water quality of Suloglu, Haskoy, Asagiova, Havsa, Kuleli and Anadere Creeks were investigated, which were significant components of Havas Stream Basin. Water samples were collected in spring season of 2016 and total of 13 water quality parameters including pH, conductivity, TDS, salinity, turbidity, nitrate, nitrite, phosphate, sulfate, biological oxygen demand, total carbon, total inorganic carbon and total organic carbon were measured. Also Cluster Analysis (CA) was applied to detected data in order to classify the dam lakes in terms of pollution levels. According to detected data, pollution levels of the investigated creeks in parallel to the flow directions as follows; Suloglu > Haskoy > Asagiova > Havsa > Kuleli > Anadere in general. According to the results of CA, 3 statistically significant clusters were formed, which were corresponded to Suloglu and Haskoy (Cluster 1) that were located on the upstream; Kuleli, Havsa and Asagiova (Cluster 2) that were located on the middlestream; Anadere (Cluster 3) that was located on the downstream. In order to provide the sustainability of these aquatic ecosystems in terms of availability by local people, organic contents including mainly nitrite concentrations of the creeks originated from agricultural applications must be taken under control by especially a conscious fertilizer application.

**Keywords:** Suloglu, Haskoy, Asagiova, Havsa, Kuleli, Anadere, Creeks, Water Quality

## SUSTAINABILITY ASSESSMENT OF DAM LAKES IN EDIRNE PROVINCE (TURKEY): IN TERMS OF WATER QUALITY

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### Abstract:

Edirne Province is located in Thrace part of Marmara Region and it can be declared as an agriculture city. In the present study, water quality of Sultankoy (İpsala District), Altınyazı (Uzunkopru District), Suloglu (Suloglu District), and Kadıkoy (Kesan District) Dam Lakes were investigated, which were constructed by DSi (State Water Works) in order to provide irrigation water (Sultankoy and Altınyazı) and drinking water (Suloglu and Kadıkoy) to the places where they are located on. Water samples were collected from the output locations of reservoirs in spring season of 2016. Total of 13 water quality parameters including pH, conductivity, TDS, salinity, turbidity, nitrate, nitrite, phosphate, sulfate, chemical oxygen demand, total carbon, total inorganic carbon and total organic carbon were measured. Also Cluster Analysis (CA) was applied to detected data in order to classify the dam lakes in terms of pollution levels. According to detected data, pollution levels of the investigated reservoirs as follows; Sultankoy > Altınyazı > Kadıkoy > Suloglu in general. According to the results of CA, 3 statistically significant clusters were formed, which were corresponded to Suloglu Dam Lake (Cluster 1); Kadıkoy and Altınyazı Dam Lakes (Cluster 2); Sultankoy Dam Lake (Cluster 3). In order to provide the sustainability of these reservoirs in terms of availability on a healthy use by local people, organic contents including mainly phosphate concentrations of the dam lakes originated from agricultural and domestic applications must be reduced as soon as possible.

**Keywords:** Sultankoy, Altınyazı, Suloglu, Kadıkoy, Dam Lakes, Water Quality, Cluster Analysis

## EFFECTS OF APPLICATION OF CHLORPYRIFOS ETHYL AND ROSE WATER ON RAT PANCREAS

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### Abstract:

Unwanted insects, rodents, plants, algae and other harmful applied for the prevention of false and excessive use of pesticides, the environment, animals and humans may cause adverse effects on.

*Rosa damascena* Mill. (Rosaceae) in the world, rose water and rose oil is used in the production of various important laughed. Food products made from these varieties of roses and cosmetic industry is heavily consumed.

In this study, an organophosphate pesticide, chlorpyrifos ethyl and rosewater application of the hormone insulin in rats and effect on pancreatic tissue was investigated. 4 groups of rats were formed into 8 groups for this purpose. The study of 32 adult male Wistar albino rats were included in Group I: control (normal feed), II. Group: chlorpyrifos ethyl (CPE) group (0.3 mg / kg / day), III. Group: rose water (1 mL / kg / day) group (RW), and IV. Group: CPE (0.3 mg / kg / day) + RW (1 mL / kg / day) group including rats were divided into 4 groups. Twenty rats were sacrificed one day after the administration of blood were taken. In blood insulin analysis, the pancreatic tissues malondialdehyde (MDA) and superoxide dismutase (SOD) has been analyzed.

As a result, compared with the control group treated rats CPE insulin levels significantly ( $p < 0.001$ ) increase was determined. RW treated rats compared to the control group could not be identified by a significant change ( $p > 0.001$ ). If RW + CPE group there is a significant increase in the amount of insulin but this increase is less than that of CPE group.

Compared to the control group, RW pancreatic tissues of rats treated with SOD were significantly higher ( $p < 0.001$ ). CPE pancreatic tissues of rats treated with SOD was significantly lower compared to the control ( $p > 0.001$ ). These data; CPE application, on insulin hormone in rats resulted in a negative result indicates that. This result CPE toxicological effects on the pancreas may be caused.

**Keywords:** Chlorpyrifos Ethyl (CPE), Rose Water (RW), Insulin, Pancreatic

## THE GROWING THREAT OF SYNTHETIC CANNABINOIDS, MEASUREMENT OF THE LEVEL OF AWARENESS AMONG UNIVERSITY STUDENTS IN BURDUR PROVINCE

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### Abstract:

Synthetic cannabinoids use and addiction, as our country is one of the most important public health problem both in Turkey and the World. Especially lately, the influence of the media both visual and written, especially College youth there is increasing interest in synthetic cannabinoids. It only take legal measures to prevent further increases and catch synthetic cannabinoids produced is not enough to combat the problem.

The number of people participating in our survey is 2,131. According to age groups of volunteers surveyed the distribution of students surveyed female ratio: 58.85%, while male students were 41.15% rate. Do you think that's enough information about Bonzai? In response to questions 19:47 % (n=415) answered yes to rate marked 39.42% (N = 840) were partially marked response rate and 41.11% (N = 876), respectively, no response has been marked. Do you have any information about synthetic drugs? 12.81% in response to the question (N = 280) answered yes marked rate. 24.50% (N = 508) were partially marked response rate. 62.69% (N = 1343), no response has been marked rate. Drug-related news in the press, How does that affect you? In response to the question %26.51 (N = 565) increases at a rate of my curiosity, 10.7% (N = 221) at a rate of my curiosity, It reduces the %62.79 (N = 1338) at a rate of my curiosity doesn't affect the option that are marked.

To prevent the spread of synthetic cannabinoids, and produced only to seize the items the legal is not sufficient to take measures to combat the problem. In particular, awareness raising and the creation of awareness among young people is of great importance for this growing public health problem. We believe that synthetic cannabinoids and to inform the public about the latest issues and should be transferred to the community about the most accurate information.

**Keywords:** Synthetic Cannabinoids, Bonzai, Awareness, University Students.

## TRADE POTENTIAL OF TURKEY AND THE BALKAN COUNTRIES

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### **Abstract:**

The aim of this study is to analyze trade flows and trade potentials between Turkey and its trading partner countries in Balkan Peninsula. The observed and estimated values of trade potential is also compared in order to determine the trade gap of the Balkan countries and Turkey. We employed a panel data extended version of gravity model to estimate the trade potential between 2005-2014 period for a panel of 10 balkan countries. We used gross domestic product as a proxy for the size of each country, and distance between the capitals of the countries as the distance variable. In order to check the effects of common language, free trade agreements, and sharing a common border on trade flows, we also used dummy variables. Due to the time invariant distance variable in the model, we only employed random effect panel data model and fixed effect model is omitted.

**Keywords:** Gravity Model, Free Trade Agreements, Trade Potential

## THE EFFECT OF AFFORESTATION SITE CONDITIONS IN MALATYA REGION ON GROWTH PERFORMANCE OF TAURUS CEDAR (CEDRUS LIBANI A. RICH.)

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### Abstract:

Tree plantation and/or afforestation works are a combination of activities requiring intensive labor and cost. The results of these activities can be explained by the effects of several factors with varying impact across time and space. Some of these factors are abiotic, such as geographic, edaphic and climatic characteristics, while others are biotic, such as decomposer characteristics of activity of microorganisms and fungi.

The present study was conducted to determine the effect of site conditions on the growth performance of cedar seedlings (*Cedrus libani*) planted on a tree plantation in Malatya province, Eastern Turkey.

In total, 93 experimental areas were chosen systematically at the end of second vegetation period in the plantation area. Then, various parameters were measured in the experimental areas. A factor analysis was carried out to determine the most critical factors influencing the percent of height and root collar diameter. These parameters were found to be most affected by Organic Substance Rate, Inorganic Substance Rate (I), Soil Texture Type, Lime (CaCO<sub>3</sub>) Content, Elevation, and Inorganic Substance Rate (II).

**Keywords:** Afforestation, Growth, *Cedrus Libani*, Malatya



## INTERNET ACCESS AND DIGITAL SKEPTICISM: A PRELIMINARY ANALYSIS

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### **Abstract:**

Technology readiness is multifaceted, varies from one individual to the next, and predicts and explains a person's responses to technologies. This study investigates whether internet access contributes to technology readiness segments of people.

The Internet is one of the most powerful media of information and communication in human history, it has opened massive opportunities for economic development across the globe. This research aims to analyze technology readiness level of people who access Internet and evaluate their technology readiness levels in terms of the technology readiness segments. The research is conducted on 270 participants and data is gathered by using Technology Readiness Index (TRI) survey, which was developed by Parasuraman (2000) to measure users' intention to technology usage. The Technology Readiness Index is based on four main categories of attitudes toward technology which are optimism, innovativeness, discomfort, and insecurity. Based on participants' TRI dimensions score, each participant is classified into five TRI segments; explorers, pioneers, skeptics, paranoids and laggards. In the light of the findings and limitations, some recommendations were made to tackle the technology readiness problem.

**Keywords:** Technology Readiness Index, Technology Adoption, TRI, Internet Users, Digital Skepticism

## BIOMETRIC SOLUTIONS FOR IS SECURITY

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### **Abstract:**

In this paper, we review the potential use of biometric technologies as viable, useful, flexible and arguably cost- effective IS security control devices in organizations. Based upon an exploratory analysis of top business publication mentions of uses of biometrics for security controls, we introduce our view that deployments of biometrics as IS security controls continue to be remarkably underutilized and underdeveloped compared to the potential that such technologies might yield to organizations. Applying theory associated with the MIS economics reference discipline literature, we study the possible broader issues that might indicate that there are underlying limitations to widespread adoptions of biometrics technologies as physical control mechanisms for IS security. Finally, we make suggestions that might alleviate these hypothesized economic and social roadblocks prohibiting adoption of the theoretically promising yet pragmatically limited biometric solutions to enhancing the overall IS security environment.

**Keywords:** IS Security, Biometric Security, Biometrics, Security Tools, Biometric Authentication

## FIELD CALIBRATION OF A NEUTRON METER FOR MEASURING SOIL WATER CONTENT IN LOAMY SOILS

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### Abstract:

Increasing of water-use efficiency in agriculture requires a precise measurement of soil water content in root zone. Soil moisture sensors provide a great opportunity to achieve efficiency improvements. In this study, a performance evaluation of a neutron meter (CPN 503 DR Hydroprob) for 5 different (20, 40, 60, 80 and 100 cm) soil depths was studied under field conditions in Turkey. Measured soil water content values were compared with corresponding values derived from gravimetric samples. Experimental data were collected in a drip irrigated pumpkin (*Cucurbita pepo* L.) field in 2015. Results showed that accuracy of neutron meter would change based on soil depth. The measurements in 20 cm soil depth gave the best regression coefficient ( $R^2 = 0.91$ ) while RMSE value of measurements in 40 cm soil depth was lower. The t statistic between predicted values obtained from soil moisture sensing device and observed values obtained from gravimetric procedures at  $p < 0.05$  level was insignificant for all depths.

**Keywords:** Neutron Meter, Soil Moisture, Calibration, Performance

## THE EFFECT OF THE PSYCHOLOGICAL CONTRACT PERCEPTION AND ITS BREACH ON THE ORGANIZATIONAL COMMITMENT: A RESEARCH IN A COMPANY OPERATING IN THE MANUFACTURING SECTOR

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### Abstract:

Globalization, rapid changes and developments occurring in the information and communication technology are changing the businesses and employees' covered and mutual expectations and responsibilities. Organizational structure which decreases with the increasing of information system using, increasing layoffs, changing of the employment relationship, beginning of the developing modern business relationship have increasingly become important the psychological contract from the aspect of the disappointed employers and employees. While psychological contract's items are usually honesty, commitment to the organization, doing qualified work, higher performance task and so on in terms of the business , they are increasing the responsibilities, promotion, opportunities to improve their skills, open communication, social rights and so on in terms of the employees. There are some predictions that written business contracts will be affected and organizational commitment, productivity and motivation will reduce in case of breaching the unwritten psychological contract. Therefore organizations need to retain the employees who devote their selves to the organization, create forces unity by doing aims and objectives unity with the organization and are motivated for both continuation of the written business contract and the organization's success and competitiveness.

In this study researching of the psychological contract perception and the effects of it on the organizational commitment in case of its breaching has been aimed. The data collected by a questionnaire on the employees in a company operating in manufacturing sector will be analyzed and recommendations for businesses and the sector will be made.

**Keywords:** Psychological Contract, Psychological Contract Breaching, Organizational Commitment.

## EVALUATION OF ACCOUNTING EDUCATION OFFERED IN FORMAL EDUCATION IN TURKEY IN TERMS OF INFRASTRUCTURE AND HUMAN STANDARDS – A MODEL PRACTICE IN ERZURUM-

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### Abstract:

With the new Turkish Trade Act, which was introduced in 2011 in Turkey, organisation of accounting records and financial statements must be based on the International Accounting and Financial Reporting Standards. These standards are constituted and accepted on a global scale. In order to practice standards and make it the foundation for desired right evaluations, it is very important to organise accounting records and financial statements according to these standards. Ensuring compliance with standards on a global scale will allow comparable and objective accounting records and financial data to be created in the world. As a result, it will be possible to base financial and economical evaluations on right foundations. Schools' physical infrastructure, students' educational infrastructure and competency of human factors that provide and support accounting education is critically important in order to be able to provide education in compliance with these standards. In this study, we tried to determine how students, who receive accounting education in Turkey's formal education institutions, receive this education in terms of educational infrastructure and competency in humane standards by conducting a survey. With the pilot application in Erzurum city, how the competency in terms of infrastructure of accounting education and human standards is perceived in all formal education levels by people who receive this education. The survey was conducted among students who received accounting courses in high school, college, faculty, master's and doctoral level. Thus, perceptions of students, who have received accounting course in every level of formal accounting education, educational infrastructure and physical infrastructure and competency in terms of human standards were measured.

**Keywords:** Accounting, Financial Statements, Accounting Education, Ias, Ifrs.

## COMPARISON OF THE CALIBRATED SWAN MODELS' PERFORMANCES FORCING WITH DIFFERENT WINDS IN THE BLACK SEA

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### **Abstract:**

The aim of this study is to compare the performances of the calibrated SWAN models forcing with several re-analyses (ERA-Interim, MERRA, and CFSR) and one operational dataset (ECMWF). For this, the SWAN model is firstly calibrated for each wind independently. The calibration is based on white-capping progress and its tunable parameter (Cds). The model outputs are assessed against buoy measurements at three locations (Gelendzhik, Hopa, and Sinop). The best calibrated SWAN model for each wind is determined. The comparisons between performances of the calibrated SWAN models forcing with several winds are made in terms of statistical error indicators— namely bias, scatter index, root mean square error, and correlation coefficient for wave parameters Hm0 and Tm02.

The results show that although the quality of the wave hindcasts in terms of their comparisons with observations differs, it is observed that Janssen formulation for white-capping is more suitable for the SWAN model for all winds and lower Cds parameter provides more accurate results. Besides, the differences between the calibrated SWAN models' performances are relatively small but the calibrated SWAN model using the CFSR winds are of higher accuracy than those using other winds. Scatter indexes for the best model are 38% for Hm0 and 20% for Tm02 at Gelendzhik, 49% for Hm0 and 24% for Tm02 at Hopa, and 33% for Hm0 and 18% for Tm02 at Sinop. The mean scatter index value for all locations is 40% for Hm0 and 21% for Tm02. This shows that the results of the calibrated SWAN model forcing with the CFSR winds are in agreement with the measurements.

**Keywords:** Wave Hindcast; SWAN; Wind Forcings; Black Sea

## SPATIAL DISTRIBUTION OF MEAN WAVE ENERGY FLUX OVER THE BLACK SEA

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### Abstract:

The aim of this study is to determine spatial distributions of annual, seasonal, and monthly mean wave energy flux over the Black Sea. For this, the wave characteristics are obtained in half-hour temporal resolution produced with a calibrated SWAN model (Akpınar et al., 2016) during 31 years. Spatial distribution of wave energy flux is determined by using spatial distributions of significant wave height and energy period over the Black Sea. The results show maximum value of the average wave energy flux over the Black sea during 31 years is 5.72 kW / m. Bulgaria's coasts and the coasts of Istanbul, Sakarya and Kırklareli in Turkey have the highest wave energy (about 5 kW / m). This is probably due to strong eastern and north-eastern winds and their long fetch lengths. Average wave power generated based on all years of the spatial distribution over the Black Sea is very similar to the seasonal average wave power but their values are different. In each season, the average wave power reaches highest values off the coast of south-western Black Sea, while it decreases towards the north-west and east. It continues to decline towards the south. In all seasons, just like all annual average wave power map, the lowest value areas are found along the Georgian coast of Batumi.

**Keywords:** Wave Energy; Spatial Distribution; SWAN; Black Sea

## MOISTURE-DEPENDENT SOME PHYSICAL PROPERTIES OF CEMRE (TRITICUM AESTIVUM L.) AND SARICANAK-98 (TRITICUM DURUM DESF.) WHEAT SEEDS

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### Abstract:

In this study, some physical properties of Cemre and Sarıcanak-98 wheat species produced within scope the GAP (The Southeastern Anatolia Project) were determined. These varieties are quite high in terms of production yield, quality and nutritional value of wheat varieties. After harvesting of wheat in order to be processed easily and cost-effectively from a technological point of view, knowledge of the physico-mechanical properties of seeds are required.

The some physical properties of Cemre and Sarıcanak-98 wheat seeds were determined as a function of moisture content in the range of 10,85 – 19,2% and %10,16 – 19,74% dry basis (d.b.) respectively. The average length, width and thickness were 6,85 mm, 3,11 mm ve 2,75 mm, for Cemre wheat seeds at a moisture content of 10,85% d.b. and 7,52 mm, 3,37 mm ve 2,97 mm, for Sarıcanak-98 wheat seeds at a moisture content of 10,16% d.b., respectively. Moisture in the Cemre and Sarıcanak-98 seeds in range from %10,85 – 19,2 ve %10,16 – 19,74 d.b. respectively, studies on rewetted seeds showed that for thousand seed mass increased from 35,38 to 47,89 g for Cemre and from 49,87 to 64,49 g for Sarıcanak-98 , the projected area increased from 20,39 to 25,36 mm<sup>2</sup> for Cemre and from 24,87 to 28,87 mm<sup>2</sup> for Sarıcanak-98. In addition, sphericity, porosity, terminal velocity, bulk density and true density varies in properties were determined. The static coefficient of friction of wheat seeds increasing moisture content in dry basis aluminum, stainless steel and galvanized iron have been identified to be 3 different surface for Cemre and Sarıcanak-98 seeds.

**Keywords:** Wheat, Seed, Physical Properties, Moisture Content



## THE ROLE OF INTERNSHIPS IN DEVELOPING PERSONAL AND PROFESSIONAL ATTRIBUTES IN STUDENTS. EVIDENCE FROM THE UNIVERSITY OF NEW YORK TIRANA

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### Abstract:

Internships are not only a curricular requirement in nowadays educational system. They are considered as a bridge to help students pass smoothly into the real life business. This paper brings evidence through an exploratory case study with bachelor students to be graduated at the University of New York in Albania. The role of internship for developing personal and professional attributes in students is investigated. Moreover, the authors provide an overall picture of the benefits and challenges faced by students during their internship programs, since these often can represent the starting point for the future career of the graduates.

The authors address the importance of carrying out certain relevant internships by students. Data are collected using semi-structured interviews as well as written reports produced by the students at the end of the internship period.

The paper concludes that the main reason for pursuing an internship is not always employment, instead, the need for further personal and professional development. Moreover, the paper identifies the most important skills acquired through the internship experience. It also reveals the gaps among academic preparation of the students and internship experience.

**Keywords:** Internship, Personal Skills, Professional Skills

## USER DIMENSION ON SOCIO-CULTURAL SUSTAINABILITY OF TRADITIONAL SETTLEMENTS: KALEICI/EDIRNE/TURKEY

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### **Abstract:**

The processes of change observed in many field today such as urbanization, urban transformation and globalization -all caused by socio-cultural, technological, economic and politic factors- have great influence on people, relations, environment, houses and cities within the world. As an important component for cultural sustainability and worth of historical heritage the traditional settlements are also affected by these changes together with their users. The problem occurs when the culture dissolves during transformation. But it can be solved by not ignoring social environment and socio-cultural sustainability while transforming the physical environment. It is aimed to put forth how socio-cultural sustainability is provided in Kaleici Traditional Settlement in Edirne/Turkey as a case study. Methodology includes field study; observation, photography, questionnaire as well as statistical evaluation. Finally it is determined that users sustain their traditions and daily life routines beside transformation thus socio-cultural sustainability is provided substantially. Besides physical and spatial re-arrangements during transformation process, the importance of cultural components and socio-cultural factors within user oriented studies are mentioned.

**Keywords:** User, Traditional Settlements, Transformation, Socio-Cultural Sustainability, Edirne

## DATA MINING TECHNIQUES IN DATABASE SYSTEMS

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### Abstract:

At the current stage the technologies for generating and collecting data have been advancing rapidly. The main problem is the extraction of valuable and accurate information from large data sets. One of the main techniques for solving this problem is Data Mining. Data mining (DM) is the process of identification and extraction of useful information in typically large databases. DM aims to automatically discover the knowledge that is not easily perceivable. It uses statistical analysis and artificial intelligence (AI) techniques together to address the issues. There are different types of tasks associated to data mining process. Each task can be thought of as a particular kind of problem to be solved by a data mining algorithm. The main types of tasks performed by DM algorithms are:

- Classification:
- Association:
- Clustering:
- Regression:
- Summarizing:
- Dependence Modelling

In this paper we will discuss the advantages and disadvantages of the techniques below. A secondary goal of our paper is to give an overview of how DM is integrated in Business Intelligence (BI) systems. BI refers to a set of tools used for multidimensional data analysis, with the main purpose to facilitate decision making. One of the main components of BI systems is OLAP. The main OLAP component is the data cube which is a multidimensional database model that with various techniques has accomplished an incredible speed-up of analyzing and processing large data sets. We will discuss the advantages of integrating DM tools in BI systems.

**Keywords:** Data Mining, Bi, Olap, Ai

## AGRICULTURAL DIFFUSE POLLUTION AND SUSTAINABILITY IN ERGENE BASIN

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### **Abstract:**

Limited waters sources in the world are consumed rapidly, it has been seen that water sources should be examined with its basin holistically. When Ergene Basin is examined holistically, it seems to have agricultural area 76% of the area and a significant production value (64% sunflower and 50% rice) in grain production in the country. When total usage of chemical fertilizers and pesticides in agriculture are analyzed according to the years, an increase is observed.

In this study, it is aimed to determine the long term nutrient (total nitrogen and total phosphorus) loads and usage of pesticides in Ergene Basin. For this purpose, by using Geographic Information System, land use of the basin has been digitized and the spatial values of patterns of land use which is used to estimate the load from diffuse sources has been used. By using Export Coefficient Model, nutrient loads from diffuse sources have been estimated and chemical fertilizer amounts and conversion factors, animal numbers and emission factors are used. The loads from chemical and natural (animal) fertilizers are 17000 tons/yr TN and 2000 tons/yr TP. Also in this study, monitoring stations have been proposed for the determination of nutrients and other pollutants loads considering sub-basins and pollution sources for the water sources, air and soil can be monitored simultaneously.

When the effects of nutrient loads and pesticides at surface waters and soils in Ergene Basin are considered both ecologically and socio-economically, it has been identified that intended use of water sources was changed, agricultural and aquatic production was negatively affected by deteriorated ecological balance at surface water. The diffuse pollution from agricultural sources causes surface water, groundwater and soil contamination. Ecological and economic sustainability of Ergene Basin are considered to be under a certain threat.

**Keywords:** Diffuse Pollution, Nutrient Load, Pesticide, Sustainability

## A REVIEW OF THE BRANDING LITERATURE IN THE DESTINATION CONTEXT: A CITY BRANDING EMPHASIS

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### **Abstract:**

While there exist studies which attempt to measure the brand equity of cities and countries from a customer perspective, there is little or no evidence regarding a thorough review of the destination branding literature from its inception to date, and more specifically about city branding. The objective of this study is thus to present a review of the literature of city branding, with the main aim of aiding tourism destination researchers who are conducting studies in this particular field. In order to conduct this review, ProQuest (ABI/INFORM) database was utilized, using the terms 'city branding' and 'destination branding' from 2005 through June 2016, as the review of the literature suggests the first traces of publications documenting 'city branding' studies appeared on 2005. This review serves as a roadmap for researchers in the field of destination branding, as it provides an overview of the concept of branding and its origins, a review of the concepts of place and destination branding who served then as an umbrella to the concept of city branding. Further, attention is devoted to summarizing the studies published on 'city branding', providing in this way a valuable contribution for the audience interested in the topic of destination branding, and more specifically its city-related subarea. In light of the review conducted, it is found out that the research field of city branding remains still in its infancy, suggesting that there is still room for further research in this particular area.

**Keywords:** Review, Branding, Destination Branding, City Branding.

## RELATED TO SYNTHETIC CANNABINOID USE CASES ENCOUNTERED IN THE EMERGENCY DEPARTMENT IN THE PROVINCE OF BURDUR

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### Abstract:

With different combination and ratio available on the market with the increasing diversity in clinical studies on the effects of synthetic cannabinoids are quite difficult to detect effects. The psychoactive effects of synthetic cannabinoids euphoria, anxiety, psychosis, cognitive skills detected as a change in acute physical effects of excessive sweating, nausea, vomiting, appetite-enhancing, blood pressure and heart rate irregularities, chest pain, described as. These changes in clinical signs, such as the dose of the chemical that is used type of personal tipping depends on many factors. In addition to poisoning, hallucinations and delusions, which can lead to death due to the number of suicides has also increased. Long-term use in the course of the underlying psychosis in the people who worsening and kidney failure will occur and the risk of abstinence syndrome use in the continuation of experience. The syndrome of abstinence that arise even when you're sober panic attacks, civil unrest, severe substance the desire to receive, tremor, memory problems, depression, insomnia, and nausea, vomiting, excessive sweating, weight loss and include symptoms such as headaches.

Our research is prepared in the form of survey conducted for healthcare professionals who work in the emergency department. Originally prepared by the authors based on the answers given by health professionals who survey consists of 30 questions; The age range of patients seen; the rate of 65.75% are people aged 15-25 years. Encountered when the patients were evaluated according to their profession; students (31.9%), self-employed (16.8%) and unknown (34.5%) in the form.

Which has become a major public health problem, particularly encountered in young individuals: a synthetic cannabinoid-induced problems in all areas of society awareness should be created to reduce legal action would be a clearer way.

**Keywords:** Synthetic Cannabinoid, Case, Health Professionals.

## CHANGED CIRCUMSTANCES AS GROUND FOR NON-PERFORMANCE OF CONTRACTS (AN OVERVIEW OF MACEDONIAN CONTRACT LAW)

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### **Abstract:**

The purpose for which parties enter into a contractual relationship is to create relevant rights and obligations which meant that the interest of these parties is that the created obligations must be performed as agreed, i.e. a signed contract has the force of law between its parties (*pacta sunt servanda*). Deriving from Roman law, this principle has been established in most legal systems. According to this principle, a party to the agreement is responsible for non-performance. After the conclusion of the contract but before the contract is performed, a party's situation may change due to changed circumstances, change that make it impossible or excessively difficult to perform for any of the parties. It means the situation and circumstances have changed since the moment of signing the contract that the parties would not have entered into the contract, or would have made it differently had they known what was going to happen. These situations proved that the principle of *pacta sunt servada* cannot be applied in the absolute form. The compromise was found on another principle – *rebus sic stantibus* (which states that contract are binding only so long and to the extent that matters remain the same as they were at the time of the conclusion of the contract). This paper examines exclusion of party's liability due to changed circumstances by provisions in the Law on Obligations of the Republic of Macedonia. The review includes the conditions that must be met to consider as changed circumstances, the obligation to give notice to the other party, and excluding the possibility of invoking the changed circumstances. In addition, the author through comparative method will compare the solutions from Macedonian legislation and solutions from UNIDROIT Principles of International Commercial Contracts, Principles of European Contract Law, and ICC Hardship Clause.

**Keywords:** Changed Circumstances, Law On Obligations

## THE CAUSAL RELATIONSHIP BETWEEN FINANCIAL INTERMEDIATES AND ECONOMIC GROWTH - THE CASE OF MACEDONIA

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### **Abstract:**

There are numerous study made by well known authors about economic growth and its determinants. One of the mostly discussed topics in the growth theory is determining the relationship with financial development, respectively examining the cause and the effect.

Through this paper we attempt to examine the causal relationship between development of financial intermediates and economic growth in Macedonia. For this purpose, our empirical work is based on time series analysis with monthly data from year 2005 to 2012. The data are obtained from Macedonian Bureau of Statistics, National Bank of Republic of Macedonia, the World Bank Database and IMF database. Augmented Dickey Fuller Test was applied to check the stationary of the data. Co-integration test and Granger causality tests were applied to empirically investigate the relationship between the variables included in the econometric model.

From this study we conclude that for the Macedonian case, the causality of direction is proved just from the economic growth to financial intermediation but we can't realize an evidence for the inverse causality.

**Keywords:** Economic Growth, Financial Intermediation, Granger Causality, Macedonia.



## A NEW TREND IN SUSTAINABILITY AND RESPONSIBILITY ACCOUNTING FOR HOSPITALS: GREEN ACCOUNTING

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### **Abstract:**

The need for efficient and effective utilization of ever decreasing resources makes it necessary for managers to make decisions in order to create alternatives to contribute to the preservation of environment and to raise environmental awareness. This trend brings the concept of "green" in hospitals into question as part of the social responsibility. Financial aspects of the green hospital practices are addressed under "green accounting". The concept of "green accounting" proffer an approach which adapts environmental factors to the accounting system in order to provide companies with sustainable growth. It will be vital to deliberate environmental investment costs and to keep these costs under control in order for the hospitals to be able to use the insufficient resources in an efficient and effective manner. This descriptive study aims to provide an insight into green accounting, which is a new concept for hospitals, endeavor to introduce the importance of green accounting for hospitals.

**Keywords:** Green Accounting, Hospital, Responsibility Accounting, Sustainability Accounting

## THE EFFECT OF DIFFERENT SEWAGE SLUDGE DOSES TREATMENTS ON HEAVY METAL ACCUMULATION IN SOIL AND SORGHUM PLANT

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### Abstract:

The purpose of the study was to determine the accumulation of heavy metals in sorghum plant parts and field soil upon application of urban sewage sludge as fertilizer. To this end 0, 2, 4 and 6 da-1 of urban waste sludge and chemical fertilizer was mixed with the soil before planting. Cultural care of plants were carried out and grains were harvested during period of grain maturation. The study was repeated two years for representing different climatic and soil conditions. Heavy metal (Pb, Fe, Zn, Se and Cd) analysis in root, stem, leaf and soil samples, taken before planting and after harvesting, was performed.

Results revealed that depending on increasing amount of waste sludge, the amount of heavy metals in soil and plant parts increased considerably. The highest heavy metal accumulation was recorded in soil samples at all dose treatments. Accumulation in plant parts indicated high alteration in terms of heavy metals. The amounts of heavy metals in plant parts was as follows; for Pb and Fe it was root>leaf>stem>grain, for Se it was grain>root>leaf>stem, and for Cd it was stem>root>leaf>grain. Sorghum yielded varying responses in terms of Zn, depending on increasing sewage sludge doses. Threshold level for toxicity was not reached in any application doses of sewage sludge for both in soil and plant parts. In conclusion, low doses of sewage sludge applications can be used in field agriculture due to its contribution to soil structure and serving as nutrient for plants. It was recommended to use different doses of waste sludge to be tested in different plants in future studies.

**Keywords:** Sorghum, Wastewater Sludge, Heavy Metal, Plant Participation, Doses

## MINERAL CONTENTS OF WEED CROPS IN CENTRAL ANATOLIAN REGION

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### Abstract:

Objective of this research is to determine the mineral contents of weed crops intensively grazed by livestock of Central Anatolian Region. A total of 11 weed crops (*Sinapis arvensis*, *Lamium album*, *Malva* spp., *Convolvulus arvensis*, *Chenopodium album*, *Alhagi* spp., *Sanguisorba minor* Scop., *Amaranthus* spp., *Taraxacum officinale*, *Polygonum cognatum* and *Sorghum halepense*) collected from pastures and field of Kayseri were used as the plant material of the research. Plant samples were collected at flowering periods during June of the year 2011. Samples were dried and mineral contents were determined with 3 replications. Statistical analyses were performed based on randomized block design.

P, Ca, K, Ni, Cd, Pb, Cu, Mn, Na, Zn, Fe, Mg and B were detected in the crop seeds in different amounts. The proximate analysis indicated that the seeds contained Cu 8.115-9.360, Mn 65.905-77.890, Zn 30.405-42.105, Fe 254.0-290.5, Mg 2118.0-2414.0, B 6.385-9.655, Ni 0.2305-0.2945, P 2640.5-3307.5, Ca 8193.0-8965.0, K 10221.51-12332.0, Cd 0.1625-0.2235, Pb 0.3345-0.4160 and Na 1181.51-1475.5 mg kg<sup>-1</sup>, respectively. Results indicated that weed plants of Central Anatolia were rich in trace elements and there was no need for supplemental trace elements.

**Keywords:** Weed, Mineral Content, Correlation, Biplot

## DESIGN OF A SUSTAINABILITY PROGRAM FOR HIGH SCHOOL STUDENTS AT THE UNIVERSITY OF GUADALAJARA

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### **Abstract:**

Following the world tendencies towards sustainability, the education in Mexico is aiming to integrate these concepts. Working with children and young people is the most important task of this campaign and the goal is to change the point of view of future generations. High school students are in an age in which they discover the world and forge some of the values and manners that will rule the rest of their lives. It is of vital importance to integrate the students in activities and projects related to sustainability to strengthen their sense of responsibility towards the environment and humanity.

The challenge of designing a program integrating the sustainability concepts and make them interesting and appealing to the young students involves creativity and the ability to seize the opportunities as well as overcome the obstacles that may show up in the process. The goal was to integrate art, science and information and communications technologies (CITs) to design a fun program for the students and to fulfill the guidelines established by the National High school System (SNB). All of the projects were carefully chosen to satisfy each of the thematic axes determined by the SNB. The result is a program that includes outdoor activities such as crop production in the green areas as well as community brigades to restore public spaces near the high school, a film projection program that includes different documentaries related to environmental and human issues with a discussion involving the students, the collaboration with a recycling company to gather paper and paperboard, campaigns over waste management and the creation of a collection of books and movies related to sustainability.

The design and operation of this kind of programs depends deeply on the collaboration between the academia and the administration of the school to show good results.

**Keywords:** Education, Sustainability, High School, Program

## PHOSPHORUS LOSSES INFLUENCED BY IRRIGATION EFFICIENCY, TILLAGE, AND PHOSPHORUS RATE

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### Abstract:

Phosphorus (P) additions are necessary for plant growth and livestock production. However, eutrophication problem might be happened due to excess losses of P from agricultural lands to watersheds. Therefore, implementation of management practices that minimize erosion and runoff plays a crucial role in P transport. In order to investigate the effects of irrigation efficiencies (40% and 60%), P rates (0, 90 and 135 kg ha<sup>-1</sup>), and tillage (conventional-till, and Chisel-till) on P losses in runoff water from furrow irrigated cotton fields at two different locations (Eyyubiye and Koruklu). Sediment losses, runoff volume and P were summed over the growing season. Significant interaction between tillage and irrigation efficiency for runoff volume in 2009 were found in both locations. Runoff volume was generally highest with low irrigation efficiency (40%) and Chisel-till. Similar interaction was also found for sediment losses in 2009 at Koruklu location as well as in 2010 at Eyyubiye location. Generally the highest sediment losses were with Conventional-till and lower irrigation efficiency, whereas the lowest ones were with Chisel-till and higher irrigation efficiency (60%). Phosphorus losses significantly increased with increasing P rate and decreasing irrigation efficiency. For example, P losses in 2010 for Eyyubiye location were ranged from 132.4 to 1298.6 g ha<sup>-1</sup> for total P, 60.4 to 293.2 g ha<sup>-1</sup> for bioavailable P, 83.7 to 716.2 g ha<sup>-1</sup> for water soluble P. The highest P losses were with low irrigation efficiency and conventional-till, whereas the lowest ones were with high irrigation efficiency and Chisel-till. Overall, the results suggested that increasing P rate increased P losses but no effects on sediment losses and runoff volume which were accelerated by conventional-till and low irrigation efficiency.

**Keywords:** P Losses, P Runoff, Eutrophication, Tillage, P Transport

## EFFECTS OF TILLAGE AND PHOSPHORUS RATES ON WHEAT YIELD AND SOIL P

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### Abstract:

Soil amendments like fertilizer and tillage can impact phosphorus (P) cycling in soils. Phosphorus is vital nutrients for plant due to its role in many physiological processes. Therefore, proper management practices are crucial for plant growth as well as soil. A two years field study was established to investigate the effects of P rate (0, 60 and 90 kg ha<sup>-1</sup>) and tillage (conventional-till, and Chisel-till) on wheat yield and soil P at two different locations (Eyyubiye and Koruklu). There was no interaction between P rate and tillage on wheat yield, but separately each factor was statistically effective. Generally increasing P rates increased grain and stover yields. However, Non zero P treatments had higher yields with no difference between them. Generally Chisel-till had higher grain and stover yields compared to Conventional-till when statistical difference appeared. The highest Olsen P was obtained with the highest P rate in depth of 0-5 cm but this effect was not seen in 5-30 cm soil depth. Total P was not influenced by either P rates or tillage practices at both soil depths.

**Keywords:** Fertilizer P, Olsen P, Wheat, Tillage, Stover.

## A THREE-DIMENSIONAL MODEL OF SINGLE PEM FUEL CELL HAVING TRIPLE-SERPENTINE FLOW CHANNEL DEVELOPED WITH CFD

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### Abstract:

In this investigation, a three dimensional, single-phase proton exchange membrane (PEM) fuel cells with triple-serpentine flow channel was studied numerically, evaluating reactant gas humidification, water management and cell performance .The model equations were solved using CFD software ANSYS Fluent<sup>®</sup> 16.2 with Gambit<sup>®</sup> (2.4.6) as a pre-processor. This 3-D model with 19x50 mm<sup>2</sup> active layer used to investigate the performance of fuel cell by determining the current density, oxygen ,hydrogen and water molar concentration distributions took into account the mass, momentum, energy, species, charge conservation equation as well as combines electrochemistry reaction inside the fuel cell. The simulation results were illustrated polarization curves including I–V and I–P curves. Various properties of the GDL such as permeability, porosity, tortuosity and the hydrophobic texture can affect the flooding at flow channels. In this study, the effect of GDL porosity on flooding was investigated with different operating conditions. From the results, for lower operating voltages, as the cathode relative humidity decreases, the cell performance is enhanced because the cell performance is mainly dependent on the cathode mass transport limitations due to the liquid water blockage effect. As decreases, the oxygen concentration in the reactants increases and the water concentration on the cathode side decreases, this reduces flooding and improves the cell performance. Also, analysing the polarization curve it can be said the performance of the PEM fuel cell was improved by increasing the reactant gases humidification.

**Keywords:** Flooding, Gas Diffusion Layer, Humidification, PEM Fuel Cell, Performance

## BEYOND DEBATES IN HISTORICAL CLIMATOLOGY

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### **Abstract:**

A part of a broader approach known as environmental history, historical climatology (or climate history in US) has not only been a study of the influence of climate upon human history, but a tool at the forefront of the climate debate as well. However, while historians today reject the deterministic role of climate and all its implications in post-colonial history, the public debate has never been louder and the terms like 'Little Ice Age' have become a buzzword and an argument. The paper tries to show two things: the interdisciplinary nature of such field, going beyond the traditional debates between “hard” and “soft” science, and the responsibility of the field to provide a better understanding of the past, instead of social or political relativism of the future.

**Keywords:** History, Climate, Environment, Interdisciplinary, Debate



## UNIVERSITY STUDENTS PROTECTING AND CONSERVATING SEA TURTLES IN THE SHORES OF MEXICO

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### **Abstract:**

Our country is in a privileged geographical location and is regarded internationally as the country of sea turtles, because six of the seven species that inhabit the planet are specific to Mexican coasts to fulfill their reproductive cycle; now all are considered endangered or threatened. The activity play sea turtles inside the food chain in the world's oceans is of utmost importance, so it's necessary to consider the consequences that lead to the disappearance of these reptiles and their populations due to poaching and smuggling of their products and by-products, causing disturbance to this balance of marine ecosystems of our environment. The overall objective of the project is to protect the populations and nesting sea turtles that come to breed on the shores of six states in Mexico, as well as their immediate environment, through actions to ensure their protection and conservation, monitoring and implementing environmental education in nearby communities through trained, sensitized and committed to the environment college students. Methodology used: patrols, collection, strewn with nests, nesting females measuring, cleaning nests and hatchling release. The analysis of data obtained it's made by quantifying of nesting females, mortality and survival percentage, hatching rate, protected nests index and recording environmental parameters. For fourteen years of work they had been trained 2,724 students in different areas of knowledge. Results: 25.654 nests have been collected; sown 2'456,839 and released 2'049,363 hatchlings, data from 2002 to 2015. The percentage of survival to adulthood is 1 turtle in 1,000 that's why it is actually important to carry out actions that protect various species of these organisms that inhabit our seas.

**Keywords:** Students, Conservation, Learning, Sustainability

## SMALLHOLDER FARMERS' BEHAVIOURAL INTENTION TOWARDS SUSTAINABLE AGRICULTURAL PRACTICES

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### Abstract:

The introduction of sustainable agricultural practices is considered as a win-win strategy especially for low-income countries because of the potential to simultaneously solve food insecurity and climate change issues. Despite the numerous studies that focus on the adoption of technological innovations, little work has been done on the socio-psychological behaviour of smallholder farmers with regard to sustainable practices. This study investigates smallholder farmers' behavioural intention towards two sustainable practices (minimum tillage and row planting). The possible roles of attitude, normative issues and information sources on behavioural intention are explored. The decomposed theory of planned behaviour is used as a theoretical basis. The findings reveal that attitudes and normative issues positively explain farmers' intention to adopt sustainable practices. Perceived control also has a positive and significant effect on the intention to apply minimum tillage. This means when the intention is formed, the farmers are expected to carry out their intention when the opportunities arise. Moreover, perceived usefulness, social networks, and perceived easiness are significant predictors of farmers' attitudes. Furthermore, social networks and training are factors that positively affect the normative social norms, which in turn also positively mediate the relationship of training and social networks with behavioural intention. Finally, neither the perceived resources nor media reports significantly affect smallholder farmers' behavioural intention. This paper confirms that social networks, personal efficacy, training and perceived usefulness play significant roles in adopting sustainable practices in the current farming systems. Accordingly, willingness to adopt sustainable practices seems to be limited by negative attitudes and weakly normative issues (social and psychological factors). Therefore, the focus should be given to social-psychological factors to improve adoption of sustainable practices by smallholder farmers, thereby improving farm productivity, and enhancing their livelihoods.

**Keywords:** Smallholders, Information, Intention, Sustainable Practice, Decomposed Theory Of Planned Behaviours, Structural Equation Model,

## IMPORTANCE OF SUSTAINABILITY AND DEVELOPMENT IN TERMS OF MAIZE (ZEA MAYS. L.) GROWN WITH DRIP IRRIGATION

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### Abstract:

Maize is an important cereal in human nutrition and in animal feed production. It is a very good protein source. It can be used as flour, corn oil, glucose and starch. Maize is a strategic crop to meet the growing population's food needs. In recent years, drip irrigation method has been disseminated among maize producers. Early adapters very interested and began to use drip irrigation in their fields. With this method, irrigation and fertilizer use is made intensely. The implementation of drip irrigation the fertilization carried out effectively and it provides high yields being obtained. In addition to the deployment of these systems close to plant soluble nutrients can be sent to the desired point. Plants that will be used so that food costs will also be reduced. In particular, the land in disfigurement ensures equal distribution of water. Affected by the wind, watering is done required time. Also, weed problems are less in the plant. The leaf diseases is reduced in the plants. Thus reducing the cost of inputs used in production. Drip irrigation not only decrease water use but also reduces energy costs. Thereby, contributing to sustainability agriculture and the environment. This situation is important the development of countries.

**Keywords:** Drip Irrigation, Sustainability, Development, Maize, Efficiency

## MANAGEMENT OF NATURAL RESOURCES TOWARDS AGRICULTURAL ENVIRONMENTAL PROTECTION

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### **Abstract:**

All living things require to continue their life. Especially, in agriculture producers want to have higher yields with irrigation and they seen water seen as an undepleted asset. This leads to unconscious consumption of groundwater and surface water resources. Apparently, only if water resources are exhausted; this situation pose a threat on agriculture and also in industry. Furthermore, unconsciously irrigation causes salination and reduction on agricultural lands in Turkey. Also it leads to many environmental problems. Therefore, water is very important in every aspects. To use water effectively, producers have been informed and educated to use modern irrigation methods, such as drip irrigation, instead of primitive irrigation method. Countries, to meet the rapidly growing population's demand for food increasing the income derived from agricultural production by providing ensures sustainable terms of production to ensure sustainable development of natural resources should be pointed out that the effective use and development. Also increasing the income derived from agricultural production, underground and surface water resources organized policies to contribute more to the national economy should be accelerated agricultural development. Efficient use of available water resources and studies for development of sustainable irrigation projects should be carried out. In this paper, the effects of different irrigation methods are explained to protect the natural resources.

**Keywords:** Water Resources, Agriculture, Sustainability, Environment

## APPLICATION OF PRODUCT PLACEMENT AND FUNCTION OF ADVERTISERS IN TURKEY

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### Abstract:

In this paper, functioning of product placement application in Turkey within context of advertisers is revealed. It is aimed to reveal the reason to choose product placement application in visual media through entities which operates in Turkey and have recognizability on an international, national, regional and local level at the same time, to define sectorial and legal problems to put forward the advertisers' suggestions for solution for these problems. The study is based on the representatives of advertiser companies. While collected through the method of interview in depth, an empiric method, the data were evaluated with NVivo, a computer-aided program for data analysis, through interview and research questions. Along with conceptualization for the context, the process of product placement in Turkey within the context of advertisers was also clarified. Existing problems were defined and some solution suggestions were developed. Moreover, authentic models for the continuation of process in Turkey were developed within the context of the study. The research suggests that there are a number of legal and structural problems towards product placement in Turkey. It was also defined that product placement, will be used as an important strategy by the sector in advertising field which is developing rapidly. In terms of analysis of product placement application in Turkey within the context of advertisers, the study contributes a lot to the advertising field and the ones that are studying academically in this field.

**Keywords:** Advertisement, Product Placement, Advertiser

## SOCIAL MEDIA USE OF LARGE CORPORATIONS: TURKEY FORTUNE 500 ANALYSIS

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### **Abstract:**

In the age of new media and a networked society, online participation and social networking have become an increasingly common development across Turkey as well as the rest of the world. Also this phenomenon continues to transform the way individuals communicate and interact with one another as well as the ways individuals and groups engage with organizations and brands. Social media enables effective communication between organizations and customers, furthermore organizations use social media to increase customer loyalty and brand awareness. Finally, some organizations allocate more of their marketing spending to social media tools.

The aim of this study is to enlighten the current status of social media use among top 100 organizations in Turkey's Fortune 500 list, by exploring and describing the organizations' social media platforms in use, follower/like statistics and associated practices with social media. Research data were collected through official web sites and social media accounts of the enterprises and analyzed through quantitative and qualitative methods.

**Keywords:** Social Media, Fortune 500, Turkish Enterprise

## MOBILE BANKING ACCEPTANCE: A MODEL SUGGESTION

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### **Abstract:**

Mobile phones are the most dominant form of mobile computing; consequently, they have become integral to people's lives. Despite the deep penetration of smartphones, m-banking services are still in their immaturity with great potential for growth in the future. M-banking is one of m-commerce's most value-added applications and has a huge economic impact. The phenomenon is so important that IS professionals have described it as one of the most promising and important developments in the field of mobile commerce and banking.

M-banking enables users to acquire real-time account information and make financial transactions at anytime and anywhere. Based on some large group of advantages, banking industry expect that mobile banking will acquire a wide user adoption. However, current user adoption of mobile banking is much lower. The aim of this study is to determine the factors influencing customer acceptance of m-banking applications and also to present the relations between these factors on a theoretical model. The research model is developed with the integration of three major theories; Tst Technology Fit (TTF), Unified Theory of Acceptance and Use of Technology (UTAUT) and ITM (Initial Trust Model) to examine the mechanisms behind the adoption of m-banking.

This paper offers valuable insights to decision-makers involved in the implementation and deployment of m-banking services.

**Keywords:** Mobile Banking, Technology Adoption, Ttf, Utaut, Itm

## SOME FRUIT CHARACTERISTICS OF SUPERIOR WALNUT GENOTYPES COLLECTED FROM CAPPADOCIA REGION OF TURKEY

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### **Abstract:**

In present study seed propagated walnut genotypes selected from Nevsehir provinces and some towns located in Cappadocia region of Turkey were investigated. During the selection process firstly 55 walnut genotypes with high yield were determined. Approximately 40 fruit samples were collected from each genotypes and some fruit parameters were evaluated. According to results significant differences were found among the genotypes. Fruit length of genotypes ranged between 27.8-46.8 mm. Fruit height and width of genotypes varied among 26.8-39.2 and 27.1-38.2 respectively. Fruit weight of walnut genotypes were found from 7.8 to 16.5 g as average 11.7g. The highest fruit weight was obtained from 'genotype 13' selected from 1500 m of altitude in Urgup town. Fruit endocarp weight of selected genotypes were ranged between 3.8-7.9 g and average of 5.8 g. Among the selected walnuts some promising genotypes were determined. Results of this study may contribute to increase of walnut production and breed new cultivars.

**Keywords:** Breeding, *Juglans Regia*, Selection



## FRUIT QUALITY PARAMETERS OF QUINCE GENOTYPES SELECTED FROM CENTRAL ANATOLIA, TURKEY

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### Abstract:

In this study carried out between 2011-2013 quince populations consist of chance seedlings were investigated in Central Anatolia (Kayseri province) where no study was conducted on quince selection. Fruit samples of 24 quince types superior for fruit characteristics were collected in different region of Kayseri. Twenty-five fruits per tree in October-December commercial harvesting season of quince in Turkey were collected. All fruit samples were assessed for fruit weight (g), fruit length (mm), fruit width (mm), fruit hardness (kg/cm<sup>2</sup>) and TSS (total soluble solids). Fruit height, fruit width, fruit weight, total soluble solids and hardnesss were determined in fruit samples. There was high level of variation for fruit quality parameters among the quince genotypes. Fruit weight of quince genotypes were ranged between 336.3-73.2 g. Fruit height and width varied between 94.1-55.8 mm and 95.2-50.6 mm respectively. Total soluble solids of genotypes were found from 9.5 to 17.0. Fruit hardness were ranged between 15-22.8 kg/cm<sup>2</sup> among the genotypes. This study may presente new alternatives and contributions to quince breeders and producers.

**Keywords:** Cydonia Oblanga, Kayseri, Quince

## EVOLUTION OF PHENOLOGICAL AND POMOLOGICAL CHARACTERS OF SOME ALMOND GENOTYPES AND CULTIVARS IN TURKEY

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### **Abstract:**

Almond is important fruit for Turkey and also other countries which have temperate climate zone. Addition it has grown suitable soil and climate conditions, it is important terms of evaluation of uneven plantations for production and unsuitable soil and drought conditions that used low input. Recently, high demand has occurred for almond fruit because of high nutritional values through the world and also new cultivars aside from current cultivars. Adaptations of almond cultivars have varied as climate conditions. Therefore, it should set up new almond orchard for suitable almond cultivars which have high adaptation ability. In this study, it observed some phonological and morphological data and measured some pomological parameters using 70 almond genotypes. As results, It were determined big variations among almond genotypes with flowering time, harvest date, fruit weight, fruit shell/seed ratios and twin seed. Obtained results showed that especially, selected almond genotypes can use for breeding programs and orchard set up.

**Keywords:** Almond, Phenology, Pomology

## AN EVALUATION ON THE ATTRACTION OF TURKISH ECONOMY FROM THE POINT OF FOREIGN DIRECT INVESTMENT

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### Abstract:

Foreign direct investments are the one of the most important tools that make countries progress in the processes of their economic development and provide them to commune with the world economy in our day. The countries that can properly interpret advantages which globalization process presents have searched the ways of making their national markets attractive for foreign investors. Turkey is the one of the countries making an effort in this subject. Being announced as candidate country to EU in 2005 had encouraged foreign direct investments about tending towards Turkey. However, especially internal and external political developments that Turkey was exposed to for last ten years had negatively affected amount of the resource coming by the way of foreign direct investments to Turkey.

This study has aimed that foreign direct investments that come to Turkey in the era of 2004-2014 take place under influence of which factors and reveal that making national market attractive is to what extent of being in priority of governments. For this reason, in this study to measure attractiveness of countries in terms of foreign investments; foreign direct investments that come to Turkey occur under which factors and how the factors that make national market attractive follow a progress from the process of the membership of Turkey to European Union until now had been analyzed with the help of these indicators by looking at twelve indicators that were determined by United Nations Conference On Trade and Development (CNUCED).

**Keywords:** Foreign Direct Investment, Choice Of Investment Area, Turkish Economy, Developing Countries

## SINGLE AND COMBINED EFFECTS OF COPPER AND NICKEL ON NITRIFICATION ORGANISMS IN BATCH UNITS

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### Abstract:

The purpose of this experimental study was to evaluate single and combined effects of copper and nickel on the nitrification organism activities. Experimental results indicated that trace amounts of Cu<sup>2+</sup> stimulate the activity of nitrifiers and ammonium removal rates (ARRs) increased from 0.225 to about 0.5 mg NH<sub>4</sub>-N/mg MLVSS.day on a first day by elevating Cu<sup>2+</sup> concentrations from zero to 0.05 mg/L, respectively. The lowest ARR value was observed at the concentration of 2.0 mg Cu<sup>2+</sup>/L on the first day of reaction. The NH<sub>4</sub>-N oxidation steadily decreased significantly as the applied Ni<sup>2+</sup> concentration to the nitrifying biomass increased. The highest ARR of 0.02 mg NH<sub>4</sub>-N/mg MLVSS.day was observed when the nitrification culture was exposed with 2.0 mg Ni<sup>2+</sup>/L. The simultaneous presences of Ni<sup>2+</sup> & Cu<sup>2+</sup> negatively affect the activity of nitrification organisms. In order to achieve the same ammonium oxidation level as compared with the blank sample, it needs more reaction times. The experimental results indicated that it is possible to treat industrial wastewater Ni<sup>2+</sup> and Cu<sup>2+</sup> with individually or together. Cu<sup>2+</sup> is less toxic than Ni<sup>2+</sup> at relatively high concentrations. The toxicity of heavy metal could be minimized by increasing the microorganisms in the biological reactor.

**Keywords:** Nitrification, Copper, Heavy Metal, Nickel

## THE EFFECTS OF BUILDING MATERIALS ON BUILDING BIOLOGY AND THE RESULTANT AIR QUALITY

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### Abstract:

The basic need of a human being is to lead a healthy life. Since people spend 90% of their life indoors, the main function of a building should be providing a healthy environment for users. Healthy building meets user's biological, psychological, social needs through its quality indicators related with the outdoor-indoor environmental characteristics. Buildings, which are designed, constructed and presented to use in health, may lose their healthiness during the using stage. The reason of this is the quality indicators' degradation or deficiency in fulfilling the changing needs due to the changes of time (aging of the building and the user) and circumstances (function, environmental characteristics, characteristics of the user). Building Biology can be defined as the teaching of the integral relationships between people and their built environment. It is a science that leads to natural healthy ecological buildings that exist in harmony with the planetary environment. The main topics of building biology is interior climate, heat and moisture comfort, air quality, radioactivity, electro-climatic pollution, acoustic violence and natural lighting conditions and its effects.

According to the studies, 65% our buildings are polluted, sometimes as much as five to ten times higher than city pollution. The harmful gases, volatile organic compounds, particulate matter, lead, asbestos and dust have been receiving considerable interest in indoor air field studies because of their high emission rates from materials used indoor environments. They can cause diseases such as cancer, asthma allergic reactions, pulmonary fibrosis and many more.

In this study; the definition of building biology, types and sources of indoor air pollutants and the impact of materials on indoor environment and human health are discussed in detail.

**Keywords:** Building Biology, Building Materials, Human Health, Indoor Air Quality

## A MINI HYDROELECTRIC APPARATUS AS RENEWABLE SOURCE OF ENERGY: 'A GENERATOR'

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### Abstract:

The matter is considered in the scope of sustainability and initially the basis and content of the term is defined. Based on this definition, the qualities of water and water energy are inspected as water is one of the most important type of clean energy source. Water energy is a time-honored renewable energy whose use dates back to earliest periods in history. The subject titled "A Generator" is a small but significant support to environmental protection as it defines a patented object which generates energy from water with a mini apparatus.

Protection of future lives of creatures and keeping them in infinite existence necessitate taking measures in advance. Concepts such as environment protection, sustainability, green energy, green economy etc. have also been under consideration by the UN since the 1970s. The significance of the topic addressed by many developed or developing countries and is being mentioned in various meetings. Each country started taking precautions on their own and continue to do so. The subject is very comprehensive. This paper inspects as required hydroelectric power plants which produce clean energy and date back to ancient times. Water, as main source of hydroelectric power plants, is collected in proper basins and thus provided with potential energy. Water is then dropped from heights to trigger its kinetic energy and canalized to turbine wheels, moving which it turns kinetic/mechanical energy into electric power. This basic characteristic of water is evaluated in a mini apparatus this time. And an apparatus of unaccustomed size is obtained, which could support electricity production in household wet areas.

**Keywords:** Generator, Water, Hydroelectric Power Plants, Sustainability

## INFLUENCE OF EARLY OTTOMAN URBAN PATTERN IN BURSA ON THE BALKAN CITIES: SKOPJE CASE

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### Abstract:

Bursa, as the first capital of Ottoman State, is a peculiar Anatolian city representing unique urban development of Early Ottoman Era. Various studies have depicted that there was an established Ottoman model for the development of new towns and agreed that the Early Ottoman urban pattern beginning with Bursa influenced the development of Balkan cities that were conquered during the 14th century.

This study focuses on the effects of urban development idea of Early Ottoman State on Bursa and Skopje. Skopje is one of the Balkan cities conquered by Ottomans following Bursa. The city of Skopje, displayed similar characteristics with Bursa in terms of its topography and urban pattern. Although their development differed after the Ottoman sovereignty ended, their early development displayed some similarities.

The settlement pattern, during Early Ottoman Era, can be characterized with an existing fortress, a bazaar and neighborhoods called mahalle. These neighborhoods were developed around a nucleus composed of religious, commercial, social and cultural buildings called kulliye. Within the scope of this study, the similar urban pattern of Bursa as the first Ottoman capital and Skopje, as one of the earliest Balkan cities conquered by Ottomans is analyzed. There are various studies focusing on Early Ottoman urban pattern in Bursa and Skopje separately. However, the similarities of the development of these two cities are rarely studied. Therefore, this study aims to depict these similarities and the effect of Early Ottoman urban pattern on these two cities.

**Keywords:** Early Ottoman Era, Urban Pattern, Bursa, Skopje

## USE OF SOLAR ENERGY ON AGRICULTURAL LANDS IN TURKEY

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### Abstract:

Changing climatic characteristics and increasing fossil originated fuels use steer global attention to sustainable energy systems. Emerging technologies, coming with decreasing costs and increasing efficiency, enhance usage of non-polluting renewable energies systems. Development in these clean technologies such as solar energy becomes strategic not only on economic advancement but also has a significant impact on agricultural improvement. While agricultural products and food prices in the world are in a downward trend; in Turkey they are still increasing above inflation values. One of the major reasons causing this situation is input costs. Especially, expensive electricity and fuel costs bring farmers heavy financial difficulties. On lots of agricultural lands; because of not having mains electricity; irrigation is done by using fueled generators. Today's' classic irrigation pumps are generally settled; only considering the points where the mains supply is located. And not estimating their efficiency and trying only to lower installation costs; increase the variable expenses, energy use and overall costs. These fossil fuelled energy suppliers are not only costly and noisy, but also have a continuous additional fuel expense. On the other hand; irrigations done with solar powered pumps are economic, silent and environment friendly. Additionally; when there is no need electricity on agriculture land; redundant energy coming from solar system is sold to main network and brings extra profit to the farmer. Although installation costs of solar system seems expensive in the beginning; that investment will pay for itself in medium term. In this paper, the potential of solar energy, its use in agriculture and its' role on sustainable development is discussed.

**Keywords:** Solar Energy, Agriculture, Extension, Sustainable, Turkey



## DATA RATE MEASURES FOR 4G MOBILE NETWORKS IN ALBANIA

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### Abstract:

Companies of mobile telephony operate in a highly competitive market. Subscribers, with the possibilities given to them to change the operators, can easily change network based on the services offered to them. Due to this, all mobile operators which aim to grow and establish a better position in the market they operate, are involved permanently in offering better services for their current and pretended subscribers.

The quality, the speed and all related values to data offered are fields which the operators in Albania aim to improve. From 4 Mobile Operators in Albania, 3 of them offer 4G LTE data service.

This paper focus on measuring how real the data values declared by them are and how good is the quality of 4G LTE service offered. Through this paper we will discuss over different measures made in Tirana city related to rate fluctuation of uplink and downlink throughput of data service. The measures are located in 6 different points in Tirana city, which are chosen based on the traffic rate. Measures (made at the same day and time for all the operators in order to have equality) are realized through a Huawei LTE modem for FTP DL/UL.

**Keywords:** 4G LTE, Data Throughput, LTE Modem

## MIGRATION OF WOMEN FROM RURAL TO URBAN IN TURKEY

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### Abstract:

Migration from rural to urban has been a relatively important issue in Turkey. Since 1950, the industrialization and urbanization process had a negative effect on living conditions of farmers and it has led to internal migration from rural to urban areas. Of course, rapid industrialization is not the only reason for migration. To have better educational opportunities also led rural people to migrate. Marriage and living with children is one of the major triggers on the migration of women. The sharp inferiority seen in marriage age of women in rural areas, and frequent occurrence of male-dominated attitudes in family relationships; make women more desperate and cause this social problem more complicated. Economic and social factors, better service in health and also willing to leave the villages to cities can be listed for as other reasons. Agriculture and poverty are very closely related. Rural women suffer from poverty far more than rural men. Nowadays, more than 1 billion people in the world are dealing with poverty. Unfortunately, majority of them are women who live in developing countries. The hope of living within better conditions is another reason for women's rural to urban migration. But when they migrate they have no choice but to live in slum places with unhealthy conditions. Migrant rural women are employed generally in labor-intensive and low wage sectors such as textile, in-home cottage industry and house cleaning. In this paper, the migration process and women's role in sustainable development are analyzed from women's perspective in Turkey.

**Keywords:** Migration, Women, Rural, Turkey

## A RESEACH ON INTERNAL MARKETING AND MOTIVATION: DIFFERENCES OF EMPLOYEES' EVALUTIONS IN TRAINING AND DEVELOPMENT PROGRAMMES IN BANKING SECTOR

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### **Abstract:**

This study was conducted to examine the differences of employees' evaluations who participate in training and development programs in banking sector using questionnaires gathered from employees by the e-mail survey on internet in Kayseri, Turkey. Participation in training and development programs is quite important for employees as internal customers. Data was collected through the questionnaires from Turkey Is Bank. The outcomes of Independent-samples t test and ANOVA shows that the perceptions of employees on evaluations of training and development programs on motivation differ in situation of participation, number of participation and experience in sector. Results of the study conclude that employees participation in training and development programs can enhance their motivation. However, results are strongly based on the literature review.

**Keywords:** Internal Marketing, Differences On Evaluations, Training And Development Programs, Employee's Motivation.

## EARTHQUAKES AND RURAL STRUCTURES

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### **Abstract:**

Turkey is located over earthquake zones and about 24% of country population lives in non-durable rural houses. In case of a severe earthquake, casualties and injuries, livestock casualties, damaged buildings and other damages are mostly observed in rural structures. In various parts of the world, majority of the damages are also observed in rural structures because of improper site selections, poor-quality construction materials or local materials, improper design of these buildings and structures. Therefore in rural structures, earthquake-resistant structures should be constructed with light-weight durable materials to provide life safety of people living in these regions and to provide great contributions to country economy.

**Keywords:** Agricultural Structures, Rural Settlements, Earthquake

## COMPOSITION OF LANDFILL GAS AND DEPOSITS FORMING IN GAS ENGINES AND EFFECTS OF ENERGY PRODUCTION FROM BIOGAS

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### Abstract:

Landfill gas (LFG) is considered as a clean energy source for electricity generation using gas engines or turbines. Landfill works as a bioreactor producing biogas which is used as a renewable energy. The LFG is suitable to energy production especially in electricity production by gas engines, hot water by boiler, etc. The utilization of LFG reduces the greenhouse gases emission to the atmosphere by converting methane (CH<sub>4</sub>) to carbon dioxide (CO<sub>2</sub>) in the concept of global warming. That conversion systems of methane have benefits in reducing greenhouse gases and other atmospheric pollutants is also greatly respected. However, the utilization of LFG brings many potential problems that bring challenges in waste to energy projects that show each project and its problems are unique with their solution as well. This study refers to description of compositions of landfill gas utilized in energy production from LFG and deposits forming on engines parts operated with landfill gas (LFG). The LFG contained about  $9.5 \pm 0.4$  mg/m<sup>3</sup> total siloxanes, majority of which were octamethylcyclotetrasiloxane (D4) ( $5.0 \pm 0.2$  mg/ m<sup>3</sup>), decamethylcyclopentasiloxane (D5) ( $2.9 \pm 0.1$  mg/m<sup>3</sup>) and hexamethyldisiloxane (L2) ( $1.6 \pm 0.1$  mg/ m<sup>3</sup>) in Odayer Landfill Site, Istanbul. These siloxanes and other elements are promoted the formation of deposits inside of the gas engine. In order to determine the composition of deposits, the samples collected from the engine heads that had significantly high levels of silicon ( $149,400 \pm 89,900$  mg/kg) as well as calcium ( $70,840 \pm 17,750$  mg/kg), sulfur ( $42,500 \pm 11,500$  mg/kg), and zinc ( $22,300 \pm 7200$  mg/kg). The analyses indicate that zinc and calcium originated from the additives in the lube oil while lead, aluminum, copper, nickel, iron, chromium were due to the engine wear, silicon oxide was due to the oxidation of siloxanes in the LFG. The study help to identify the sources of elements in the LFG and deposits.

**Keywords:** Landfill Gas, Siloxanes, Combustion, Energy, Trace Compounds, Engine Deposits

## METABOLIC ENGINEERING OF M BARKERI: WAYS TO INCREASE METHANE PRODUCTION IN M. BARKERI FOR WASTE TO ENERGY PROJECTS

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### Abstract:

The demand for waste to energy projects have been increasing rapidly in the recent years. The high decomposition potential as well as production of methane makes municipal solid waste (MSW) from landfills, of great interest in this area. New strategies are needed to optimize the use of existing landfills and prolong the life of any new ones. Methane and carbon dioxide are considered the main landfill gases (LFG) that are produced from biodegradable organic waste components in landfills. Gas engines are operated with LFG to produce energy primarily by burning methane. Methanogens, which belong to the domain of archaea, are microorganisms found in wetlands that produce methane as a metabolic byproduct in anoxic conditions. Some of the methanogens found in landfill sites are Methanobacterium Formicicum, Methanosarcina Barkeri (M barkeri), Methanobacterium bryantii. M barkeri species has been reported to be dominated in large-scale mesophilic and thermophilic digesters treating wastewater and sewage sludge. Its dominance comes mainly due to its wide tolerance for environmental factors such as nutrients and temperature.

The details of methane metabolism of Methanosarcina Barkeri will help us understand how we can increase methane production in M Barkeri to increase the gas collection and generate more energy. To increase methane production in two of the methane production pathways; a) Formate to Methane and b) Acetate to Methane, we can increase the enzymes: methyl-coenzyme M reductase, Tetrahydromethanopterin methyltransferase, Acetyl-CoA decarboxylase, formate dehydrogenase, alpha subunit and/or coenzyme F420. These measures need to be taken to increase methane production. Further experimentation is needed to optimize the amount of increase for these enzymes.

**Keywords:** M Barkeri, Waste To Energy Projects, Landfill Gas, Methane Production

## EFFECTS OF ENERGY DRINKS WITH ALCOHOL CONSUMPTION

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### Abstract:

Especially among students in recent years, energy drinks with alcohol consumption has become popular and is known to the acquisition of risky behavior. According to researches; of consuming energy drinks with alcohol, compared to only consume alcohol, it reveals that they use 2 times more alcohol. Serious injury, sexual assault, drunk driving car, more deaths are related to alcohol consumption. When consumed with alcohol and energy drinks, there has been a dramatic increase in these adverse events.

Energy drink consumption among 18-24 year olds, the results of a survey conducted on 697 students, when students mix energy drinks with alcohol; sexual abuse, physical damage, reveals that they experience negative effects, such as the need for additional medical treatment. Students often; To hide the taste of alcohol and drunkenness to get more alcohol to feel the next day, to remain under the influence of alcohol and other reasons stated that they mix alcohol with energy drinks. Energy drinks and alcohol consumption, although increasing with each passing day, there are no controlled studies on the subject. However, energy drinks and alcohol with consumption of alcohol on the central nervous system, there are many popular publications for that reduce the depressant effects. It is reported energy drinks might reduce the intensity of the depressant effects of alcohol, and this effect is attributed to energy drinks with alcohol antagonist relationship. However, little scientific data on the subject, and some do not support this view. Therefore, caution should go and should raise awareness on the topic in the community.

**Keywords:** Energy Drinks, Alcohol, Awareness

## CHRONIC DISEASE MANAGEMENT FOR SUSTAINABLE HEALTH

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### Abstract:

Length of life and the incidence of chronic diseases have increased in parallel with the rapid developments in the fields of technology and medicine today. It is known that a significant rate of elder individuals have at least one chronic disease. Chronic diseases directly affect the national economy because of the loss of workforce and the social and economical problems they cause beside their direct effects on the lives of the individuals. These people's needs for care and help require the use of many sources. It is important for people to have better education, better nutrition, better house conditions and better medical care to be protected against illnesses.

Health professionals should know the chronic diseases at first and their effects on the individual, society and country. The health professionals' duty of first priority is the protection and development of health. Health professionals should help the individuals to be able to manage their own illness, their adaptation to the self care behavior, to enhance their self esteem and increase their independence and cope with the sensors. They should teach them the methods for solving the problems and they should evaluate the patients integratively. The patients' adaptation to the treatment plan increases as their care skills develop thus the excessive use of medical services and the repeating periods of the disease decrease. The burden formed by the chronic diseases on the society can be reduced with the prevention and the management of the chronic diseases. Because of this reason, forming and sustaining social politics are important in order to enable the individuals to live a life of good quality increasing their independency.

**Keywords:** Chronic Disease, Health, Sustainable



## SOME PHYSICAL PROPERTIES OF CEMRE (TRITICUM AESTIVUM L.) AND SARICANAK-98 (TRITICUM DURUM DESF.) WHEAT SEEDS

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### Abstract:

In this study, some physical properties of Cemre and Sarıcanak-98 wheat species produced within scope the GAP (The Southeastern Anatolia Project) were determined. These varieties are quite high in terms of production yield, quality and nutritional value of wheat varieties. After harvesting of wheat in order to be processed easily and cost-effectively from a technological point of view, knowledge of the physico-mechanical properties of seeds are required.

The some physical properties of Cemre and Sarıcanak-98 wheat seeds were determined as a function of moisture content in the range of 10,85 – 19,2% and %10,16 – 19,74% dry basis (d.b.) respectively. The average length, width and thickness were 6,85 mm, 3,11 mm ve 2,75 mm, for Cemre wheat seeds at a moisture content of 10,85% d.b. and 7,52 mm, 3,37 mm ve 2,97 mm, for Sarıcanak-98 wheat seeds at a moisture content of 10,16% d.b., respectively. Moisture in the Cemre and Sarıcanak-98 seeds in range from %10,85 – 19,2 ve %10,16 – 19,74 d.b. respectively, studies on rewetted seeds showed that for thousand seed mass increased from 35,38 to 47,89 g for Cemre and from 49,87 to 64,49 g for Sarıcanak-98 , the projected area increased from 20,39 to 25,36 mm<sup>2</sup> for Cemre and from 24,87 to 28,87 mm<sup>2</sup> for Sarıcanak-98. In addition, sphericity, porosity, terminal velocity, bulk density and true density varies in properties were determined. The static coefficient of friction of wheat seeds increasing moisture content in dry basis aluminum, stainless steel and galvanized iron have been identified to be 3 different surface for Cemre and Sarıcanak-98 seeds.

**Keywords:** Wheat, Seed, Physical Properties, Moisture Content

## A COMPARISON OF GREENHOUSE GAS EMISSIONS FROM ORGANIC FARMING AND CONVENTIONAL FARMING SYSTEMS

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### **Abstract:**

Today, the world population is rapidly increasing, but the size of agricultural lands has reached to maximum limits. In addition, the environmental impact of intensive agricultural production and climate change threatens food security in many regions of the world. Moreover, excessive use of fossil fuels, pesticides and chemical fertilizers in conventional farming has serious adverse impacts on natural environment and human health. So environment-friendly farming systems with reduced greenhouse gas generation and organic farming practices are getting more popular in recent years. The aim of this research is to investigate the utility of renewable energies in organic farming and to compare with conventional farming systems with regard to greenhouse gas emissions. As a result, use of renewable energy in organic farming systems and their impact on greenhouse gas emissions have been examined according to different research results and the results were compared with conventional farming practices.

**Keywords:** Greenhouse Gas Emissions, Organic Farming, Conventional Farming

## PARENTAL SELECTION OF SALT TOLERANT WHEAT VARIETIES USING MOLECULAR AND PHYSIOLOGICAL CHARACTERIZATION

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### Abstract:

Soil salinity is one of the major abiotic stresses affecting agricultural productivity. In 2014, Institute for Water, Environment and Health (IWEH) reported per day loss of around 2,000 hectares of irrigated land worldwide due to soil salinity. In this crucial scenario, developing salt tolerant crop resources can be a supportive strategy. In last two decades, cereal genomics involving molecular markers, high-throughput sequencing and functional genomics have been extensively used for wheat improvement under stress conditions. Hence, in a TUBITAK funded project, we are employing marker-assisted selection (MAS) approach to introgress *Nax* genes responsible for salinity tolerance (from Australian wheat lines) in to several local wheat genotypes. As a part of this project, we have screened tetraploid wheat genotypes from different countries for salt tolerant *Nax1* and *Nax2* genes using molecular markers, *gwm312*, *cslinkNax1* and *cslinkNax2*, *csNax2*, respectively. Additionally, we compared the physiological growth responses of these genotypes under control and salt stress conditions. Four replicates of all the genotypes were grown in half-strength Hoagland nutrient solution for 15 days prior to salt treatment with control (0 mM NaCl) and 200 mM NaCl. Results provided valuable information to support our ongoing molecular and classical breeding experiments under greenhouse and field growth conditions. Through these experiments, we are aspired to identify and develop novel salt tolerant wheat germplasm for breeding programs.

**Keywords:** Cereal Genomics, CAPS Marker, MAS, *Nax* Genes, SSR, Salt Stress, Wheat

## EFFECTS OF NITRIC OXIDE APPLICATION ON BARLEY GROWN UNDER TOXIC LEVEL BORON TREATMENT IS GENOTYPE DEPENDENT

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### Abstract:

Presence of toxic level boron (B) in the soil has specifically deleterious effects on optimum plant growth at the agricultural lands of the arid and semiarid regions worldwide, including Central Anatolia, the land that is known as the cereal storehouse of Turkey. The main outcome is yield penalty, the severity of which is directly relevant with the level of toxicity in the soil and the tolerance status of the crop species and or variety. Crop B requirements, tolerance to B deficiency and toxicity of the plants is highly divergent at interspecies and intraspecies level. Hence, it is very critical to use tolerance genotypes at B-stressed agricultural regions. While it is easier to cope with the deficiency conditions, considering the availability of B-enriched fertilizers today, it is a more serious obstacle to handle B-toxicity. Conventional reclamation methods of the soil is impractical if not impossible. Thus the logical method remains is to use tolerant genotypes and/or develop methods that ameliorate and or restrict the availability of the element to the crop plant. In our study, we used two barley genotypes with extremely opposite reactions against B toxicity, meaning one tolerant and one sensitive local Turkish varieties namely Tokak and Hamidiye, and applied nitric oxide (NO) to determine the possibility of eliminating/reducing the toxicity effects of B in the growth media. Effects of NO under B toxicity were evaluated in a greenhouse study using 2 dosages, 2 applications, and 4 replications for a total of 32 pots. Differences on the basic growth and developmental parameters and physiological responses were found to be variety and NO dependent. Macro and micronutrient uptakes were highly effected from the treatments and applications with significant differences at genotype level. Further research is required to determine the enzymatic, antioxidative and gene expression responses of the plants under treatments.

**Keywords:** Barley, Boron Toxicity, Mineral Nutrients, Physiological Response

## AN ETHNOBOTANICAL STUDY OF PLANTS USED FOR TEA MAKING IN KOSOVO AND ALBANIA

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### Abstract:

The paper is focused on the ethnobotanical knowledge of using the local plants for tea making (water infusions), as recreational and medicinal teas in Kosovo and Albania. The generic term “tea” (caj) in Albanian is an important category of wild medicinal plants. At least 94 species are listed as plants that traditionally have been used for preparing refreshing hot beverages (recreational tea) and infusions for specific medicinal purposes. The most important and popular species for tea making in both areas are: *Rosa canina*, *Vaccinium myrtillus*, *Hypericum perforatum*, *Tilia cordata*, *Matricaria chamomilla*, *Sideritis* ssp, *Origanum vulgare*, and *Crataegus monogyna*. The plants usage depends on the culture of local population and many of them can be used as recreational and medicinal purpose tea. The structure of the most commonly used taxa in Kosovo is similar to those used in Albania. However, the term “caj” or “caj mali” (mountain tea) in northern Albania is referred to the wild oregano (*Origanum vulgare*), but also to wild thyme (*Thymus serpyllium*), and in other parts of Albania referred to *Sideritis raeseri*, whereas in Kosovo referred to *S. raeseri* and *S. scardica*. This study provides the first analysis of the use of plants for tea in both states, describing in details the parts to be used, and importance of different species.

**Keywords:** Ethnobotany, Tea, *Origanum Vulgare*, *Sideritis*, Traditional Knowledge.

## MOBILE AIR QUALITY INDEX MONITORING SYSTEM

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### **Abstract:**

Air quality is a matter of considerable concern as it affects public health, the environment and the economy of developed countries. It is very important topic in urban areas as it closely affects the health of a lot of people in compact areas. Recent research has shown that air pollution can increase the incidence of diseases and impair the quality of life. It is therefore necessary to develop systems for real-time multi-parameter environment monitoring so that timely decisions can be taken. The use of such systems allows us to make a thorough study of the levels of major pollutants and their sources. The Air Pollution Index (API) Reporting Systems are an important tool of risk communication. It informs the public of the local level air pollution, and the potential health risk it would impose. Conventional monitoring systems have significant limitations, especially with respect to the cost of their installation and maintenance. Methods based on mobile handheld devices also have limitations and measurements usually are not fully automated. Advances in gas sensoric and in smart systems development have made it possible to have new low-cost, precise and accessible air quality monitoring tools.

One of the major city pollutants in the main EU cities is particulate matter (PM). Recent assessments provided by the European Environment Agency indicate that exposure to atmospheric particulate matter causes approximately three million deaths per year in the world. Frequent exceedances of PM thresholds have been reported by the most of the EU countries, primary in big cities and agglomerations where human exposure is correspondingly higher. The paper presents an approach for cost effective measurement of particulate matter and some other basic environment parameters in real-time. Based on these measurements an API is calculated. Preliminary prototypes and implementation challenges are discussed.

**Keywords:** Air Quality, Monitoring System, Particulate Matter

## ETHNOMEDICINAL ASPECTS OF SOME WEEDS OF RAHOVEC REGION, KOSOVO

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### Abstract:

Wild edible plants, and particularly weeds, continue to play an important role as medicinal plants for many people around the world. In Kosovo, some of these plants are widely used in medicinal ethnobotany, and a number of species are considered as weeds in crops. Region of Rahovec, Kosovo, is a territory of diverse plant use traditions, which are still insufficiently documented. The aim of this study is to document local ethnomedical practices of using weeds on this region.

The present paper deals with observation on ethnomedicinal use of some weeds by the local people. Fieldwork was focused on the weeds of crop fields and vineyards of Rahovec, via survey conducted during 2015–2016. The paper presents the report of 38 weeds of medicinal importance, which have been used by rural people for the treatment of several diseases like respiratory, stomach, kidney disorders, diabetes, nervous disorder, skin disease, cough, cold, fever, weakness, diarrhea, blood purification, etc.

The data presented here include their botanical name followed by the family, local name, plant part used with purpose and mode of use. Data are presented showing the significant representation of weeds in the medicinal floras of the Rahoves and in the medicinal flora of Kosovo as a whole.

**Keywords:** Ethnobotany, Ethnomedicine, Medicinal Plant, Traditional Knowledge, Weeds.

## EFFECTS OF ENSILING TIME ON CHEMICAL COMPOSITION OF MAIZE SILAGES

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### **Abstract:**

The present study was conducted to investigate the effects of ensiling durations on nutritional composition of maize silage. For this purpose, chopped maize samples were ensiled in 3-liter glass jars for 7, 14, 21, 28, 35, 42, 49 and 56 days. Ensiling duration significantly increased crude protein (CP) and crude oil (CO) CP contents of maize silage ( $P < 0.05$ ). The initial pH value of 4.43 decreased to 3.87 at the end of 56 day ensiling period. On the other hand, there were not any significant changes in dry matter (DM), crude ash (CA), ADF and NDF content of maize silage throughout 56-day ensiling period ( $P > 0.05$ ). Current findings revealed that increasing ensiling durations created significant decreases in pH contents and increases in CP and CO contents. It was concluded that minimum ensiling duration for maize silage should not be less than 40 days.

**Keywords:** Maize, Silage Quality, Ensiling Duration, Conservation, Nutritional Composition



## SUSTAINABILITY IN SUPPLIER SELECTION PROBLEM: A LITERATURE REVIEW

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### **Abstract:**

For over fifty years, supplier selection problem has been a major topic for companies to maintain their profit, as well as their own source consumption and internal productivity. To deal with the problem, numerous studies with various methods and approaches have been conducted. In recent years, with the awareness of the inefficient use of natural resources, industrial pollution and deterioration of nature, the term sustainability has been utilized in supplier selection process. To gain profit and effective use of the natural resources, this approach focuses on not only economic factors, but also environmental and social dimensions that the company should follow to make decisions. Therefore, sustainable supplier selection is getting more and more important for competing in rapidly changing environment. For this reason, this topic has substantially attracted both the academic and corporate attention. Given this evolving research area, the major purpose of this study is to review the current literature on sustainable supplier selection from the perspective of solution approaches. By summarizing the relevant studies within this perspective, we also aim to show the literature gaps for future research directions.

**Keywords:** Sustainability, Supplier Selection, Literature Review

## SYNTHESIS, MOLECULAR MODELLING OF SOME NEW BENZOXAZOLE DERIVATIVES AS TOPOISOMERASE II INHIBITORS

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### Abstract:

DNA topoisomerases, which catalyze the interconversion of various topological states of DNA, were originally discovered to change the superhelical structure of closed circular DNAs. Depending on the nature of the reactants and reaction conditions, topoisomerases can catalyze DNA relaxation/supercoiling, catenation/decatenation and knotting/unknotting reactions.<sup>1,2</sup> Based on their functional mechanisms, DNA topoisomerases have been classified into two types. Type I DNA topoisomerase breaks and rejoins only one of the two strands during catalysis, while type II DNA topoisomerase acts on both strands for each DNA strand-passing reaction and it requires ATP for full activity.<sup>3</sup> Investigation of the inhibitory activity of eukaryotic Topoisomerases is widely used in anticancer drug development.

Recently, a new series of benzazoles has been investigated for their inhibitory activity on eukaryotic DNA topoisomerase II in cell free system. Among the tested compounds 2-(2-methoxyphenyl)-6-nitrobenzoxazole derivative (IC<sub>50</sub>=17μM) was found to be more active than standard drug etoposide (IC<sub>50</sub>=21.8μM).<sup>4</sup> As ongoing research, we have synthesized some new 2-(substitutedphenyl)-5(or 6)-nitrobenzoxazole derivatives for evaluating their topoisomerase II inhibition activity. Furthermore, molecular modelling studies using Discovery Studio 3.5 have been done for developing new effective topoisomerase II inhibitors having benzoxazole nuclei.

\*This study is supported by a grant (Project Number:16H0237002) from Scientific Research Projects Committee of Ankara University.

**Keywords:** Benzoxazole, Topoisomerase II Inhibitors, Synthesis, Molecular Modelling

## CARBAMATE DERIVATIVES OF PYRIDAZINONE AS ACETYLCHOLINESTERASE INHIBITORS

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### Abstract:

Alzheimer's disease (AD) is a progressive neurodegenerative disorder characterized by some major pathological signs such as synaptic loss, reduced levels of the neurotransmitter acetylcholine,  $\beta$ -amyloid senile plaques and neurofibrillary tangles.

Several efforts have been done for the development of potent and selective AChE inhibitors (AChEI) and to date these drugs such as tacrine, rivastigmine, donepezil and galantamine, represent the main therapeutic approach for symptomatic treatment of AD. Rivastigmine, which is a drug from the carbamate class, act as cholinesterase inhibitors for the treatment of AD.

Our ongoing studies towards the derivatives of pyridazinone and carbamate moiety with acetylcholinesterase inhibitors activities prompted us to design new compounds. For this purpose some [3-(4-substituephenyl)-6-oxopyridazin-1(6H)-yl]methylphenylcarbamate derivatives were synthesized by condensation of 6-(4-substituephenyl)-2-(hydroxymethyl)-pyridazine-3(2H)-on and appropriate phenylisocyanate derivatives in acetonitrile. The activities of the compounds for possible AChE inhibitory activity was be performed by Ellman method. Additionally, 3D-common feature hypotheses was obtained by using clinically used AChE inhibitors such as tacrine, rivastigmine, donepezil and galantamine. Our active compounds were compared with obtained Hypotheses in order to discuss whether newly synthesized carbamate derivatives carry on similar pharmacophore site as AChEI.

\*This study is the doctoral thesis of Solen Cicekli and supported by a grant (Project Number:02/2015-08) from Scientific Research Projects Committee of Gazi University.

**Keywords:** Alzheimer's Disease, Carbamate Derivatives, Acetylcholinesterase Inhibitors, Synthesis, Pharmacophore

## STUDIES ON THE SYNTHESIS OF SOME NEW (2,3-DIHYDRO-[1,4]DIOXINO[2,3-B]PYRIDIN-7-YL)METHYL 4-(2-SUBSTITUTEDPHENYLCARBAMOYL)BENZYL CARBAMATES AS ANTICANCER AGENTS AND HDACIS

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### Abstract:

Histones deacetylases (HDACs) are a family of enzymes that catalyze the deacetylation of lysine residues located in the NH<sub>2</sub> terminal tails of core histones. They play an important role in epigenetic regulation of gene transcription and also control other cellular functions, such as proliferation, cell death, and motility. Therefore, HDACs are regarded as promising targets for cancer therapy.

HDACis have been shown to induce cell cycle arrest, cell differentiation, and apoptosis. Furthermore, HDACis were reported to intensify the host immune response and decrease angiogenesis. For these reasons, several HDACis are currently at various stages of clinical trials, individually or in combination with radiotherapy and/or chemotherapy for cancer treatment in patients with hematological and solid malignancies. HDACis currently in clinical trials belong to four different chemical classes: hydroxamic acids, cyclic peptides, benzamides, and short chain fatty acids.

Entinostat is a selective HDAC inhibitor that has been well-tolerated in clinical trials to date, belongs to benzamide class among HDAC inhibitors. In this study, a new benzamide series of (2,3-dihydro-[1,4]dioxino[2,3-b]pyridin-7-yl)methyl 4-(2-substitutedphenyl-carbamoyl)-benzylcarbamates have been synthesized. The structural evaluation of the synthesized compounds was based on the <sup>1</sup>H NMR, Mass and elementary analysis data. The synthesized compounds are investigated for their anticancer and HDAC inhibitory activities.

Acknowledgement: This work was supported by The Scientific and Technological Council of Turkey (TUBITAK), Turkey (Project No: 213S097).

**Keywords:** Anticancer Compounds, Anticancer Activity, Amid, Benzamide, Histon Deacetylase, Entinostat

## STUDIES ON THE SYNTHESIS OF SOME NEW BENZAMIDE COMPOUNDS CONTAINING BENZOTHAZOLE RING AS ANTICANCER AGENTS AND HDAC INHIBITORS

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### Abstract:

Histone deacetylases (HDACs) are a class of enzymes with a predominant role in regulating gene expression through a chemical modification to DNA-associated proteins known as histones. HDACs are an important class of enzymes that deacetylate the  $\epsilon$ -amino group of the lysine residues in the histone tails to form a closed chromatin configuration resulting in the regulation of gene expression. Inhibition of HDAC enzymes has been identified as one of the promising approaches for cancer treatment. Entinostat is a selective HDAC inhibitor that has been well-tolerated in clinical trials to date, belongs to benzamide class among HDAC inhibitors.

In this study, in the light of anticancer properties of histone deacetylase inhibitors, benzo[d]thiazol-2-ylmethyl 4-(2-substitutedphenylcarbamoyl)benzylcarbamate compounds which are derivatives of benzamide containing benzothiazole structure has been synthesized. The structural evaluation of the synthesized compounds was based on the <sup>1</sup>H NMR, Mass and elementary analysis data. Their docking studies are shown that they have enough interactions for the enzyme inhibition. Synthesized new benzothiazolyl benzamide compounds are under investigation within the scope of anticancer properties and histone deacetylase inhibitory activities.

Acknowledgement: This work was supported by The Scientific and Technological Council of Turkey (TUBITAK), Turkey (Project No: 213S097).

**Keywords:** Benzamide, Benzothiazole, Histone deacetylase (HDAC), Histone deacetylase Inhibitors (Hdacs), Entinostat, Anticancer, Synthesis.

## AN ENGINEERING APPROACH TO DEVELOP A MATHEMATICAL MODEL FOR SUSTAINABLE POPULATION

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### Abstract:

Sustainability has been linked with every aspect of present day civilization except size of human population. We talk about sustainable environment, sustainable economy, sustainable education, etc. and end up listing "... and also human population" at the end of the causes of environmental degradation, bad economy, inadequate education etc. Practically, the study of natural ecosystems alone is not getting us anywhere. We have to discuss these aspects for each political ecosystem as defined by the geographical borders of states as recognized by the UN and consider the human population in each state and determine the sustainability of its size. Political states and their populations have been suffering from the consequences of overpopulation for a long time. Indications of their continuously degrading environment, poor economy and unemployment is undeniable. On the other hand the size and distribution of the population of each state is well documented. Our primitive population model is considering the population distribution diagrams as a basic block with the net births each year are the input to this block and the number of people that retire in each year as the output. The difference between these numbers for each state will be the number of people that are expected to be unemployed when they reach the age 21 or 22. We make a case study for some states and compare their present day unemployment. We open the development of unemployment mathematical model to other interested researchers for further development and collaboration.

**Keywords:** Sustainable Population, Engineering Model, Demographic Distribution, Unemployment

## MN EFFICIENCY OF SOME BEAN VARIETIES GROWN IN TURKEY

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### Abstract:

This study was carried out using a Mn deficient soil (0.98 mg kg<sup>-1</sup>) in the greenhouse and two dosages (0 mg kg<sup>-1</sup>Mn and 40 mg kg<sup>-1</sup> Mn) were applied to 46 bean genotypes (14 of them were registered varieties). Mn efficiency of the genotypes were evaluated by using the dry matter ratios of the genotypes at Mn deficient and Mn available states.

According to the results obtained, Mn applications increased dry matter of the plants from 5% to up to 226%. The genotypes used were highly different for their Mn efficiencies. Mn efficiency of the registered varieties were in between 57 to 96% while that of the remaining unregistered genotypes were in between 31 to 100%. Mn efficiency of the registered varieties were found to be the highest at the Aras and Yunus 90 (96%) and Sehirali 90 (95%) whereas within the unregistered 38-SBC (100%), 30-K05 and 15-K4SK (96%) represented the ones with the best responding genotypes. In contrary, the lower Mn efficiency of the registered varieties were presented by the Batallı (57%) while of the unregistered genotypes 29-AKET (31%) was the genotype with the lower Mn efficiency. Considering the overall mean of Mn efficiencies, the registered varieties presented higher Mn efficiencies (80%) as it was compared with the unregistered remaining genotypes that presented 68% Mn efficiency.

**Keywords:** Mn Efficiency, Bean, Phaseolus Vulgaris, Registered Varieties, Turkey

## YIELD AND QUALITY EFFECTS OF NITROGEN APPLIED AT DIFFERENT LEVELS AND PERIODS ON SUGARBEET

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### Abstract:

In this study, Coyote sugar beet variety was grown at the Konya Sugar Industry and Trade Company Alakova Field Trial Area during 2013 and different levels of nitrogen and application times were evaluated based on their effects on the yield and quality. Random block design with 2 factors were used in the trial in triplicate and different N dosages (0, 15, 20, 25 and 30 kg da<sup>-1</sup>) at 3 application periods (1.st application period was during sowing/hoeing at the end of June; 2.nd application period was during hoeing in June and in the last week of July; 3th. application period was during sowing, hoeing in June, July and in the last week of August) were tried. N was, applied at the mentioned amounts and periods using urea (46% N). At sowing, phosphorus (9 kg da<sup>-1</sup>P<sub>2</sub>O<sub>5</sub>, TSP) and potassium (9 kg da<sup>-1</sup>K<sub>2</sub>O, K<sub>2</sub>SO<sub>4</sub>) were applied using the sowing machine. As the results of the research, tuber yield, sugar rate in the tuber and refined sugar rate, amino-N and Na contents were affected based on the N applications, at statistically significant levels. While differed based on the N applications, tuber yield of sugar beet was found 75.30 t ha<sup>-1</sup> at the control and the highest increase (18%) was obtained (89.11 t ha<sup>-1</sup>) from the application of 20 kg da<sup>-1</sup> N.

**Keywords:** Nitrogen, Sugar Beet, Application Time, Yield, Quality



## COMPARISON STUDIES OF E-LEARNING LMS'ES IN HIGHER EDUCATION INSTITUTIONS IN THE REPUBLIC OF MACEDONIA

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### Abstract:

A variety of systems that support e-learning are available to help organizations manage courses and provide for the learners' ways to organize, update, store content and enable ease of administration. All of these systems are progressive and their main task is helping companies or educational centers improve their productivity, efficiency and customer/students services. Indeed, Bologna's summit guidelines regarding the Bachelor/Master structure, which is currently used in most colleges and universities, were mostly aimed at standardizing the educational system in European higher education. Educational institutions use these guidelines as a basis for setting up their educational model. As related several higher education institutions in the Republic of Macedonia, the need for a new learning management system to educational innovation was highlighted, acknowledging the difference between five universities that were chosen, both public and private ones, exemplifying the Macedonian higher education context with the intention of having deeper knowledge about the current situation of e-learning in our country. However, different educational institutions in our country are at different stages in implementing new learning models. The results showed that higher education institutions preparation stage regarding the application of e-learning, whereas private ones have applied this system since their foundation, and use it on daily basis where they perform all the services. They are a step forward related to demand-based learning that means giving the student more freedom of choice in his or her learning program.

**Keywords:** Learning Management System, Higher Education In Republic Of Macedonia, E-Learning

## SAFETY ASPECTS AND THE ROLE OF DATA IN ELECTRONIC MARKETING

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### Abstract:

In the past decade internet has become a very important issue that helps companies and costumers to communicate easily and exchange data without being forced to have direct meetings. But sometimes people hesitate to do transactions via internet due to the security of their personal data. For this reason companies around the world must create methods for security issues, in order to make their web pages more confidential, to convince the audience and increase the number of consumers. Online users have to find themselves secure, regardless where they are involved in: opening a commercial video, buying something online in online stores or trying to communicate with online supervisors. This article is focused in online user's perception of privacy and perception of security during their online activities. Therefore, in this study is discussed the security knowledge of online users, experiences during their online transactions and the main questions "Do they have ever faced with any online security problems?"

**Keywords:** E-Marketing, Security, Companies, Online Users.

## SOLVENT EXTRACTION SEPARATION OF THORIUM FROM LANTHANUM AND CERIUM USING PHOSPHONIUM BASED IONIC LIQUID

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### Abstract:

Sustainability is the key factor for healthy and efficient technology development from the environmental point of view. Use of eco-friendly materials in the industry is an essential requirement for the green life style of modern society. In that context developing and usage of green chemicals stands on for scientists as a new challenge.

Ionic liquids are defined as low-melting-point solvents that consist entirely of ions. Some features of ionic liquids make them appropriate candidates for green chemistry applications. Due to their extremely low vapour pressures they have non-flammable and non-volatile properties. The combinations several of anions and cations produces new ionic liquids which have different physical and chemical characters. The term of "designer solvents" is used for expressing this remarkable phenomenon. One of the important application areas of ionic liquids in the chemistry is the separation and purification process. Solvent extraction is a common method for separation of metals from many mediums. It is used in laboratory studies as well as in industrial applications. Ionic liquids are used as an "organic phase" in solvent extraction applications due to immiscible with aqueous metal solution.

Rare earths are widely used in high-tech products playing very important role in our daily life. They are 17 elements with atomic numbers ranging from 57 to 71 in the periodic table (plus scandium (Z = 21) and yttrium (Z = 39)). Thorium often accompanies to the rare earth elements in the ores. And separation of this radionuclide element from rare earths is a necessity in all cases.

In this study we investigated to the separation of thorium from lanthanum and cerium rare earths which are quite abundant in the ores. Phosphonium based ionic liquids were employed for solvent extraction system. Factors of solvent extraction: pH, concentration of metal, time and temperature were examined and extraction process was characterized.

**Keywords:** Ionic Liquid, Solvent Extraction, Thorium, Lanthanum, Cerium

## FROM BALCONY TO FRENCH WINDOW: EFFECTS OF URBAN TRANSFORMATION ON LOCAL PEOPLE OF SUADIYE AND BOSTANCI DISTRICTS

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### **Abstract:**

This paper aims to discuss the effects of urban transformation on local people of Suadiye and Bostancı Districts in Kadıkoy - İstanbul regarding people's life styles, habits, and relation with built environment. After the 17th August, 1999 earthquake, the government has supported urban transformation for risky and dangerous buildings even in some cases for the whole of a district. As a result of this support, especially more profitable districts have undergone a rapid environmental change. Suadiye and Bostancı are the two examples of this situation.

In this paper, general characteristics of urbanization and urban transformation and their relation with the socio-cultural sustainability in the Suadiye and Bostancı are analyzed by design thinking methods. In order to understand the governmental aspects of urban transformation, at first urban transformation laws are expressed briefly. After the brief explanation, effects of urban transformation on local people are discussed. The discussion is supported by the observations, desktop research, self-experiences and literature review. The discussion is especially focused on the shift from the balcony to French windows because of implicit and explicit meanings of the balcony. Consequently, environmental stress depending on the urban transformation on local people of Suadiye and Bostancı is emphasized and concerns about the losing certain cultural values of the districts are shared.

**Keywords:** Urban Transformation, Environmental Stress, Istanbul, Cultural Sustainability

## EASE OF DOING BUSINESS AND FDIS INFLOWS: AN EMPIRICAL ANALYSIS FOR SOUTH EASTERN EUROPEAN COUNTRIES

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### **Abstract:**

There are numerous researches conducted on Foreign Direct Investments- FDIs in terms of push- pull factors and their economic contribution to host countries in the last three decades. In the last decade there is a renewed interest on assessing FDI determinants due to structural changes governments of different countries have undertaken to be able to compete in absorbing FDIs. Most of the analysis has been done by utilizing variables at macro level such as market size, growth rate, inflation, exchange rate etc. But when considering South Eastern European countries, many foreign investors would also base their final decision on barriers potentially to be faced at operation stage of their representatives in host country. The purpose of the study is therefore to assess the impact of easiness of doing business to FDI inflows.

Secondary data have been retrieved from World Bank for European and South Eastern European countries for 2004-2016 to assess the impact of easiness of doing business and FDIs inflows. Ease of doing business is a composite index assessed based on data on ten factors, including: starting a business, registering a property, dealing with construction permits, enforcing contracts, getting credit, paying taxes, resolving insolvency, protecting minority investors, getting electricity and trading across border. The analysis will be done for each of the factors and the overall index.

The findings will provide valuable information for discussion among researchers as well as for consideration for policy makers regarding FDIs promotion and attraction governmental policies, particularly for South Eastern European countries.

**Keywords:** FDI, Ease Of Doing Business, South East European Countries

## **MANAGING SUPPLY CHAIN SUSTAINABILITY AND RISKS: A REAL CASE STUDY IN TURKEY**

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### **Abstract:**

Supply Chain Sustainability is the management of environmental, social and economic impacts throughout the lifecycles of goods and services. Supply Chain Sustainability for companies can conserve resources, optimize processes, uncover product innovations, save costs, increase productivity and promote corporate values. Managing risks through supply chain sustainability is particularly important in companies. This study provides an analysis of trends and challenges for sustainable supply chains and the management of related risks with a real case application from Turkey.

**Keywords:** Supply Chain Management, Sustainability, Risk Management.

## A COLLABORATIVE STUDY ON THE PHYSICAL AND SOCIAL MEANING OF DOORBELL: PROBLEMS AND SOLUTION SUGGESTIONS

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### **Abstract:**

Doorbell is both a physical and social link between indoor and outdoor environment of people. Since its first usage, people benefit not only from its physical properties, but also from its social and emotional properties. In this study, current usage of the doorbell, further usage scenarios of it, the ways of sustaining its physical and social meaning while applying new technological developments to it will be discussed and handled as a design problem. Problem field is tried to be determined with the help of the design thinking approaches and methods. Detailed information about the determined problem have been collected and solution suggestions and alternatives tried to be improved. In every stage of the study like problem definition, detailing or suggestion, co-working constituted the main path of the study. In order to do that, workshops were made. So, problem has been analyzed in a more detailed way. In this study, current problem, user profiles, suggestions to the current problems of the doorbell are shared systematically. The data, gathered by this study, can form the research basis of a product development activity of a doorbell. Needs, applied solutions and suggestions of different user groups on mentioned subject has made this study valuable.

**Keywords:** Design Thinking, Doorbell, Methods

## THE FUTURE OF ORGANIC FIBERS

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### Abstract:

Organic fibers which are produced without chemical fertilizer and pesticide beside special agricultural applications and these are generally natural fibers. Organic fibers require much more time, labor, cost value, care and special agriculture areas than conventional fibers. Organic fibers are not enough to make safe the cloth since finishing treatments may entail to some additional toxic effects. Therefore Global Organic Textile Standard (GOTS) which includes environmental and social aspects accepted recently.

Environmental aspects of organic fibers: Contribution to decrease of global warming as plant originated organic fibers such as cotton, linen etc. during agriculture stage; environmental protection of the earth since the lack of chemical fertilizer for plant originated organic fibers; environmental protection of weather and waste waters since the lack of pesticides; environmental protection since less energy requirement to remove pesticides; environmental protection since less water requirement to remove pesticides; environmental protection of waste water if GOTS standard is also used, beside ecological protection of people using these textiles; environmental protection having biodegradable properties of textile waste products as well as all natural fiber products.

The future of organic fibers in the world is dependent on some dimensions such as textile, agriculture, environment- ecology, social life, economy etc. It is as follow that the amount of consumption of organic fibers in textile area instead of the other fibers; the growing possibilities of organic fibers in agriculture; positive impacts of organic textiles to environment and ecology; becoming conscious people about their health and environment by wearing organic textile products; buying capability of consumers to wear these organic textiles being more expensive than conventional ones will determine the future of organic textile production in the world.

A brief review will be done on above environmental subjects and the future of organic fibers will be revealed at above conditions.

**Keywords:** Organic Fibers, Organic Textiles, Organic Cotton, Environmental Protection, Pesticide, Fertilizer, GOTS Standard.



## ARE NATURAL DYES ENVIRONMENTALLY AND ECOLOGICALLY FRIENDLY?

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### Abstract:

Environmental protection has been considered in textile since 1980's and all treatments in textile production were reviewed environmentally and ecologically. It is supposed that natural dyes were environmentally and ecologically safe since they are natural. A fashion of natural dyed textiles also spread all over the world in 80s. But it is suggested that some dye plants such as convallaria majalis, papaver somniferum etc. were toxic when they were eaten by living organisms; some dye plant sources such as Euphorbia species, Eucalyptus species, Lawsonia inermis, Phytolacca americana etc. cause skin disorders. However, when the textile fibres are dyed by these toxic plants, only dye compounds such as alizarin, purpurin etc. will combine to the fibre whereas toxic parts such as alcaloid, photosensitive agent etc. which are available beside dye component in the plant remained in the wastewaters and these may also have harmful effects to the environment. Some mordants such as Cd (cadmium), Cr +6 (chrom+6 ), Hg ( mercury ) , Pb (lead), Sb ( antimony), As ( arsenic), Cu (copper), Ni (nickel), organic Sn (tin) compounds which are on textiles are quite harmful to human health on different scales according to Oeko- Tex 100 which is common ecotextile standard in Europe. Waste waters including these heavy metals may also entail harmful effects to the environment and ecology. Thus, it is revealed that only alum and iron mordants are safer in natural dyeing treatments. Requirement of large agricultural areas, higher density of metal mordants in waste water, relatively low fastness properties are also environmentally and ecologically drawbacks of natural dyeing.

**Keywords:** Natural Dyes, Environment, Ecology, Toxic Plants, Toxic Mordants

## POTENTIAL MISTAKES MADE IN DESIGN OF NATURAL WASTEWATER TREATMENT SYSTEMS (CONSTRUCTED WETLANDS)

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### Abstract:

Current climate change and resultant global warming have exerted a great pressure over water resources. Water resources are not sufficient in some countries to meet ever-increasing domestic, agricultural and industrial demands. Such restrictions oriented countries either to use water-saving technologies or to reuse treated wastewaters. Besides conventional, high-cost advanced treatments systems, natural treatment systems are used in small communities. Constructed wetlands, so called as natural treatment systems, emulates the natural wetlands and uses the biochemical processes taking place in natural one to remove pollutants from wastewaters. They are commonly preferred in rural sections, especially for wastewater treatment in villages. Although these systems are quite new in Turkey, there are several of them constructed in various parts of the country. Since several mistakes have been made in design of these systems, majority of them either not operating at all or way behind the expected performance outcomes. Once these systems were constructed, it is quite hard to make repairs or rehabilitation to improve the performance of these systems. Therefore, design criteria should strictly be taken into consideration before to construct natural treatment systems. The present study was conducted initially to point out the design criteria for constructed wetlands and then to put forth possible mistakes made in design, operation and maintenance of these systems. Recommendations were also provided for future constructions.

**Keywords:** Constructed Wetland, Natural Treatment, Sub-Surface, Kayseri, Turkey

## RELATIONSHIP BETWEEN CORPORATE GOVERNANCE RATINGS AND FINANCIAL PERFORMANCES: AN APPLICATION OF THE COMPANIES LISTED ON THE BIST CORPORATE GOVERNANCE INDEX (XKURY)

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### Abstract:

This study is conducted to determine the direction of the relationship between corporate governance ratings and financial performance of the companies. The data for the study are collected from 2015 annual financial statements of the 50 companies, listed on the corporate governance index of Istanbul Stock Exchange (BIST-XKURY). In order to measure financial performances of the companies as of the year studied, financial ratios defined as a financial performance indicator are calculated and TOPSIS, one of the multi-criteria decision analysis methods, has been applied. These calculated ratios are converted into a single score that indicates a company's financial performance. Then, companies are classified by these scores which shows financial performances. Financial performance scores achieved by TOPSIS method is analyzed by comparing it with the index created on the basis of corporate governance rating notes as of the year analyzed. The concept of corporate governance and corporate governance index, TOPSIS method and ratios set to be used in measuring the financial performance are described in general in the study. Also, the relationship between financial performances and corporate governance ratings of the 50 companies listed on the BIST-XKURY has been revealed in detail.

**Keywords:** Financial Performance, Corporate Governance, Corporate Governance Ratings, Topsis Method

## THE EFFECT OF SERVICE QUALITY IN TOURISM BUSINESSES ON CUSTOMER SATISFACTION

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### Abstract:

In the rapidly changing and diversifying competitive environment of these days, the brand-names which carry on business in tourism sector are obliged to renew and develop their service quality in order to answer the continuous expectations of their customers. Among the most important associational marketing elements in terms of establishing long term relationships between the tourism businesses and the customers of brand-names and sustain those relationships, service quality and customer satisfaction are the leading ones. Tourism businesses need to satisfy their customer both emotionally and attitudinally in order to establish long term relationships with their customers. The traditional performance indicators of the tourism businesses which display their market shares and profit levels were substituted for the quality of the manufactured product or services and customer satisfaction. In this direction, the study aims to research the effect of service quality on the customer satisfaction. Within this context, a model was constructed through Structural Equation Model (SEM) in order to determine the effect of service quality on the customer satisfaction. The relationships between the variants in the model were tested through the data of the questionnaire applied to the customers of the tourism businesses and the theoretically presented hypothesis was also tested. Furthermore, the frequency analysis, explanatory and confirmatory factor analyses and the applications of Structural Equation Model were employed in the analysis of the research.

**Keywords:** Service Quality, Customer Satisfaction, Tourism Enterprises, Marketing

## AN ANALYSIS OF ONLINE REVIEWS ON HOTELS: A CASE STUDY OF ANTALYA

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### Abstract:

Nowadays, online information and content has become the most important source. The number of websites with integrated social media infrastructure has been increasing and it has provided ease of usage to users. There is a lot of evaluation and sharing for tourism a very large part in this site. Especially after use of the hotel shares, online interpretations about hotels become the priority application and the reference point for consumers. Tourists from different cultures, traditions, ideologies and living standards, are sharing their experiences and opinions. Beyond categorical and formal distinction, there are also quite different form such as offering hotel type services for customer's value. In this context, it has been thought that the relationship between the hotel customers who expected to give more importance to religious values and the other tourist is important in consumer behavior. In scope of this paper, content analysis will be applied on the online content of the certain part of hotels in Antalya using the tripadvisor review. After the research, significant differences can be observed between the different review.

**Keywords:** EWOM, Hotel Experience, Tripadvisor Review, E Consumer

## THE USE OF BLOGS FOR MARKETING PURPOSES IN TURKEY: FASHION BLOGS

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### Abstract:

In recent years, it is increasing the power of social media because of increased interest in the information and communication Technologies and together with the development of new media. The concept of socializing with new communication technologies is gaining a new dimension. Individuals who get the opportunity to communicate in a virtual environment, they benefits in order to obtain information from the environment. Social media applications such as blogs, microblogging, chat sites, forums and social network, enables bidirectional communication with individuals recognizing on the other hand it can turn into a mass force. Blogs, combining their efforts to communicate with the target audience of the brand and it is being used as a new medium. So, brands recently have benefited from this effect and it have more cared the new era of marketing methods such as EWOM or Viral marketing with blog writers and use of blogs, in short they have developed new practices. In this situation, fashion is one of the most categorical sector. There are a lot of fashion blogs formed by followers, producers and brands. That blogs have numerous experience, reviews, share and critics about fashion. In this scope, prominent fashion blogs will be evaluated in the research and it will be examined detailed by means of content analysis in the context of modern marketing methods.

**Keywords:** New Media, EWOM, Blogs, E-Consumer

## DEPENDABLE REUSE OF SOFTWARE AND HARDWARE COMPONENTS – A HOLISTIC VIEW

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### Abstract:

Reuse is the process of creating new systems from existing ones rather than building them from scratch. Reuse is not limited to the deployment of particular components; it has, moreover, to consider all of the information that is related to the product generating processes, including also documents from requirements definition, analysis, design, and test cases as well as test procedures. Long period market analyses encourage reuse that tend to have very high return on investment, e.g., in case of software engineering, about \$30.00 returned for every \$1.00 invested. In case of hardware, about 25% of the existing electrical and electronic (E&E) components are suitable for reuse; this means savings of billions of euros every year, apart from saving our environmental resources. In Europe, E&E reuse is considered to be the best waste handling procedure. Nevertheless, whereas a component may be perfectly suited to one application, it may prove to cause severe faults in other applications. Therefore, an adequate validation process considering the changed purpose and the different application configuration in combination with new, reused, or further used components is needed. Furthermore, it is important to consider interferences between hardware and software whenever either one changes. Both software and E&E, systematic approaches to reuse are available. Industrial standards for reuse, that is, IEC 62309 (Dependability of products containing reused parts – Requirements for functionality and tests) and IEC PAS 62814 (Dependability of software products containing re-usable components – Guidance for functionality and tests) support the reuse process.

The author has been chairing both of these standards. This submission intends to summarize and critically review well-known reuse approaches and techniques, and give hints and recommendation for the practice.

**Keywords:** Reuse, Hardware, Software, Electronics And Electrical Components

## NON-PERFORMING LOANS AND GOVERNMENT TAXES IN THE ALBANIAN BANKING SYSTEM

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### Abstract:

Following the financial crisis of 2008, banking institutions all over the world have been reviewing their policies and monitoring the main indicators that might warn a possible default or crisis. One of the most important indicators consistently under control has been the non-performing loans. A lot of efforts to explain the non performing loans factors have taken place in Albania including both macroeconomic and microeconomic factors.

This study includes a special reference to the non-performing loans indicator being affected by certain macroeconomic factors, especially by corporate taxes, which has not been studied before. The in-depth analysis considers the following variables: GDP growth rate, the inflation rate, the interest rate and corporate taxes as a dummy variable and includes all banks for a period of 5 years. The study aims to find if there exists any relationship between the NPLs ratio and corporate taxes following the rationale of NPLs being increased as a consequence of tax ratio increased, due to several governmental policies.

The results of the regression analysis used, showed up that interest rates have a statistically important impact on non-performing loans. The corporate taxes variable proves to be statistically significant at a level of 90%, which actually gives the possibility for further research in a wider database for a larger time period.

**Keywords:** Non Performing Loans, GDP Growth Rate, Interest Rate, Inflation Rate, Corporate Taxes Rate.



## VISUAL IMPACT ASSESSMENT IN LANDSCAPE DESIGN OF LAWN AREAS

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### **Abstract:**

A landscape keep that different types of elements or units and better or worse from other landscape to different and perceived extent variable or have a dominant structure that it reveals of landscape's unique structure that is reveals its character. In recent years, 'visual quality' concept plays an important role in the planning and design work which is identification of elements that make up to landscape. Therefore, to determine the visual quality of an area, firstly we need to detect what is going on the possibilities of the existing landscape structure, then the identification of potential possessed by the elements and components of the landscape in this area is very important.

The aim of the research has been to reveal of visual landscape quality which lawn areas are located in various landscape character as background. According to this purpose, the main material is constituted by 3 images that they are selected from different points in Duzce University. In addition, various computer software like Adobe Photoshop CS6 and SPSS 20 are secondary materials which first is used for processing of images and images' photomontage and the latter is used to evaluate of surveys. Within the framework of research, the datas are analyzed via Spss which are resulting from surveys of experts who are consisting of a total of 30 ones, Landscape architect lecturer, alumni and graduated by his master's degree. Each photo is given a point by experts who take into consideration of visual landscape indicator before and after photomontage. As a result, in accordance with the determining criterias, lawn areas are defined by the values of visual quality and has been put forward to some suggestions.

**Keywords:** Background, Landscape Visual Quality, Lawn Areas Photomontage, Visual Landscape Indicators

## A STUDY ON QUANTIFICATION OF URBAN ECOSYSTEM SERVICES WITHIN COMPOSITE INDICATORS

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### **Abstract:**

Ecosystem services to ensure human well-being that it includes benefits from which derive directly or indirectly ecosystem function/process. Nowadays, especially considered environmental issues in urban areas which it has been seen, rationally determination, monitoring and improving of these benefits become more important day by day. Besides, rather than each one of existing services separately addressing to provided by the ecosystems, the common benefits of provided from all of them should be considered. Thus, it is provided that different ecosystem services in the city will be compared within a common scale. In this context, the aim of this paper is studying composite indicator concept for urban ecosystem services. Indicators which are weighting within the scope of representation capability for the ecosystem service score in Likert scale toward international standards. Asar stream, one of the most important urban corridors in Duzce province, is selected for a case study. As a result of the study, the ecosystem services which are provided by the selected ecosystem quantify only in a rational value as integrated.

**Keywords:** Ecosystem Services, Composite Indicator, Urban Ecosystem

## USE OF IODIZED SALT STATUS AT FOOD SERVICE INSTITUTIONS IN KAYSERİ

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### Abstract:

Iodine deficiency is a major public health problem in Turkey. It is important that iodized salt use at not only household but also food service institutions, to maintain prophylaxis. The aim of this research was to determine use of iodized salt status at food service institutions in Kayseri and practice and awareness of employees working in there about use of iodized salt. Research was conducted in total 100 food service institutions in the city of Kayseri between January-May 2015. Data were obtained from prepared a checklist specific to this research, face to face meetings with employees, observations for applications in food service institutions.

The rate of businesses that only using iodized salt was 60%. 47% of these businesses were reported that iodized salt should use for health. 46% of businesses were expressed that they pay attention to buy salt whether it is iodized and 79% of businesses were reported that they buy salt in less than three months as recommended. 61.3% of businesses that use iodized salt had salt shaker on service table and although 80.4% of these salt shakers were dark, 60.9% of them contacted with the air. Among the businesses using iodized salt the rate of adding salt to food to cook close and after cooking was 11% and 21%, respectively. Salt is appropriate physical conditions at businesses that they use iodized salt (besides stove and away 93%, moisture free environment 100%, away from sunlight 97%). 30% of business owners were informed of using iodized salt and 24% of business owners had information about health problems that happen in iodine deficiency. Knowledge about use of iodized salt should be increased and behaviours change should be created at employees working in food service institutions.

This research was supported by TUBITAK-2209 in 2015.

**Keywords:** Food Service, Iodine, Salt

## NUTRITION EDUCATION BY PEER EDUCATION MODEL IN UNIVERSITY STUDENTS

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### Abstract:

Peer education model is an important experience for the development student leaders and trained students' nutrition and health states. The aim of this study was to create awareness about healthy nutrition and to reduce negative nutrition habits by increasing nutrition knowledge. Peer education model was used for this study. It included 63 volunteer students staying at university sorority and leader student group consisting of 7 people. Initially, 34 questions were asked to measure students' nutrition knowledge and the results were evaluated as low, medium and high. Prior themes were determined after questionnaire forms applied to detect general nutritional habits. For one theme per week, interactive education studies were made, posters were prepared and slogans were created. Intended for the themes, collective activities that contain healthy choices (milk and fruits time, healthy breakfast, walking time etc) were hold. Body analyses were made by using BIA (TanitaBC730) and the results were commented with the participants. Questionnaires were repeated one month after the completion of activities.

Result: The rate of consuming milk everyday before peer education has increased to 40% from 13.3%, the rate of consuming egg 3-4 days per week has increased to 41.7% from 21.7%. The rate of consuming white bread, fast-food and carbonated drinks has decreased. While the rate of having breakfast was 66.7% before education, this rate has increased to 95% after education. Fruit consumption has increased to 95% from 16.7%. The rate of getting high scores has increased to 86.6% from 56.6%. With peer education, the students' level of nutrition knowledge and awareness are increased and it has created a positive impact on nutrition habits. Peer education is suggested as a useful educational method for development of the young people's healthy nutrition conscious.

This study was supported by TUBITAK-2209 Project.

**Keywords:** Nutrition, Peer Education, University Student

## SORGHUM IN PHYTOREMEDIATION

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### **Abstract:**

Environmental pollution due to human activities in industrial and mining areas started to be a big global problem. Heavy-metals, pesticides, organic and radioactive wastes are among the leading pollutants and occupy an important place. Because of the complexity of relations among parameters and differences of pollutants, it becomes difficult to clean these areas by physical and chemical methods.

Phytoremediation is an environmentally friendly and low cost biotechnological method using plants for immobilization and degradation of contaminants in polluted areas. Choose of ideal plant species and appropriate enhancing criteria are the most important requirements for obtaining high efficiency remediation and beneficial biomass.

The popularity of sorghum is increasing every day due to its widespread use in bioethanol production and animal feed as well as its adaptability to dry and salty areas, compatibility to low input agricultural fields, availability as basic food for more than 500,000 people, and use as supplementary product for treatment of various diseases. In addition, sorghum can also be used in phytoremediation of contaminated areas owing to its heavy metal accumulating property. It has been proven that sorghum accumulates more heavy metal in tissues when compared with most plants known as tolerant. Extremely low transfer of heavy metals to grain by keeping them in root and leaf is a superior property of sorghum. In this respect, the grains can safely be used both as human and animal feed. In the present study, phytoremediation potential of sorghum plant in eliminating the heavy metals in multiple-heavy-metal contaminated areas was discussed.

**Keywords:** Sorghum, Phytoremediation, Heavy-Metal Contamination

## THE ROLE OF LIQUIDITY IN THE FINANCIAL SYSTEM OF ALBANIA

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### **Abstract:**

The aim of this project is to analyze the complex and dynamic linkages of transmission channels between three broad types of liquidity within the financial system; that of market liquidity, funding liquidity and central bank liquidity. Findings show positive effects by creating a virtuous cycle in normal financial times, and liquidity linkages act as helpers by redistributing liquidity in the system without obstacles, in an efficiency and cost-less way. Negative effects refer to turbulent times by creating a vicious cycle between types of liquidity. The consequences arise from asymmetric information and incomplete markets.

The role of Central Bank is highlighted in these linkages cause of the Central Bank's obligation to reduce the instability of a financial system meltdown even though Central Bank's interventions might not have a guaranteed success. Fundamentally, it provides a temporary solution to the vicious circle as long as it cannot distinguish between insolvency and illiquidity. A comparative study between the globally principles of the role as Lender of Last Resort and Bank of Albania, is conducted to present the differences and similarities.

Finally, after being able to know the relationship of linkages and how liquidity "communicate" with each other, this project present a forecast model focused on autonomous factors that affect the liquidity. Net Position of Government is the main factor with the highest effect. The model presented seems to be worthy to be used for short-time forecasts.

**Keywords:** Liquidity Linkages, Autonomous Factors, Transmission Channels, Central Bank.

## STONE USE IN URBAN OUTDOOR SPACES: A CASE STUDY OF DUZCE DOWNTOWN

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### Abstract:

Cities can be defined as areas where have meet the daily needs of people with structures which they can provide reside and socializing. The urban space covers where citizens perform the actions as urban economic structures, social, political, cultural, religious and so on which the rest of outside. The outdoor is another concept that must be defined to express the concept of urban space. Urban outdoor spaces are consisted of streets and squares where they perform the recreational activities of urban people (sports areas, shopping centre, recreation-entertainment areas). The city can be achieved in pedestrian safety and urban environments can be created for a healty life by qualified of urban outdoor arrangement. People's social, cultural, aesthetic, psychological needs, physical environments and together with all the other elements in this environment that the design of extremely importance reinforcement element should be made taking into account the ergonomic features. The use of stone which is pavement elements are very important in terms of both functional and aesthetic. From past to present, stone material has not lost its popularity that is widely used in the outdoors. Incorrect or wrong use to create a space leads to labor, materials and wasted money besides when using the outdoors can cause people to physically force. In this study, urban outdoors in Duzce Downtown, pavement materials which is an urban equipment elements basis were examined by observing the use of stone and which is used types of stone and the advantages and disadvantages of the urban spaces of the stones are evaluated.

**Keywords:** City, Duzce, Stone, Urban Outdoor

## BACILLUS THURINGIENSIS PARASPORINS AND THEIR USE IN CONTROLLING CANCER CELLS

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### Abstract:

Parasporins are Cry proteins produced by *Bacillus thuringiensis* (Bt) strains during sporulation processes and notable for targeting the cancer cells with their unique cytotoxicity mechanism without exerting hemolytic effect on normal cells. Parasporins are specifically produced by Bt strains with non-insecticidal effect. Although the studies on parasporins go back to the 1970s, comprehensive scan about the cytotoxicity of parasporins was performed by Mizuki and colleagues. Considering that these proteins exhibit selective toxicities on human cancer cell lines but not on normal cells, detailed studies about the mode of action of anticancer effect was investigated in several countries. Specificity and abundance of parasporin producing Bt species in nature brought them into an important position in terms of developing anticancer agents. Parasporins are classified into six groups by the committee of parasporin classification and nomenclature as parasporin-1 (PS1), PS2, PS3, PS4, PS5, and PS6 by taking the amino acid homology into account. Activated parasporins display cytotoxicity at varying degrees in different cancer cell lines. There are numerous studies about promoting the use of Bt parasporins as anticancer agent in human, but in depth studies should be carried out about their usability in model organisms. Researches should also be deepened especially in vivo due to production of different types of parasporins with different mechanism of action by different Bt strains. Clarification of the molecular mechanisms of toxicity for every candidate parasporin on cancer cell lines may ease the development of anticancer agents. Thus, the present study was conducted to provide a review about the cytotoxic impacts of Bt parasporin on human cancer cell lines.

**Keywords:** *Bacillus Thuringiensis*, Parasporin, Cancer Cells



## ANNEXIN A2 LEVELS AND CHEMORADIOTHERAPY RESPONSE OF PATIENTS WITH LOCAL ADVANCED STAGE NON-SMALL CELL LUNG CANCER

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### Abstract:

Annexin A2 is a kind of phospholipid-binding protein over expressed in tumor cells and associated with poor prognosis in terms of tumor invasion, lymph node metastasis and overall and progression-free survival. In present study, the relationships between Annexin A2 levels and chemoradiotherapy response together with survival rates were simultaneously determined before and after chemoradiotherapy in patients with local advanced stage non-small-cell lung cancer (NSCLC). Patients with NSCLC were subjected to 66 Gy radiotherapy together with weekly administration of 25 mg/m<sup>2</sup> docetaxel and cisplatin chemotherapy. Blood samples were taken a day before and after chemotherapy for studying Annexin A2 levels. Histopathologically, patients were classified as adenocarcinoma (23%, n=9), epidermoid carcinoma (71%, n=28), adenosquamous (%2, n=1), and sarcomatous type (2%, n=1). Complete response in 5% and partial response in 59% of the cases were recorded with the median follow-up period of 13 months. Overall survival rates were 74% for one year and 61% for two years. Mean overall survival rate, hydrangea of local control, and that of progression-free survival rates, were respectively observed as 18, 10, and 9 months. While the average level of Annexin A2 prior to treatment was 23.94 ng/ml, it was estimated as 17.66 ng/ml after treatment. There was no correlation between Annexin A2 levels and chemoradiotherapy-induced response. However, pretreatment evaluation of Annexin A2 levels in response to chemoradiotherapy revealed a slightly significant trend. No relationship was detected between Annexin A2 levels and overall survival, local control and progression-free survival rates. In conclusion, a significant decrease was observed between Annexin A2 levels before and after treatment in patients receiving chemoradiotherapy due to local advanced NSCLC, but it was not reflected in evaluation of response to therapy and survivals.

**Keywords:** Annexin A2, Nsclc, Docetaxel, Cisplatin, Simultaneous Chemoradiotherapy

## AN ANTI-COLONIAL APPROACH TO SUSTAINABLE DEVELOPMENT: ECONOMIC STRUCTURAL ADJUSTMENT AND WOMEN IN AGRICULTURE IN AFRICA

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### **Abstract:**

This paper proceeds from the historical perspective of Africa's colonial heritage towards its implications on the continent's democratic deficit; and within the framework of Economic Structural Adjustment Programs (ESAPs), its economic regression and women's status in general and more specifically in agriculture as applied to sustainable development. Within those critics, an anti-colonial approach to sustainable development in Africa is proposed which would then be based on democracy, egalitarian economic development between North and South and in relation with those, on gender sensitive actions which would transform women's status towards their empowerment. While doing this, a multi-dimensional approach to sustainable development within a historical perspective is proposed within the methodologies of analytical thinking; diverging from colonialism to democracy, from economy to gender and etc. In this perspective each dimension is in relationship with the other and the paper aims at pointing out such a relationship within the framework of sustainable development.

As a result, an anti-colonial approach to sustainable development within the framework of structural adjustment and women in agriculture must recognize the following analytical tools of reflection: colonial heritage – lack of democracy, democracy – sustainable development, North-South power relations – colonial division of labor, colonial division of labor – structural adjustment, export oriented strategies – import oriented strategies, industrialization – exportation of primary goods, cash/male crops – food/female crops, colonial division of labor – gender division of labor in agriculture, women's reproductive roles – productive roles, market economy – domestic economy, women's empowerment – democracy, women and sustainable development. In conclusion, it may be asserted that the subject matter of economic structural adjustment and by implication women in agriculture in Africa has necessarily to do with the colonial heritage of the continent, especially as regards democracy that any positive approach to sustainable development should take into account.

**Keywords:** Agriculture, Colonialism, Esaps, Sustainable Development, Women.

## THE IMPACT OF MACROECONOMIC AND BANKING FACTORS ON ALBANIAN NONPERFORMING LOANS

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### **Abstract:**

Credit risk measurement of the banking system, the dominant component of the financial system of a country, is an important aspect where the interest of academics, economic agents and other professionals has been considerably increased, especially following the global financial crisis. In the last decade, non-performing loans have been in the spotlight almost all over the world, since their large and uncontrolled increase would lead to the eventual bankruptcy of the banking system as a whole. Analysis of the factors affecting credit risk for the banking system is an important analysis and can be seen as the key for credit risk management. This starts by the identification of direct and indirect determinants which exhibit an impact on credit risk, followed by the assessment of the impact ( negative or positive impact ). The main objective of this paper is to analyse the link between the macroeconomic developments and the banking credit risk in Albania, recently affected by unfavorable economic and financial conditions and to which, on this matter, the literature has not given a particular attention yet. The econometric model used is that of multiple linear regression where as the dependent variable is obtained the indicator of non-performing loans of the Albanian banking system and as independent variables are chosen a number of macroeconomic indicators and indicators of assets and liabilities of the system itself. Employing data approaches to this country over the period 2005-2014, I conclude that the banking credit risk is significantly affected by the macroeconomic environment: the credit risk increases when GDP growth, credit growth rate and the share price indices decrease and rises when the interest rate and loan to deposit ratio increase. Moreover, it is also positively affected by an appreciation of the real exchange rate.

**Keywords:** Banking System, Credit Risk, Non-Performing Loans, Macroeconomic Indicators

## DETERMINATION OF THE LIFE SATISFACTION OF WOMEN RECEIVING SOCIAL AND ECONOMIC SUPPORT ACCORDING TO THE EQUILIBRIUM MODEL

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### Abstract:

In Turkey, the majority of families who divorced, or abandoned, or whose spouse was detained / convicted, or died is women. Under the regulation of social and economic support, many of these women benefit from the financial support provided for children, young people and families. Each of them must both look after her children and earn a living for their families. At this point it is important to ask how these women evaluate their life as a whole. In this context, the aim of this work is to determine the relationship between self-types and life satisfaction of women receiving social and economic support. The Balanced Differentiation and Integration Scale and The Satisfaction with Life Scale were used. Total samples of 85 voluntary female respondents were selected by a simple random sampling method from Branch Directorate of Homestay Economic Support and Special Child Care Centers in Ankara Provincial Directorate of Ministry of Family and Social Policies. In gathering the research materials were used to questionnaire technique. Age is predictor variable. When the age of women increase, the levels of self-development decrease. There is no significant relationship between life satisfaction and age. According to the equilibrium model, it is expected that people in self-balanced type have more positive life satisfaction. In the result of the study, it was found to be a positive and moderate correlation between interpersonal relations sub-scale and life satisfaction scale. One of the ultimate goal of sustainable development is to improve the quality of life and well-being of individuals and families by developing their life conditions. Therefore, ensuring gender equality and strengthening women and girls at all levels should be encouraged. In this process, it is not rejected that social work's role in supporting and receiving of sustainable development

**Keywords:** Sustainable Development, Social And Economic Support, Life Satisfaction, Equilibrium Model, Social Work

## SUSTAINABILITY IN HOSPITALITY INDUSTRY IN TURKEY: NATIONAL AND INTERNATIONAL APPLICATIONS

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### **Abstract:**

Worry about having limited sources bring “the conception of sustainability” into agenda. Sustainability and concordantly; sustainable development (sustainable improving) composes the basis of “the conception of sustainable tourism”. Sustainable tourism derived from worries related to impacts came light from the tourism that originated from environment. In recent years, as it happens in another industries. For tourism industry and specifically accommodation facilities, the conception of sustainability gains importance gradually. In this context, accommodation facilities with application called certificate programs having particular standards, national and international awareness, eco label try to provide sustainability in Tourism Industry. The purpose of study is to examine and evaluate the applications using optionally in Turkish accommodation facilities internationally blue star, green key and national green star, white star and green hotel. In this direction, conceptional frame has been comprised into study. Raising the attention, by years, to those applications at accommodation facilities in Turkey is one of the important result of study and shows the importance that accommodation facilities give for sustainable tourism.

**Keywords:** Sustainable Tourism, Certificate Programs, Eco-Labels, Awards.

## IS SUSTAINABLE URBANISM POSSIBLE FOR TURKEY?

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### **Abstract:**

The population ratios of urban and rural areas in Turkey were nearly stable from 1927 until 1950s, approximately 25% for urban and 75% for rural areas. After 1985, both the amount and also the ratio of the rural population dropped drastically. The economic, social and cultural opportunities in urban areas have worked as pull factors which led up to unplanned urbanization. As there was not much control over the growth of the cities, many problems occurred such as air pollution, noise, chemicals, poor quality water and loss of natural areas which decreased the life quality of the citizens. A more sustainable understanding of city planning and design may be the only solution to this phenomenon. The traditional Ottoman cities had the clues of sustainability. The quarter (mahalle) and how the quarters were connected to each other was determined according to the local variables such as climate, terrain, social and cultural facts. With the rapid urbanization, the characteristics of the Turkish cities have changed and the dominance of quarters yielded. Today's urban planning process in Turkey is a top-down approach and the application plans neglect the urban identity and ecological values. The responsibility areas of the authorities for the city planning are not clearly defined and the planning systems don't reply the needs of the changing society. Turkey has many deficiencies for sustainable urbanism but the actions of local governments are promising for the future. In this study, sustainable urbanism was described shortly. The city planning process in Turkey were explained, the improvement proposals for the current situation were put forward and the good examples of sustainable urbanism approaches in Turkey were presented.

**Keywords:** Sustainable Urbanism, City Planning, Turkey, Environment

## A SPATIAL ANALYSIS OF A TRADITIONAL STREET IN AMASRA, TURKEY

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### **Abstract:**

Historically, culturally, and architecturally rich ancient city fabrics have important heritage qualities in terms of urban identity and sustainability. Pedestrian zones, which are based on pedestrian comfort and facilitate perceiving cultural heritage in historical city centers on the pedestrian scale, are of particular importance for urban design. Besides its natural beauties, the city of Amasra is a residential area located on a peninsula with historical and cultural features in the Western Black Sea Region. As a 3,000 year old ancient coastal town close to big cities such as İstanbul and Ankara as well as the Kastamonu-Bartın Kure Mountains National Park and Safranbolu, Amasra has a high potential for tourism. By 2013, the Castle of Amasra was included on UNESCO's World Heritage Tentative List as a trading post and fortification on the Genoese trade route from the Mediterranean to the Black Sea. Having been selected as a study area, Cekiciler Bazaar's pedestrian zone is Amasra's most commercially and touristically important landmark which reflects the traditional city fabrics. The main purpose of the study is to determine the role of Cekiciler Bazaar, which is a historical market and has traditional Turkish settlement characteristics, in downtown Amasra. This study used local, natural environment and built environment analyses. The data obtained were analyzed using SWOT analysis. As a result, this study developed suggestions based on landscape design principles for Amasra's Cekiciler Bazaar.

**Keywords:** Amasra, Traditional Street, Pedestrian Zone, Historic Urban Landscape, Cekiciler Bazaar

## THE GUZELCEHISAR-BARTIN COASTAL LANDSCAPE HERITAGE PROJECT

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### **Abstract:**

Coastal areas are sensitive for their cultural values and their distinctive ecological characteristics. Generating ecological landscape planning approaches based on a balance of protection and usage balance in coastal areas is particularly important for the sustainability of these sensitive areas. Guzelcehisar, an archaeological residential site on the rural Black Sea coast, the natural and cultural values of which have been significantly protected, was chosen as the study area. Located 17 kilometers from Bartın, it is one of the rare areas in the neighborhood of this city where citrus fruits can be grown in the Black Sea climate due to its microclimate. Guzelcehisar has 80 million-year-old special geomorphological formations featuring natural monuments in the coastal area and these formations are called the Lava Pillars due to their volcanic structure. The diameter of the lava pillars is 50–100 centimeters, and their height is over 30 meters. The lava pillars in the Northern Ireland, Scotland and California were put under protection and acknowledged as natural heritages. Guzelcehisar Coast Lava Pillars, which are among the suggestions for the Geological Heritage Inventory in Turkey, are one of the world's exceptionally developed natural formations. However, Guzelcehisar Coast Lava Pillars have yet to be known adequately in the country where they are located. This paper reveals the landscape potential of Guzelcehisar Coast Lava Pillars and compares it to their equivalents in the rest of the world. Strategic suggestions have been developed to evaluate the Lava Pillars focusing on sustainable tourism as coastal geological heritage areas.

**Keywords:** Coastal Landscape, Coastal Heritage, Lava Pillars, Guzelcehisar



## SENSES IN CHILD DEVELOPMENT

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### **Abstract:**

Children born from the moment that the information they obtained as a result of interacting with the stimulant in daily life affect brain development in a positive direction. Learning consists of genetic potential and environmental factors. The events that happen in the brain in the learning process takes place with the synaptic connections between brain cells. Developing an environment results in synaptic connections-packed warning that children are the basis to gain a more complex cognitive skills. Children from infancy, are not in contact with the environment allows the formation of learning by supporting brain development and is carried out by the stimulation of the senses in this case. From the moment their babies are born, to take all kinds of stimulating the senses and tends to respond. Quickly taste, hear, smell, touch and get to know the world around him and seeing senses. In this process where the child spent, configuration information through the senses of the world, it requires the realization of the sense of education as a starting training from the moment the child is born. With this in mind sensory development in children in this study, examples of activities to support the development of the senses senses with supporting material and environment were presented.

**Keywords:** Children And Senses, Sensory Development, Sensory Integration.

## SDGS AND JUST TRANSITION IN TOURISM

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### **Abstract:**

**Rationale/Problem:** There are still problems to implement sustainable tourism in order to offer better services for tourists. At the same time, tourism workers do not have adequate infrastructure and working conditions for their welfare. There is a need to approach this process carefully and offer stakeholders new perspectives with the help of Sustainable Development Goals which have direct and indirect relations with tourism sector. Our research and action plan will make it possible to create new and green tourism jobs for those people. **Objectives:** As it is mentioned above, we follow policy general guidelines of SDGs. This will create new opportunities for green jobs. Every green job creation is related with SDGs and their future development. This will help just transition.

**Method:** It is possible to create green tourism jobs with following approaches and find new methods to combine green economy within SDGs. There are 17 goals of SDGs and eight goals will be taken into consideration for tourism and green economy.

1. Use of Local Production in Tourism
2. Inclusive and Equitable Tourism Education
3. Gender Equality and Empowerment in Tourism Sector
4. Full and Productive Employment and Decent Work in Tourism
5. Inclusive and Sustainable Industrialization
6. Tourism reduces the inequality of Communities
7. Cities and Human Settlements
8. Tourism Promotes Inclusive Peaceful Societies

**Results:** Recommendations will be made for project proposal as the result of this study

**Keywords:** Sdgs, Tourism, Green Economy

## THE USE OF MEMBRANE PROCESSES TO PROMOTE SUSTAINABLE ENVIRONMENTAL PROTECTION PRACTICES

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### Abstract:

The aim of this study is to promote membrane employment for sustainable environmental protection practices in terms of retaining the depletion of natural resources at a grade less than their proportion of renewal and consumption and employment of as much renewable resources as possible instead of depletion of unrenovable resources. Furthermore, information on life cycle assessment of products and manufacturing systems is provided. Energy and water are the indispensable resources for the mankind weal. The required energy needs by developing technologies, increasing population and limited resources have led to people to sustainable methods, especially to the limited water resources. There has been growing rate of interest for biological wastewater treatment methods by membrane employment. Separation of solid-liquid mixtures is implemented in the way of biological wastewater treatment; especially MBRs have critical role for treatment processes. MBR operations allow biological treatment and disinfection without utilization of chemicals and the amount of produced sludge is less due to unemployment of SRT. Although, membrane technology still needs to be improved regarding to energy consumption, membrane and/or module manufacturing costs, durableness and expertise, it has an important place in the energy-efficient sustainable water supply, industrial wastewater management processes and energy production. In addition to this, they are flexible and adaptable for module modification and latest novelties.

In literature, limited researches have been practiced so far dealt with the issue of public acceptance of certain methods being applied. Future research may focus on overcoming the issue of membrane fouling, by devising methods for efficient cleaning, preferentially without employment of dangerous chemicals, as well as by investigating new types of membranes.

**Keywords:** Biological Treatment, MBR Processes, Renewable, Sustainable Environmental Protection

## ALLELOPATHIC POTENTIAL OF SOME AROMATIC PLANT ESSENTIAL OILS ON CHENOPODIUM ALBUM L. SEED GERMINATION

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### Abstract:

Allelopathy can be regarded as a component of biological control in which plants are used to reduce development of other plants. Allelopathy refers to the direct or indirect chemical effects of one plant on the germination, growth, or development of neighboring plants. The allelopathic effects of essential oil of *Mentha piperita* L.; *Thymus vulgaris* L., *Rosmarinus officinalis* L., *Coriandrum sativum* L. and *Salvia officinalis* L. on seed germination and some growth characteristics of *Chenopodium album* L. were investigated. Essential oils of medicinal plants at 0, 2, 4, 8, 16 and 32  $\mu$ L concentrations were applied to determine their inhibition effects on seed germination; seedling length and seedling root length of *C. album* seed under laboratory conditions. The essential oil of tested plant species caused inhibitory effects on seed germination and seedling length of *C. album*. Allelopathicity increased progressively with the increasing essential oil dose. The results showed that total germination inhibition of *C. album* depended on the essential oil doses; ranged from 7, 75 to 100 %. The maximum inhibition (100 %) rate for germination was obtained from the highest essential oil doses for all test species. Essential oil of *Mentha piperita* L.; *Thymus vulgaris* L., *Rosmarinus officinalis* L., *Coriandrum sativum* L. and *Salvia officinalis* L. could be used as alternatives of herbicides to suppress germination of *C. album* seeds in organic farming systems.

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**Keywords:** Allelopathy, Essential Oil, Seed Germination, *Chenopodium Album*.

## DETERMINATION OF WEED SPECIES IN GARLIC (*ALLIUM SATIVUM L.*) FIELDS IN TASKOPRU COUNTY IN KASTAMONU PROVINCE IN TURKEY

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### Abstract:

Turkey is the 7 ranks among the garlic produced countries with the 4% share of production. Kastamonu, with a share of approximately 14% can be considered the most important province in Turkey in terms of cultivation. Almost all of garlic produced in Kastamonu (about 90%) are grown in the Taskopru. According to the data in 2008 made of total garlic cultivation was 18500 hectares, total garlic production was 16,650 tons and the average yield of garlic was 9000kg/ha in Taskopru. Purpose to determine the weed species in garlic fields in Taskopru County in Kastamonu province 23 surveys were done at 2010 and the coordinates of the surveys fields were collected for making weed map. The first 10 species determined in terms of frequency were *Convolvulus arvensis L.* (% 91.30), *Chenopodium album L.* (% 82.61), *Medicago spp.* (% 69.56), *Amaranthus retroflexus L.* (% 65.21), *Echinochloa crus galli (L.) P.Beauv* ( % 60.86), *Sinapis arvensis L.*(%56.52), *Sonchus arvensis L.* (% 56.52), *Cirsium arvense L.* (% 52.17), *Polygonum aviculare L.*(% 47.83), *Galium aparine L.*(% 30.43).

Acknowledgements: The author thanks the Research Fund of the Erciyes University (Number FYL-2016-6442) for participates to ICSD International Conference on sustainable Development 2016.

**Keywords:** Garlic, Weed, Survey, Taskopru

## EMPIRICAL ANALYSIS ON THE RUNNING TIME OF A SEARCHING ALGORITHM, CHUNK ALGORITHM

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### Abstract:

Searching and sorting, by no doubt, represent two of the most fundamental and widely encountered problems in computer science. Given a collection of objects, the goal of search is to find a particular object in this collection or to recognize that the object does not exist in the collection. A major goal of computer sciences is to understand and develop a solution for the particular problem. Typically solving the problem involves at least four steps: (1) design an algorithm, (2) analyze the correctness and efficiency of the procedure, (3) implement that procedure in some programming language, and (4) test that implementation. An important issue is to describe the efficiency of a given procedure for solving a problem. Informally, usually we speak in terms of “fast” or “slow” programs, but the absolute execution time of an algorithm depends on many factors such as: the size of the input, the programming language used to implement the algorithm, the quality of the implementation and the machine on which the code is run (a supercomputer is faster than a laptop). In this paper we will analyze the performances of a searching algorithm, precisely the chunk algorithm. In analyzing the efficiency of chunk algorithm, we will only concentrate on searching items, using the Chunk-Search Algorithm, on one-dimensional arrays with integers. We wanted to see how does different chunk size, input size (i.e., the “speed” of the algorithm as a function of the size of the input on which it is run), and the machine on which the code is run. Other factors are important, but they typically induce a constant factor speedup or slowdown in the “wall clock” execution time of an algorithm.

**Keywords:** Chunk Algorithm, Computer Performance, Input Size, Chunk Size

## ENVIRONMENTAL POLLUTION OF COASTAL WATERS DURING VLORA-SARANDA AND EVALUATION OF LEVEL OF POLLUTION

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### Abstract:

The presence of organic pollutants in the environment is a problem that has caused a great public concern and has attracted the attention of researchers. Continuous emissions of these compounds have led to increased concentrations in water. The impact of the presence of toxic substances in the marine environment is quite powerful to compromise the physiological and health values. In particular pesticide contamination of the surface and underground water that comes from their use in agriculture is a worldwide problem. Studies and environmental monitoring, identification of pollutants in the environment as a result of various economic activities, continuous information about environmental conditions are particularly important to identify the problem and measures for environmental protection and rehabilitation. In this article we have handled different definition of organic toxic compounds through the application of modern analytical methods. Determination of pesticides, polyaromatic (PAH), benzene and its counterparts (BTEX), hydrocarbons, etc. in waters, have a particular importance. The content of toxic organic compounds depends on many factors, such as: season, climate, infrastructure changes, which requires a systematic monitoring. Therefore, analyzing the content of these compounds in these organizations better meet the situation of the environmental pollution.

For the above categories was defined compounds used modern techniques of extraction new convenient and practical to spend very little solvent and time and cost effective way of gaseous phase chromatography in columns kapliare with ECD and FID detectors. Therefore, water samples were taken Vlora- Saranda along the coast, which is an environment surrounded by sea and lagoons and numerous channels that traverse the area, mainly in some areas most affected by human activity, such as Narta Lagoon, Orikum, Vlora Bay, etc. PAH have not been identified, but identified some pesticides such as lindane and its isomers, DDT and its metabolites and HCB in very small quantities.

**Keywords:** Environment, Pollution, SPE, SPME, Pesticides, Aromatic BTEX.

## INVESTIGATION ON HEAT SHOCK PROTEIN 701.1 GENE 3'UTR REGION OF TURKISH NATIVE CATTLE BREEDS AND COMPARISON WITH HOLSTEIN FRISIAN CATTLE

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### Abstract:

Increased global warming is like to be one of the most important risks for world population's food supply. Improving production, reproduction and welfare are essential for sustainable animal production to meet increasing human population. Heat stress is also one of the biggest disadvantages for development of extensive animal production systems. Heat Shock Proteins have critical role at protecting living organism against to various environmental stressors including heat stress. Heat Shock Protein 70 encoding by HSP70 genes has the biggest molecular weight among Heat Shock Proteins and many effects on basic functions for life, production and reproduction. Selecting heat tolerance animal by using molecular methods is thought to be contributing to sustainable animal production rather than selecting animals by using time and money consuming traditional selection methods. It is well known that 3' UTR region of HSP70.1 gene effects on mRNA stability of the protein thus SNPs occurred this region may be important for thermal tolerance of the animal. There are no studies on genetic polymorphism on HSP70.1 gene in Turkish native cattle breeds. In this presented study 263 bp of HSP70.1 3' UTR region was analyzed by DNA sequencing in five Turkish native cattle breeds and compared with Holstein Friesian cattle breed used widely in animal production in Turkey. According to DNA sequencing results total 11SNPs and one deletion were found in Turkish cattle breeds while Holstein Frisian breed was found as monomorphic. Ten of the SNPs and one deletion observed have been reported first time

**Keywords:** Heat shock protein, heat stress, polymorphism, HSP70.1 cattle

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## PILOT SCALE ANAEROBIC LANDFILL BIOREACTOR OPERATION

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### Abstract:

Five pilot scale stainless steel reactors were constructed to simulate anaerobic landfill bioreactors (LBRs). Temperature was maintained at 37 °C by electronically controlled automated heating system, to sustain mesophilic conditions inside the reactors. The reactors were specifically designed and equipped for; uniform distribution of leachate, collection of produced biogas. All reactors were inoculated with anaerobic sludge after loading of municipal solid wastes (MSWs) and 8 L of tap water was injected to simulate rainfall. Then, leachates produced in the reactors were recirculated daily to the reactors except in control reactor which simulates conventional landfilling. Quantity and composition of both leachate and biogas have been monitored periodically. In this study, it was aimed to design and operate more productive LBRs for the waste industry. For this purpose, it will be investigated the effect of sewage sludge co-disposal, and influence of geotextile types and specifications on both waste decomposition and leachate quality.

**Keywords:** Municipal Solid Wastes, Landfill Bioreactor, Bioreactor Operation, Anaerobic Degradation, Leachate Recirculation.

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