

**CONFERENCE PROCEEDINGS**



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Emirates

## **Keynote Speaker**



**H. B. Rekha**

**Assistant Professor, Department of Civil Engineering, Bangalore University, Bangalore**

Mrs. Rekha H B serving as Assistant Professor in the Department of Civil Engineering, UVCE, Bangalore University, Bengaluru-560056, Karnataka, India. She graduated (B. E) from VTU and obtained her M.Tech with specialization in Environmental Engineering from VTU in the year 2004. Recently she has submitted her Doctoral Thesis from Bangalore University on the topic Electrochemical and Photochemical Degradation of Reactive Red Textile Dye Solution.

She has 12 years of teaching experience. Guided number of UG/PG students. Attended and presented number of Research Papers in the National and International Conferences. Published research papers in National and International Journals. Worked as organizing member in conducting workshops, seminars and International Conferences. Coordinator for one of the workshop organized in the year 2017, Department of Civil Engineering.

Her areas of interest are Waste Management, Water and Wastewater Treatment, Air Pollution and Control.

Awarded as best oral presenter in the International Conference, APCBEE, held at Singapore, 2011. She has been awarded as Young Research Scholar, 2013 and Best Practitioner, 2016 from Bangalore University.

 <p style="text-align: center;"><b>Dr. Mallesha L</b>  <b>GICICRST1713053</b></p>	<p style="text-align: center;"><b>Synthesis Of Metal Nanoparticles Using Heleconia Rostrata And Their Characterization</b></p> <p style="text-align: center;"><b>Dr. Mallesha L</b>  <b>Affiliation: PG Department of Chemistry, JSS College, Affiliated to University of Mysore, Mysuru, Karnataka, India</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>The plant extract acts both as reducing agent as well as capping agent. To identify the compounds responsible for reduction of metal ions, the functional groups present in plant extract were investigated by IR spectral studies. Various techniques used to characterize the synthesized metal nanoparticles are powder XRD, SEM and UV-Visible spectral studies. X-ray diffraction analysis showed that the particles were crystalline in nature &amp; SEM showed the formation of silver nanoparticles. UV-Visible spectrophotometer showed absorbance peak in range of 408-438 nm. The important outcome of the study will be the development of value added products from Heleconia Rostrata for biomedical and nanotechnology based industries. <b>Keywords: Synthesis, Heleconia Rostrata, Metal nanoparticles.</b></p>
<p style="text-align: center;"><b>Elame Fouad</b>  <b>GICICRST1713054</b></p>	<p style="text-align: center;"><b>Integrated Water Management under Climate Change Impact</b></p> <p style="text-align: center;"><b>Elame Fouad</b>  <b>Researcher, Institut National de la Recherche Agronomique</b></p> <p style="text-align: center;"><b>Doukkali Rachid</b>  <b>Professor, Institut Agronomique et vétérinaire Hassan II Rabat</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>The recent statistics show a clear downward trend in global and per capita availabilities of water due in particular to climate change. In addition to the recurring droughts that Morocco experienced during the last two decades, this tendency is accentuated by an unceasingly increasing demand, in particular under the effect of the demographic pressure and the economic development. In a context of scarcity and a limitation of potential resources not yet mobilized, Morocco is confronted with the need of changing its supply policy to a demand management one. The implementation of such policy requires the adoption of new management instruments and new institutional forms of organization. Accordingly, the present study proposes a tool of modeling and decision-making support which integrates the economic, institutional, hydrological and agronomic aspects. The proposed approach is based on optimization techniques and positive mathematical programming to calibrate an empirical model. Using climate change impact scenarios, this integrated economic model is tested for the basin of Souss-Massa. These simulations include changes in water availability and economic conditions, as well as demand management policy. The study results show that the demand management policy at the river basin level should take into account the regional specificities. The basin's water resources are substitutable and water management policy cannot ignore this aspect and should integrate surface and groundwater resources at the same time. In drought conditions, the water marginal value 'shadow price' increases considerably such that water pricing policy alone cannot result in a rational and a sustainable use of the water resource.</p> <p><b>Keywords: Water resources, climate change, drought, River basin, dynamic-economic model</b></p>
<p style="text-align: center;"><b>Olanrewaju Olujimi</b>  <b>GICICRST1713055</b></p>	<p style="text-align: center;"><b>Assessment of Low-Cost Lab-Base Leachate Treatment Plant</b></p> <p style="text-align: center;"><b>Olanrewaju Olujimi</b>  <b>Department of Environmental Management and Toxicology, College of Environmental Resources Management, Federal University of Agriculture, Abeokuta, Nigeria</b></p>

	<p style="text-align: center;"><b>Abstract</b></p> <p>Municipal solid waste management is a major problem in Nigeria, Africa and some parts of the world at large and has various environmental implications. However, this is not the only problem as it also poses threat to man when untreated leachate contaminates surface and ground water. This research was aimed at testing the efficacy of a locally made wastewater treatment plant. To evaluate the efficiency of the plant, leachate samples were collected from seven different dumpsites in the South-western part of Nigeria. The physical and chemical properties and also heavy metals (cadmium, zinc, cobalt, lead, nickel, manganese, and chromium) were analyzed before and after treatment. Data obtained was subjected to descriptive (Mean <math>\pm</math> S.D). The overall mean values for the dumpsites sampled for pH, EC (<math>\mu</math>s/cm), TDS (ppm), hardness, calcium, magnesium, chloride, acidity, alkalinity, phosphate, sulphate, nitrate, sodium and potassium in mg/L were 8.71, 12.50, 3472.86, 1875.75, 1412.75, 877.83, 1424.40, 8603.57, 1192.29, 347.50, 10.92, 18.75, 1405 and 2312.64 respectively for the raw leachate samples and 8.62, 3.81, 1757.86, 333.29, 142.88, 153.15, 331.31, 745.32, 253.11, 0.14, 57.42, 5.58, 811.71 and 1042.14 respectively for the treated samples. The overall mean concentrations for the heavy metals, cadmium, zinc, cobalt, lead, nickel, manganese and chromium tested for in mg/L were 0.15, 0.74, 0.54, 0.99, 0.83, 1.65 and 0.77 respectively for the raw leachate samples and 0.01, 0.00, 0.11, 0.12, 0.21, 0.46 and 0.23 respectively for the treated samples. This study showed that the plant had varying % removal effect on the various parameters tested. However, it had high % removal (97 %) on treated samples from all dumpsites. The % removal of the 7 heavy metals tested for can be arranged thus; zinc &gt; cadmium &gt; lead &gt; cobalt &gt; manganese &gt; nickel &gt; chromium. Although, there were few parameters that recorded higher values after treatment, more work can be done on the adaptability of the treatment plant to make it more workable. <b>Keywords:</b> Leachate, Heavy Metals, Lab base treatment</p>
<p style="text-align: center;"><b>Gee-Cheol KIM</b>  <b>GICICRST1713056</b></p>	<p style="text-align: center;"><b>Anti-Uplift Device Behaviors of Base Isolation System Subjected to Horizontal Load</b></p> <p style="text-align: center;"><b>Gee-Cheol KIM</b>  Department of Architectural Engineering, Seoul University, Seoul, Korea</p> <p style="text-align: center;"><b>Su-Geun KIM</b>  School of Architecture, Yeungnam University, Deagu, Korea</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The application of seismic isolation systems results in significant reduction of the inertial forces developed in a structure during a severe earthquake. But a variety of conditions may contribute to the development of either tensile forces or uplift. The isolation bearings, either elastomeric or sliding bearings, cannot resist uplift forces. In such cases, uplift restraint devices are employed to resist the uplift forces and prevent large uplift displacements. Tensile forces or uplift in isolation bearings may produce detrimental effects in the form of local instability or rupture of elastomeric bearings, and damage on sliding bearings. These studies were conducted to understand the behavior of a novel uplift-resisting device of isolator. And numerical results demonstrate the effectiveness of the new device of isolator in uplift prevention. The proposed anti-uplift device with guide system can reduce the need to design elaborate and expensive structural arrangements to control directional movement by having the guide system built into the isolator. And the proposed device can be easily installed on an existing base isolation system.  <b>Keywords:</b> Seismic isolation system, Earthquake, Elastomeric bearing, Sliding bearing, Anti-uplift device</p>
<p style="text-align: center;"><b>Arun Kumar Arulappan</b>  <b>GICICRST1713057</b></p>	<p style="text-align: center;"><b>Efficient VNF Service Chaining In Datacenter Networks</b></p> <p style="text-align: center;"><b>Arun Kumar Arulappan</b></p>

	<p style="text-align: center;">Research Scholar, Department of Computer Technology, Anna University, Chennai, India</p> <p style="text-align: center;"><b>Gunasekaran Raja</b> Associate Professor, Department of Computer Technology, Anna University, Chennai, India</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Network Function Virtualization (NFV) usually moves the network functions from physical hardware appliances to virtual machines. Customization of own services led by users through Network Functions Virtual Machines (NFVM) by setting ordered traffic paths. The extra load on switches has a transitional uplift in bandwidth utilization and also efficiency gets affected due to the significant placement of Virtualized Network Functions (VNF). Flow rules in switches and ping pong traffic among VNFs get increased rapidly due to the suboptimal placing of VNFs in service chains. In cloud Infrastructure, the enterprises deploy their middle box services for easy management, flexible scalability and economic savings. However, existing elastic virtual network function(VNF) placement strategy often leads to an unpredictable placing location due to the ever-changing workload, which may waste much precious bandwidth resource and bring a lot of VM operation overhead(e.g. VM launch, termination and migration). VNF instance scaling happens due to the ever-changing workload in datacenter, which brings considerable VM operation overhead [16]. In contrast to prior solutions, we propose Accurate VNF (AVNF) placement where tenants specify various multiple bandwidth requirements between VNFs in their service chains for different periods [14]. Thereby we guarantee the required bandwidth and allocation of VNF instances into datacenter based on the AVNF placement [23]. By proposing this algorithm, we can solve both the VNF instance placement and scaling problems which saves much network resource. As of the placement principle, we have used an on-line heuristic algorithm to allocate various VNF instances effectively which resulted in achieving minimum overall bandwidth occupancy, VM usage and migration overhead [22]. To achieve the optimal placement we provide an off-line programming based algorithm where scaling of resources happens in a unified way.</p> <p><b>Keywords: NFV, Datacenters, VNF-SC, ping-pong traffic</b></p>
<p style="text-align: center;"><b>Mr. Willy Salazar Gayo</b> GICICRST1713058</p>	<p style="text-align: center;"><b>Forecasting Financials Index Of The Philippines</b></p> <p style="text-align: center;"><b>Mr. Willy Salazar Gayo</b> Polytechnic University of the Philippines, Sta. Mesa, Manila, Philippines</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Financials Index (FIN) is one of the stock indices in the Philippine Stock Exchange (PSE). Historical data of FIN from 2013 to 2016 was utilized. Weighted Box-Jenkins Methodology (WBJM) was used to determine the best model in forecasting FIN. Least squares method was used to estimate the weight of each component stock. Also, each component stock of FIN was modeled and forecasted using Box-Jenkins Methodology. Lastly, FIN was also modeled and forecasted using Box-Jenkins Methodology (BJM). Forecasts of FIN using WBJM and BJM were compared. Results showed that WBJM outperformed the BJM since it gave the smallest MAE, MAPE, MSE and RMSE. <b>Keywords: Financials Index, Philippine Stock Exchange, Box-Jenkins Methodology</b></p>
<p style="text-align: center;"><b>Mansur Abdul Mohammed</b> GICICRST1713060</p>	<p style="text-align: center;"><b>Effects Of Some Heavy Metals On Urease Activity In Irrigated Soil Of Shagari Quarters Along Salanta River Valley, Kano State, Nigeria</b></p> <p style="text-align: center;"><b>Mansur Abdul Mohammed</b> Bayero University, Kano, Faculty of Earth and Environmental Management, Department of Geography, Gwarzo Road, 700231, Kano, Kano State</p>

	<p style="text-align: center;"><b>Emmanuel Adewale Oluwolafe</b> University of Jos, Faculty of Environment and Planning, Department of Geography and Planning, Bauchi Road, 930001, Jos, Plateau State</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Heavy metals (Cr, Cd and Pb) is the fundamental to the understanding of their biochemical effect and toxicity to soil microbes. The study aimed at assessing the effect of Cr, Cd and Pb on urease activity. Ten soil samples were collected using composite sampling methods and analyzed for physicochemical property (Cr, Cd, Pb, Oc and pH) and urease using standard laboratory procedures. The distribution the selected parameter shows the mean values of Cr (46.41 ±0.02), Cd (7.5±1.7), Pb (49.01±13.5), organic carbon (1.02±0.6), pH (7.6±0.46) and urease (0.02±0.0001). The results revealed that urease was positively correlated with Cr (r = 0.56) and Pb (r = 0.52) and was negatively correlated with Cd (r = - 0.26). However, the correlation coefficient (r<sup>2</sup>) value shows that the variation of urease in the area was explained or inhibited by 43%, 25% and 24% for Cr, Cd and Pb respectively leaving the remaining percentage to explained by other factors. From the findings it was concluded that urease activities affected by Cr , Cd and Pb and they were considered as sensitive biological indicators of soil pollution. Increase organic matter and avoid using contaminated water for irrigation were recommended in the area. <b>Keywords: Urease, Microbes, Soil, Pollution, Enzymes and Heavy Metals</b></p>
<p style="text-align: center;"><b>Iliyasu Usman</b> <b>GICICRST1713061</b></p>	<p style="text-align: center;"><b>Measurement of Radioactivity in the River Surface Soil</b></p> <p style="text-align: center;"><b>Iliyasu Usman</b> Department of Physics, Faculty of Science, Sokoto State University, Sokoto, Nigeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The distributions of naturally occurring radionuclides <sup>226</sup>Ra, <sup>232</sup>Th and <sup>40</sup>K were determined in the river surface soil collected from Butuku and Baja of Bodinga Local Government Sokoto have been taken in this study using a hyper pure Germanium (HPGe) detector in a low background configuration. The activity concentrations of <sup>40</sup>K <sup>226</sup>Ra, and <sup>232</sup>Th were determined. The specific activity of <sup>226</sup>Ra, <sup>232</sup>Th and <sup>40</sup>K were found to be 36.12 ± 0.18 Bqkg<sup>-1</sup>, 27.96 ± 0.37 Bqkg<sup>-1</sup> and 378.72 ± 12.26 Bqkg<sup>-1</sup> respectively. The radiological hazard of natural radioactivity of the Butuku and Baja of Bodinga Local Government are lower than their maximum recommended limits indicating that the use of the sediments as building materials do not constitute any excessive radiological hazards.</p>
<p style="text-align: center;"><b>Idris Mati Usman</b> <b>GICICRST1713062</b></p>	<p style="text-align: center;"><b>By – Products Of Cereals And Pulses Sold As Livestock Feed In Kano Metropolis, Nigeria, During Wet And Dry Seasons.</b></p> <p style="text-align: center;"><b>Idris Mati Usman</b> Department Of Agricultural Education School Of Vocational And Technical Education Jigawa State College Of Education, Gumel, Nigeria</p> <p style="text-align: center;"><b>Amadu Ibrahim Hadejia</b> Department Of Agricultural Education School Of Vocational And Technical Education Jigawa State College Of Education, Gumel, Nigeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>A study was conducted in Kano metropolis to determine the prices of by-products of cereals and pulses sold as livestock feed during dry and wet seasons. Visits were made to five markets ( Tarauni, yan harawa, Gyadi gyadi yan dusa , Mandawari sabon titi, Yan kaba and Kano central abattoir) between February to April (during the dry season) and July to September (during the wet season) in the year 2016. During the visits at each market, feed resources such as by- products from cereals and legumes, harvested grasses and browses were carefully observed and secured. The inventory of the feeds</p>

	<p>recorded was thereafter categorized as grasses, legumes, and browses for each of the seasons. The result indicated that prices of feed resources were generally higher during the dry season with the exception of sorghum chaff (N50.00/kg in the dry season as against N78.00/kg in the wet season). Commelina specie (76.23%), Eragrostis specie (19.23%), Cenchrus and Pennisetum species (17.31% each) and Faidhebia and albida (31.58%) had the highest frequencies amongst species of legumes, grasses and browses harvested for sale. It was concluded that prices of feed resources were generally higher during the dry season with the exception of Sorghum chaff and by-products of cereals and pulses contributed significantly to livestock production. They serve as a source of employment and are readily available feeds to livestock farmers during the dry season while in the rainy season fresh forage is available. <b>Key words: By-products, Cereals, Pulses, Livestock, Feed, Wet, Dry seasons.</b></p>
<p style="text-align: center;"><b>Zahra Syifa</b>  <b>GICICRST1713063</b></p>	<p style="text-align: center;"><b>Utilization of Tobacco Raw Material Into Biofuel</b></p> <p style="text-align: center;"><b>Zahra Syifa</b>  Department of Agroindustrial Technology, Padjadjaran University, Jl. Raya Bandung Sumedang, Bandung, Indonesia</p> <p style="text-align: center;"><b>Abubakar Ahmad</b>  Department of Agroindustrial Technology, Padjadjaran University, Jl. Raya Bandung Sumedang, Bandung, Indonesia</p> <p style="text-align: center;"><b>Abstract</b></p> <p>As the fifth largest tobacco market in the world, most of tobacco raw material in Indonesia is utilized for cigarette production. People still unfamiliar with the notion of utilizing tobacco leaves for another purpose. This paper will try to propose a new way to derive benefit from tobacco leaves into biofuel. Method will be done through literature review and interview with practitioners from tobacco and biofuel industry. The study will focus on 3 things, mainly the potency of tobacco leaves in Indonesia, obtaining and handling raw material and transesterification process of the oil making. And finally from this research should be found the results of key success factor of making tobacco oil effectively. <b>Keywords: Biofuel, Tobacco, Transesterification</b></p>
<p style="text-align: center;"><b>Bello M.T</b>  <b>GICICRST1713064</b></p>	<p style="text-align: center;"><b>Antifungal Activity And Phytochemical Screening Of Stem Bark Extracts From Guiera Senegalensis(Combretaceae)</b></p> <p style="text-align: center;"><b>Bello M.T</b>  Department Of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria</p> <p style="text-align: center;"><b>Malami S.</b>  Department Of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The in vitro antifungal activity of crude ethanolic, methanolic and water extracts of the stem bark of Guiera senegalensis were investigated to reveal the possible presence of highly active phytochemicals. The minimum inhibitory concentration (MIC) of the ethanol extract was between 0.5 and 6.25mgml<sup>-1</sup> while that of methanol extract ranged from 0.5 to 10 mgml<sup>-1</sup>. It was shown that all the extracts exhibited appreciable activity against all the fungal species investigated. The zones of inhibition exhibited by the extracts against the test fungal species ranged between 15 and 18, 15 and 20 and 5 and 10 mm for ethanol, methanol and water extracts respectively. Indicating the high activity in methanolic extract and the least recorded in water extract. The effect of the extract on fungal isolates was highest <i>Candida rugosa</i> with (20 ± 0.5mm), (18 ± 0.5mm) and (10 ± 0mm) followed by <i>Microsporum audouinii</i> with (19 ± 1.2mm), (16 ± 0.5mm) and (5 ± 0mm) and the least was <i>Trichophyton rubrum</i> with (15 ± 2.0mm), (15 ± 0.1mm) and (8 ± 0mm) for methanol, ethanol and</p>

	<p>water extracts. <i>Fusarium oxysporum</i> showed no activity in water extracts (<math>0 \pm 0\text{mm}</math>) and all was compared with amphotericin B and ketoconazole at a concentration of 1 mg/ml. Phytochemicals screening conducted revealed the presence of saponins, steroids, tannin, glycosides, alkaloids and flavonoids in the extracts. The ability of the crude stem extracts of <i>G. senegalensis</i> to inhibit the growth of keratinophilic yeasts and saprophytic fungi, is an indication of its broad spectrum antimicrobial potential which may be employed in the management of fungal infections. This could also serve as alternative potential source of antifungal agents for treatments and controls measures. <b>Key words:</b> <i>Guiera senegalensis</i>, antifungal activity, phytochemicals screening, stem, extracts, <b>minimum inhibitory concentration (MIC), zone of inhibition.</b></p>
<p style="text-align: center;"><b>Nidhi Poothulil</b>  <b>GICICRST1713065</b></p>	<p style="text-align: center;"><b>A Study on the Usage of Mobile Application for Oral Health</b></p> <p style="text-align: center;"><b>Nidhi Poothulil</b>  <b>Dental College and Hospital, Bharati Vidyapeeth Deemed University, Navi Mumbai, India</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>There are several studies on the usage of mobile application for health care. However there are very few mobile applications for oral health care. Hence this research study was initiated to establish and demonstrate the usage of mobile application for oral health care, in terms of satisfaction and motivation of the user in making appropriate oral health care decisions. The effect of contextual factors on mobile application for dental health care utilization was evaluated after adjustment for individual characteristics in terms of satisfaction, motivation and decisions made by the user in dental hospital settings. A research tool was developed for the purpose of the study and the same was administered after pilot study and standardization with the help of oral health care professionals. The data gathered consisted of the online feedback form from 40 patients, using the research tool developed for the study. The analysis of the data demonstrated diversity in the satisfaction and motivational factors while making oral health care decisions for maintaining oral health. The analysis also depicted significant difference in gender and literacy factors as the main cause for timely decisions for usage of mobile applications for assistance for oral health care.</p> <p><b>Key words:</b> Oral Health, Mobile Application, Motivation, Satisfaction, Oral Health Decisions</p>
<p style="text-align: center;"><b>Tuğba Özge Onur</b>  <b>GICICRST1713067</b></p>	<p style="text-align: center;"><b>Performance Comparison Of Multitaper And Fourier Methods For Ultrasound Signals</b></p> <p style="text-align: center;"><b>Tuğba Özge Onur</b>  <b>Bülent Ecevit University, Department Of Electrical-Electronics Engineering, 67100 Zonguldak, Turkey</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>This paper introduces a comparison between two classical spectral analyses which are Fourier and Multitaper spectrum estimation method that uses the data tapers or windows in digital signal processing for ultrasound signals. The aim of this study is to compare the performances of methods according to the detected signal frequency limits by means of Fourier and Multitaper spectral analysis methods. Results indicate that both Multitaper and Fourier methods have both advantages and disadvantages. <b>Keywords:</b> Ultrasound Signals, Fourier Method, Multitaper Method</p>



**Aliyu Ahmad Warra**  
GICICRST1713068

**Bioprospecting Castor Plant Wealth for Environmental, Medicinal, Cosmetic and Pharmaceutical Applications**

**Aliyu Ahmad Warra**

**Centre for Entrepreneurial Development, Federal University, Gusau, Nigeria.**

**Abstract**

Competitive nature of Castor plant products in industrial and domestic uses made castor a valuable resource with multiple applications. Due to organic richness and less side effects of medicinal plants, researches has been in the increase. *Ricinus communis* L. has been used in many parts of the world for treatment of various ailments. In this review an attempt was made to have insight at developing commercial products from castor plant. Concise overview of present findings and literature reports in favour of steps for the development of cultivation of the plant and better processing of its products that could substantially be used for medicinal, cosmetic and pharmaceutical preparations was supported by physio-chemical, GC-MS and FT-IR results. Physico-chemical and GC/MS Analysis of Castor oil revealed that the seed oil has potential in the production perfumery. The ester linkages, double bonds and hydroxyl groups in castor oil provide reaction sites for the preparation of many useful derivatives. Recent trend in detergent industry which made castor oil a valuable green Cleansing Agents was highlighted. *Ricinus communis* a bioenergy crop shows great potential for phytoremediation of lands contaminated by toxic metals and wastes and or pollutants potential of castor Plant as an energy crop for rehabilitation Artisanal and small-scale gold mine waste was also expaciated.

**Keywords:** *Ricinus communis*, bioprospecting, physio-chemical, GC-MS, FT-IR.



**Dejan Ravšelj**  
GICICRST1713070

**The perception of administrative barriers among SMEs in the field of tax compliance and financial reporting: evidence from Slovenia**

**Dejan Ravšelj**

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**Abstract**

The entire economy in Slovenia is mostly consisted of small and medium enterprises (SMEs), which represent a driver of growth and job creation. However, economic literature highlights various barriers that SMEs are facing, whereby administrative barriers and their removal are of great importance, especially in terms of improving the business environment and achieving greater competitiveness of the economy. Therefore, Slovenia strives for continuous improvement towards simplification of legislation and procedures, especially those associated with tax compliance and financial and accounting reporting. Namely, according to Doing Business report prepared by the World Bank, Slovenia is still behind some other EU member states (e.g. Ireland, Denmark, and United Kingdom) in paying taxes. The main aim of this paper is to establish whether there are differences in characteristics of SMEs between those that face administrative barriers to a lesser extent and those that face administrative barriers to a greater extent. Therefore, this paper tries to establish whether there is a link between the perception of administrative barriers in the field of tax compliance and financial (and accounting) reporting and different characteristics of SMEs. In order to do this, independent-samples t-test is performed on a sample of 544 SMEs. The results of this paper reveal that SMEs, which face administrative barriers to a greater extent, are younger, pay lower tax on profit and have lower efficiency of using fixed assets to generate sales, longer payables deferral period and worse performance than

	<p>SMEs, which face administrative barriers to a lesser extent. The results and findings of this paper are useful primarily for regulatory authorities. Namely, it is important that, when preparing and developing the legislation, regulatory authorities take into account the fact that there are also more vulnerable SMEs, which perceive administrative barriers in the field of tax compliance and financial and accounting reporting as more burdensome than others and which is also reflected in their worse day-to-day business operations and performance.</p> <p><b>Key words:</b> Administrative barriers, SME, tax compliance, financial and accounting reporting, Slovenia</p>
<p style="text-align: center;"><b>Ahmed Zeeshan</b>  <b>GICICRST1713071</b></p>	<p style="text-align: center;"><b>Effect Of Magnetic Field And Thermal Radiation On Heat Transfer Of Peristaltically Driven Flow Of Dusty Fluid</b></p> <p style="text-align: center;"><b>Ahmed Zeeshan</b>  <b>Affiliation: Department Of Mathematics And Statistics, International Islamic University, Islamabad, Pakistan</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>In this paper, heat transfer analysis on MHD peristaltic flow of particle fluid suspension in a planar channel has been presented. The effects nonlinear thermal radiation and Lorentz force is observed. Flow analysis is addressed for fluid phase and particulate phase under the approximation of long wavelength(<math>\lambda \rightarrow \infty</math>) and creeping flow regime (<math>Re \rightarrow 0</math>). Exact solution has been obtained for the resulting differential equation. The influence of various pertinent parameters on velocities and temperature profile is demonstrated graphically. Numerical integration is taken into account to calculate the expression for pressure rise. Trapping phenomena is also discussed and sketched by drawing stream for all the physical parameters. <b>Keywords—</b> Heat Transfer, Nonlinear Radition, Magnetohydrodynamics, Peristaltic Flow, Particle Fluid Suspension.</p>
 <p style="text-align: center;"><b>Dr. Eng. Saad M. Khalifa</b>  <b>GICICRST1713073</b></p>	<p style="text-align: center;"><b>Implementation Of Multistage Knapsack Public Key Cryptosystem</b></p> <p style="text-align: center;"><b>Assist. Prof. Dr. Eng. Saad M. Khalifa</b>  <b>Al-turath university collage Iraq-Baghdad</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>This system is a multistage knapsack cryptosystem this paper include the simulation of the system by mathlab , for both ciphering and deciphering procedure .The ciphering procedure contain ciphering message by 1st , 2nd ,and 3rd stages the deciphering procedure is reversed from 3rd , 2nd , and 1st to obtain the original message. <b>Keywords:</b> knapsack, multistage, public-key.</p>
<p style="text-align: center;"><b>Mohammed Zaid Shaikh</b>  <b>GICICRST1713074</b></p>	<p style="text-align: center;"><b>Sustainable Development With BIM</b></p> <p style="text-align: center;"><b>Mohammed Zaid Shaikh</b>  <b>Department Of Civil Engineering, Veermata Jijabai Technological Institute, University Of Mumbai, Mumbai, India</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>With the advent of technologies and standardization in the architecture, engineering, construction and operation (AECO) industries, the concept of sustainable development is gaining increased momentum than ever before. In addition, Building Information Modelling (BIM) has also started to embrace the sustainable development aspects: social, economic and environmental. In order to achieve a balanced sustainable performance, the impact of BIM on all the aspects of sustainable development has to be categorically considered. This paper reviews and reflects how the key sustainability aspects are achieved through BIM in the AECO industries. Using building information modelling</p>

	<p>(BIM) data generated during design and build over the whole project lifecycle enables faster, safer, less wasteful construction and more cost-effective, sustainable operation, maintenance and eventual decommissioning. The paper also reviews the issues surrounding the implementation of BIM alongside sustainable design practices and the inherent problems associated with attempting to evaluate benefits in a purely quantitative fashion. The development of a broader framework that incorporates both quantitative measurement and a more qualitative understanding of the process of integrating BIM and sustainable design to measure the potential of BIM for sustainability are suggested. In this paper, various uses of BIM supporting the sustainability aspects both in theory and practice were identified. This renders useful insights for future development of BIM uses for achieving greater sustainability benefits in all aspects of sustainable development.</p>
 <p style="text-align: center;"><b>N.K Oladejo</b> GICICRST1713078</p>	<p style="text-align: center;"><b>Application Of Optimization Principle In Land Allocation In Landmark University Using Linear Programming And Integer Programming</b></p> <p style="text-align: center;"><b>N.K Oladejo</b> Physical Sciences Department, Mathematics Programme Landmark University, Omu Aran, Kwara, State.</p> <p style="text-align: center;"><b>Abstract</b></p> <p>This paper deal with the application of optimization principle, specifically Linear programming (LP) and Integer programming (IP) to determine an optimum land allocation for Agricultural purposes with respect to various constraints Sensitivity analysis on the land parameters were also carried out to test the extent to which land allocation is sensitive to the changes in the parameters of the system in order to give the Landmark Agriculture management team some guidance in their consideration of alternative with regards to the appropriate and optimal land allocation and for the decision making <b>Keywords: Optimization, Linear, Integer, Programming, Sensitivity.</b></p>
<p style="text-align: center;"><b>Iaila Almanqur</b> GICICRST1713081</p>	<p style="text-align: center;"><b>Synthesis of Iron Sulfide Nanocrystals and Deposition of Thin Films for Photovoltaic Applications</b></p> <p style="text-align: center;"><b>Iaila Almanqur</b> Chemistry, Manchester University, Manchester, UK</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Recently there is growing interest to produce cheap and nontoxic colloidal nanomaterials or thin films for photovoltaic applications. Iron chalcogenides are cheapest materials available for solar cell applications. They are important, because of their potential use as an absorber in solar cells, information storage devices, catalysis, biomedicine, imaging, and sensors. In this work, Iron (III) xanthate single source precursors <math>[Fe(S_2COR)_3]</math> (R= methyl, ethyl, isopropyl, 1-propyl and 2-methoxyethyl) were used to deposit iron sulfide thin films by spin coating method. Thermogravimetric analysis of complexes show that the all complexes decomposed to iron sulfide (FeS<sub>2</sub>) and (FeS) in two steps except iron(III) 2-methoxyethyl xanthate which showed slightly different decomposition behavior. The crystallinity of thin films was studied using X-ray diffraction (XRD) and their morphology were studied by scan electron microscopy (SEM).</p>
<p style="text-align: center;"><b>Negin Maftouni</b> GICICRST1713083</p>	<p style="text-align: center;"><b>Design of a Lift System Including a Scissors Mechanism</b></p> <p style="text-align: center;"><b>Negin Maftouni</b> Faculty of Engineering, Department of Mechanical Engineering, Alzahra University</p> <p style="text-align: center;"><b>Fatemeh Aghabarari</b> Faculty of Engineering, Department of Mechanical Engineering, Alzahra University</p>

	<p style="text-align: center;"><b>Hamed Moaiieri</b>  Faculty of Engineering, Tehran Islamic Azad University, West Branch</p> <p style="text-align: center;"><b>Abstract</b></p> <p>One of the practical equipment in the industrial world are lifts. They are needed to transfer things and also human. In this research a lift is designed that includes a scissors mechanism. The load capacity is 300 kgs and the accessible height is 12 meters. This mechanism is usable in outer spaces and sport halls and so on. It is possible to be used by two or more peoples. It employs an electro-hydraulic system and may work with both AC and DC electricity. Compact design and automatic stop can be mentioned as its specialties. It can be used also in hilly and irregular surfaces like amphitheatres and so on. <b>Key words: lift, mechanism, scissors mechanism</b></p>
<p style="text-align: center;"><b>H. B. Rekha</b>  <b>GICICRST1713088</b></p>	<p style="text-align: center;"><b>Electrochemical Degradation of Remazol Red RB 133 using Sacrificial Electrodes</b></p> <p style="text-align: center;"><b>H. B. Rekha</b>  Department of Civil Engineering, Bangalore University, Bangalore-560-056  <b>Usha. N. Murthy</b>  Department of Civil Engineering, Bangalore University, Bangalore-560-056</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Textile industries produce varieties of wastewater depending on the industrial process and the raw materials such as jute, cotton and animal fibers (wool and silk) and synthetic materials (nylon, polyester and acrylic). The industrial processes are also different for the different raw materials as some of the end products do not need to be colored but some are colored extensively. Dyeing and printing unit in textile processing industries use large volume of water (ranging from 200 to 250 kilo liter per ton of textiles) and a variety of chemicals, dyes, and complex organic compounds which make the textile wastewater very complicated to treat. The results of electro-coagulation in the degradation of Remazol Red RB 133 using iron electrodes showed maximum color removal of 90.59% and COD removal of 54.36% operating at a current density of 176 A/m<sup>2</sup> after electrolysis duration of 10 minutes at optimum pH 7. At the optimum conditions, the energy consumption, electrode consumption and operating cost to treat a cubic meter of sample found to be 1.13kWh/m<sup>3</sup>, 0.15 kg/m<sup>3</sup> and Rs. 14.41/m<sup>3</sup> respectively. Aluminium electrodes showed maximum color removal of 72.33% and COD removal of 56% after an electrolysis duration of 60 minutes, pH 7 at a current density of 216 A/m<sup>2</sup>. At optimum conditions, the energy consumption, electrode consumption and operating cost to treat a cubic meter of sample found to be 11.34 kWh/ m<sup>3</sup>, 0.36 kg/m<sup>3</sup> and Rs.115.87/m<sup>3</sup> respectively. The study concluded that, iron proved to be an efficient electrode for the degradation of reactive red dye. <b>Keywords: Aluminium, Electro-coagulation, Reactive Red, Iron.</b></p>
<p style="text-align: center;"><b>Cherouana Abdelbaki</b>  <b>GICICRST1713090</b></p>	<p style="text-align: center;"><b>Electrical Modeling Of Thin Film CZTS/Zns Hetero-Junction Based Solar Cell</b></p> <p style="text-align: center;"><b>Cherouana Abdelbaki</b>  Laboratoire De Physique Mathématique Et Subatomique, Département De Physique, Université Les Frères Mentouri Constantine1, Route De Ain El Bey, 25000 Constantine, Algeria</p> <p style="text-align: center;"><b>Labbani REBIHA</b>  Laboratoire De Physique Mathématique Et Subatomique, Département De Physique, Université Les Frères Mentouri Constantine1, Route De Ain El Bey, 25000 Constantine, Algeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Considerable efforts are actually devoted to photovoltaic applications. In particular, researchers are motivated to improve the efficiency/cost ratio of</p>

	<p>solar cells and to use non toxic materials. In the last decade, the eco-friendly Cu<sub>2</sub>ZnSnS<sub>4</sub> (CZTS) material has attracted great attention due to its direct bandgap and high absorption coefficient. The purpose of this work was a contribution to improve the output characteristics of CZTS/ZnS hetero-junction based solar cell. The programming tool MATLAB was used to link the thin film solar cell characteristics with the solar cell equivalent circuit parameters. According to our program results, interesting results have been obtained. On one hand, the solar cell output characteristics were affected by irradiation parameters. On the other hand, the series resistance has been found to possess a great effect on the Current-Voltage characteristics with respect to the shunt resistance. Our modeling results were in agreement with experimental results provided by literature. <b>Keywords:</b> Electrical modeling, CZTS/ZnS solar cell, MATLAB</p>
<p><b>Djay Louis Obediencia</b> GICICRST1713091</p>	<p style="text-align: center;"><b>Market Acceptability of an Application-Based Basic Education Tutorial Booking System in Tacloban City</b></p> <p style="text-align: center;"><b>Djay Louis Obediencia</b> University of the Philippines Visayas Tacloban College, Tacloban City, Philippines</p> <p style="text-align: center;"><b>Abstract</b></p> <p>This study determined the acceptability of an Application-Based Basic Education Tutorial Booking System in Tacloban City. By utilizing mobile technology, the researcher's end goal is to create an application which acts as a medium that allows the tutees to communicate with a tutor and "book" a tutorial session. The tutors will consist of college students from the University of the Philippines Visayas Tacloban College (UPVTC). On the other hand, the tutees will be composed of elementary and senior high school students in Tacloban City. Lessons taught in the tutorial are subjects from the K to 12 Basic Education Program; mainly, English, Science, Mathematics, and Reading Comprehension. Since this application is not yet existing in the market, the researcher conducted a market study on the acceptability of this application in Tacloban City. The participants of this study are elementary, senior high school and UPVTC students. By using a structured interview schedule, the researcher interviewed its participants to determine the acceptability of the application. This paper discusses the implications of the methods used and the results of the study. <b>Keywords:</b> Mobile Application, Tutorial Booking System, Tutor, Tutee</p>
<p><b>Akpale J. Enoch</b> GICICRST1713093</p>	<p style="text-align: center;"><b>Entrepreneurial Skills Education Through Vocational And Technical Education: A Key For Sustainable Future Of Nigeria</b></p> <p style="text-align: center;"><b>Akpale J. Enoch</b> School of Vocational Education, Department of Fine and Applied Arts, Kogi State College of Education (Technical), Kabba, PMB 242, Kabba, Kogi State, Nigeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Entrepreneurship skill through vocational education has been proven to be an in-dependable factor in the sustenance and future development of any country, Nigeria inclusive, it has a more crucial role to play. The paper examines the role of entrepreneurship skills through vocational education in Nigeria. It also contends that entrepreneurship development in Nigeria must focus on producing new breeds of entrepreneurs with vision for gainful employment through vocational education. Areas that must be re-visited in order to make vocational education meet the desires and aspirations of the country were highlighted and the conclusion made.</p>
<p><b>Ward M. Ashraf</b> GICICRST1713095</p>	<p style="text-align: center;"><b>The Influence Of The Genotype On The Longevity And The Lifelong Productivity Of Holstein Breed</b></p>

	<p style="text-align: center;"><b>Ward M. Ashraf</b>  <b>Department of Preventive Medicine, Faculty of Veterinary Medicine,</b>  <b>University of Tripoli, Tripoli, Libya</b></p> <p style="text-align: center;"><b>Ruben Y. Sergey</b>  <b>Institute of Animal breeding and genetic -NAAS, Kiev-Ukraine.</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>This article is devoted to the study of the influence of the genotype on the Holstein Frisian on economic longevity and the lifelong productivity of cows. Indicators of productive longevity of 1017 purebred Holstein Frisian and cross-bred cows with a different share of genes by Holstein breed, who left the herd of Dairy cattle at Al-hiera project for 2009 and 2010 were studied. Also, the values and orientation of the correlation links of the economic longevity period with indices of lifetime productivity of experimental cows of different genotypes were determined. It was found that in experimental animals with an increase in the genotype share of genes in the Holstein breed, a positive trend was observed to increase milk yield per day of lactation, and a negative tendency to decrease the duration of productive use, lifelong dairy productivity and economic efficiency. In all groups, a high positive correlation was found between the duration of use of cows and lifelong milk yield, the duration of use of cows and their lifelong yield of milk fat, as well as between lifetime milk yield and a lifetime yield of milk fat. The presence of a weak correlation between the indices of milk yield per day of lactation and longevity has been established. The yield of lactation for one day was positively associated with lifelong milk yield and the yield of milk fat: in the group of black-and-white cows and hybrids with Holstein blood not more than 50.0%, the correlation was weak, and in high-blooded hybrids - average. The most significant effect of the genotype was on the variability of indicators of lifelong milk yield and milk fat production.</p> <p><b>Keyword:longevity,genotype,Holsteinbreed,lifetimemilkproductivity,correlation</b></p>
<p style="text-align: center;"><b>Afshan Shafi</b>  <b>GICICRST1713097</b></p>	<p style="text-align: center;"><b>Anti-Hyperlipidemic Effect Of Melon Seed Oil: A Potential Bio-Therapeutic</b></p> <p style="text-align: center;"><b>Afshan Shafi</b>  <b>Department of Food Science &amp; Technology, Muhammad Nawaz Shareef</b>  <b>University of Agriculture, Multan, Pakistan</b></p> <p style="text-align: center;"><b>Umar Farooq</b>  <b>Department of Food Science &amp; Technology, Muhammad Nawaz Shareef</b>  <b>University of Agriculture, Multan, Pakistan</b></p> <p style="text-align: center;"><b>Kashif Akram</b>  <b>Institute of Food Science and Nutrition, Bahauddin Zakariya University,</b>  <b>Multan, Pakistan</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Hyperlipidemia is a disease condition that is categorized by deposition of cholesterol in arteries, which in turn narrow the flow of blood to heart and brain and result in progression of many chronic diseases like hypertension, cardiac failure, and atherosclerosis. Melon seed oil synergistic combination mono- and poly-unsaturated fatty acids that can possess antihyperlipidemic effect. Antihyperlipidemic effect of melon seed oil was examined in hyperlipidemic rabbits as an animal model. Hyperlipidemic condition in rabbits was induced through hyperlipidemic diet. After the development of hyperlipidemic condition, the hyperlipidemic rabbits were fed on treatment diet containing melon seed oil in various concentrations. Blood of animals was analyzed for cholesterol, triglycerides, high density lipoproteins, low density lipoproteins and other biochemical parameters after every week of study period of 6 weeks. The results indicated that a significant decline in total</p>

	<p>cholesterol contents, triglycerides and low density lipoprotein was observed whereas only high density lipoprotein contents were increased up to remarkable level. So, it is concluded from the results of study that cholesterol, triglycerides, low density lipoproteins and very low density lipoprotein contents were decreased whereas high density lipoprotein contents were increased in the blood of rabbits fed on melon seed oil. <b>Key words:</b> Melon seed oil; Hyperlipidemia; Antihyperlipidemic effect</p>
 <p><b>Ven. Dr. Pinnawala Sangasumana</b>  <b>GICICRST1713098</b></p>	<p style="text-align: center;"><b>Promoting Wellbeing as a Development Indicator: A Buddhist Perspective</b></p> <p style="text-align: center;"><b>Ven. Dr. Pinnawala Sangasumana</b>  <b>Department of Geography University of Sri Jayewardenepura</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Though development has not been perfectly defined and measured, multidimensional approaches are used by policy makers and practitioners at different levels, particularly focusing on the material growth. A lot of recent debate on the search for suitable indicators for “development” goes beyond limitations of GDP as a sole measure for societal progress. Today, it has been realized that, in order to measure the whole development, attention should focus on the total wellbeing of both man and environment in the context of sustainability. Consequently, few subjective indicators such as Gross National Happiness Index (GNHI) and Better Life Index (BLI) are being used by different nations in the world today. Hence, this study aims to find out the applicability of Buddhist concepts in promoting well-being as a development indicator by addressing the weaknesses of existing working definitions. Following the methodology used to assess the applicability of Buddhist concepts on measuring human well-being for development purposes, the primary and secondary sources derived from different literature have been used for data analysis. The strong interdependence between material, social and spiritual life should essentially be taken into consideration when introducing new development indicators. The common practice of five precepts in Buddhist virtue, four sublimates for Brahmavihara, four means of sustaining a favorable relationship for Sangaha vattu and noble eightfold path along with the concepts of compassion and loving kindness can be applied to promote both human and environmental well-being and to formulate a new development indicator which would be a satisfactory index for the purpose of measuring well-being in the development context. <b>Keywords:</b> Buddhism, Development, Sustainability, Wellbeing</p>
<p><b>Bouraiou</b>  <b>GICICRST1713099</b></p>	<p style="text-align: center;"><b>Deposition time effect on ZnO thin films prepared by electrodeposition technique</b></p> <p style="text-align: center;"><b>Bouraiou</b>  <b>Materials Science and Informatics Laboratory, Ziane Achour University, Djelfa, Algeria.</b></p> <p style="text-align: center;"><b>Bencherif</b>  <b>Materials Science and Informatics Laboratory, Ziane Achour University, Djelfa, Algeria.</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>In this work, we investigated the structural, optical and electrical properties of zinc oxide (ZnO) thin layers prepared with Electrodeposition technique. The ZnO films were deposited during 15, 25, 35 and 45 minutes on an ITO substrate heated at 65°C. The obtained layers were analyzed by different techniques: X-ray diffraction (XRD), UV-visible spectrophotometry and the Hall Effect. The study shows that all the zinc oxide films have a hexagonal Würtzite-type and a preferred orientation along [002] direction. The grains size derived from XRD measurements varies between 44.64 and 153.17 Å. The measurement of UV-Vis spectroscopy showed that the ZnO layer prepared during 45 min has an optical transmittance at a maximum value of</p>

	<p>approximately 80% in the visible. The gap energy values and Urbach energy are 3.29 eV and 0.1 eV respectively. The study of electrical transport properties for the ZnO layer deposited during 45 minutes found that the resistivity of the film is <math>5.038 \times 10^{-2} \Omega \cdot \text{cm}</math>. This measure indicates n type conduction. All measurements confirm the good quality of structural, optical and electrical elaborated layers. An optimal condition for the deposition time is obtained. <b>Keywords: Thin film, ZnO, Electrodeposition, Deposition time.</b></p>
<p><b>MALLEM Oum Keltoum</b>  <b>GICICRST1713100</b></p>	<p style="text-align: center;"><b>Advanced Applications Of Some Biopolymers: Cellulose, Chitozan, Starch And Xylan</b></p> <p style="text-align: center;"><b>MALLEM Oum Keltoum</b>  LMPMP, Department of Process Engineering, University Ferhat Abbas Sétif-1, Setif, Algeria</p> <p style="text-align: center;"><b>ZOUAI Foued</b>  Research Unit Emerging Materials, University Ferhat Abbas Setif-1, Setif, Algeria</p> <p style="text-align: center;"><b>BENABID Fatma Zohra</b>  LMPMP, Department of Process Engineering, University Ferhat Abbas Sétif-1, Setif, Algeria</p> <p style="text-align: center;"><b>BENACHOUR Djafer</b>  LMPMP, Department of Process Engineering, University Ferhat Abbas Sétif-1, Setif, Algeria</p> <p style="text-align: center;"><b>Abstract.</b></p> <p>Natural polymers have been investigated for drug fields. They are widely being studied because of their non-toxic and biocompatible in nature. Biopolymers are used in industries as diverse as paper, plastics, food, textiles, pharmaceuticals, and cosmetics and also as biomaterials for medical devices. This review covers different natural polymers, recent techniques applied in their processing and characterization. Advanced applications of natural polymers, including cellulose, chitosan, starch, etc., are discussed. <b>Keywords: Biopolymers, applications, chemical structure, properties.</b></p>
<p><b>Shobha M Erappa</b>  <b>GICICRST1713101</b></p>	<p style="text-align: center;"><b>Expanding the applicability of Discretized Newton-Type method for Ill-posed Hammerstein Type Equations</b></p> <p style="text-align: center;"><b>Shobha M Erappa,</b>  Department of Mathematics,  Manipal Institute of Technology, Manipal, India -576105</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Recently, Shobha (2013) considered a Discretized Newton-Tikhonov Method for approximately solving Ill-posed Hammerstein Type Equations <math>KF(x) = f</math>; when Frechet derivative of F is not invertible. Here <math>K</math> is a non-linear operator, <math>F</math> is a bounded linear operator, <math>X</math> and <math>Y</math> are Hilbert spaces. In this work, we study the method for the case when <math>F</math> exists (Frechet derivative of F is invertible) and bounded. The convergence conditions are weaker than the conditions used in earlier studies. We analyze the convergence using center type Lipschitz condition. The center type Lipschitz condition provides a tighter error estimate and expands the applicability of the method. Adaptive choice of the parameter suggested by Perverzev and Schock(2005) is employed in selecting the regularization parameter. Numerical illustrations are given to prove the reliability of our method.</p>
<p><b>Ahmad Al-Haji</b>  <b>GICICRST1713102</b></p>	<p style="text-align: center;"><b>A Comparison of Variable Frequency Drives &amp; Soft Starters</b></p> <p style="text-align: center;"><b>Ahmad Al-Haji</b>  <b>Snr. Engineer Elect. Maint. Operations Support Group</b></p>

	<p style="text-align: center;"><b>Abstract</b></p> <p>Despite the various applications in which electrical motors are used for, the common challenge encountered in operating such equipment is overcoming the start-up period. The activity of starting up a motor involves a demand of high torque and large amounts of energy in order to accelerate the motor's rotor to full speed. The subjected energy required by standard motors is five to six times the Full Load Amps (FLA) in what's defined as an "In-Rush Current" phenomena. These excessive forces imprint undesired mechanical and electrical stress on a motor's rotors, causing reduction of operational lifetime and higher maintenance expenditures. Therefore, a necessity to control/overcome such challenges was answered by two Operational/Technical methodologies, which are Soft-Starters (SS) and Variable Frequency Drives (VFD). Both technologies provide slow torque and low current starts, however, the basic foundations and theory of operations differs.</p>
<p style="text-align: center;"><b>Kaiwan Kaiwan</b>  <b>GICICRST1713104</b></p>	<p style="text-align: center;"><b>Rain Hypothesis in Iran Stage 5</b></p> <p style="text-align: center;"><b>Kaiwan Kaiwan</b>  <b>Abstract</b></p> <p>Generally, condensation for make rain, require lower temperature. CO<sub>2</sub> absorb heat from sun shine but O<sub>2</sub> not, so forest makes lower temperature of the air by absorbs CO<sub>2</sub> and produce O<sub>2</sub>. Regarding data compound and additional evident from United State, between rain intensity, wind which brings water favor, and forest population and position, shown that forest make higher rain intensity. Distance up to 1,300 km, from beach on 25,000 square kilometer of forest with tree density 56 – 75per acre, annual precipitation become 50 – 60 inches.</p> <p>In Iran territory, exist 2 water evaporation resources those are: Caspian sea on the north and Straight Hormuz on the south</p> <p>Generally 6 projects proposed, those are: 1. several position for mangrove development including for fish trap, and reclamation including as farmer, 2. Additional water vapor from Straight Hormuz as initial wind reflector including for develop two water dump, and increase fish population, 3. Open wind flow on the south, forest as water vapor catcher to be rain, farm, 2 water dumps for many purpose, and wind power station. 4 the longest wind reflector. Primary water vapor catcher to be rain starting from between Marvdasht province, and secondary by existing farm, 5. Water vapor catch from Caspian sea, for rain and farm around Rezai'yeh, Tabriz, Qazvin, until Tehran, 6 several potential position for wind power station.</p>
<p style="text-align: center;"><b>Anand Gupta</b>  <b>GICICRST1713105</b></p>	<p style="text-align: center;"><b>Commute Well- Being As Commuter's Job Satisfaction –A Study Of Indian Sub-Urban Railway</b></p> <p style="text-align: center;"><b>Anand Gupta</b>  <b>IBM Management, GLA University, Mathura, Uttar Pradesh, India</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>This paper examines the predictability of Psychosocial Crowd commuter's behavior. The research has been done in and around the northern region of India. Data for research has been collected through a structured questionnaire. The researchers followed the random sampling technique and the study is quantitative in nature. Secondary data have been obtained from a review of available literature. Four variables were used in this study - For data analysis, the researchers used the SPSS statistical tool. The questionnaire's reliability was checked through reliability analysis using the value of Cranach's Alpha. Structural equation modeling was applied by using Amos and the model was confirmed by using confirmatory analysis. Future prospects and commute related factors have a significant effect on commuter job satisfaction. All the analyses, findings and suggestions have been enumerated in the conclusion.</p> <p><b>Keywords: Commute well-being, job satisfaction, Commute predictability</b></p>

<p><b>Azat Yerkinova</b> GICICRST1713106</p>	<p><b>Photochemical Treatment of an Organic Wastewater using UV/TiO<sub>2</sub>/H<sub>2</sub>O<sub>2</sub></b></p> <p><b>Azat Yerkinova</b> Department of Chemical Engineering, Nazarbayev University, Astana, Kazakhstan</p> <p><b>Abstract</b></p> <p>The aim of this work was to investigate the photochemical treatment of a synthesized wastewater using UV light (254 nm, 6 W), TiO<sub>2</sub> catalyst and H<sub>2</sub>O<sub>2</sub> in a batch recycle annular photoreactor. The total volume of reactor was 250 mL with 55.8 mL effective volume. Each experiment lasted 120 min and samples were analyzed by Total Carbon and HPLC analysis. The feed wastewater was prepared from D – Glucose anhydrous (C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>), Sodium hydrogen carbonate (CHNaO<sub>3</sub><sup>-</sup>), Potassium hydrogen carbonate (CHKO<sub>3</sub>), Ammonium hydrogen carbonate (CH<sub>5</sub>NO<sub>3</sub>), Peptone and Lab Lemco, with initial total carbon 768 mg L<sup>-1</sup>. The effect of the presence of phenolic compounds in the wastewater on total carbon (TC) removal was also studied. It was shown that the photocatalytic treatment was effective only when initial TC was decreased to 23 mg L<sup>-1</sup>, whereas the optimum TiO<sub>2</sub> concentration was 0.5 g L<sup>-1</sup>, leading to a TC removal up to 53%. For the same initial carbon load, the optimum H<sub>2</sub>O<sub>2</sub> concentration was found to be 67 mg L<sup>-1</sup> resulting in 52% TC removal. Combining, however, TiO<sub>2</sub> and H<sub>2</sub>O<sub>2</sub> did not lead to better performance as 50% TC removal was observed. In contrast, when initial carbon in the wastewater was partially substituted by phenolic compounds, the combination of catalyst and hydrogen peroxide resulted in better performance. Specifically, when 10 ppm of phenol were added keeping the same initial TC concentration, UV/TiO<sub>2</sub> treatment resulted in 44% TC removal and 98% Phenol conversion, whereas using additionally H<sub>2</sub>O<sub>2</sub> led to 100% Phenol conversion after 45 minutes and 74% TC removal. Results for 10 ppm 2-Chlorophenol with UV/TiO<sub>2</sub>/H<sub>2</sub>O<sub>2</sub> demonstrated 75% total carbon removal and 100% 2-chlorophenol conversion.</p> <p><b>Keywords :</b> TiO<sub>2</sub>, photocatalysis, advanced oxidation process, wastewater treatment.</p>
 <p><b>Gaukhar Balbayeva</b> GICICRST1713107</p>	<p><b>Advanced oxidation for wastewater treatment based on photo-Fenton reaction</b></p> <p><b>Gaukhar Balbayeva</b> Affiliation: Chemical Engineering Department, Nazarbayev University, Astana, Kazakhstan</p> <p><b>Abstract</b></p> <p>In the present work, the photochemical treatment of a synthetic wastewater in a batch recycle photochemical reactor using ultraviolet irradiation (254 nm, 6 W), hydrogen peroxide and ferric ions was studied. Reactor volume was 250 mL with 55.8 mL of irradiated volume in the annular photoreactor. The effect of initial total carbon, initial H<sub>2</sub>O<sub>2</sub> amount, and Fe(III) added, on total carbon (TC) removal was studied. The effect of phenol's presence on TC removal was also studied. Each experiment lasted 120 min, and the process was attended via pH, TC and HPLC analysis (for determination of phenolic compounds conversion). The results obtained showed that the addition of Fe(III) markedly increased the mineralization of the wastewater. Specifically, for initial carbon concentration 375 mg L<sup>-1</sup>, 2664 mg L<sup>-1</sup> H<sub>2</sub>O<sub>2</sub>, without any Fe(III) added, the TC removal was 48%, whereas after adding 320 mg L<sup>-1</sup> Fe(III) it was 84%. The difference was even more pronounced during the first 60 min, since the TC removal was increased from 18% in the absence of Fe(III) to 81% in the presence of 320 mg L<sup>-1</sup> Fe(III). The results obtained were used in the treatment of a real wastewater (leachate) with initial carbon concentration 1800 mg L<sup>-1</sup>. The results showed that pH adjustment markedly increased the TC removal. For leachate with initial carbon 1800 mg L<sup>-1</sup>, the results for TC removal improved from 3% (using 13320 mg L<sup>-1</sup> H<sub>2</sub>O<sub>2</sub>) to 71% after pH adjustment from 8 to 5 with HCl (using 13320 mg L<sup>-1</sup> H<sub>2</sub>O<sub>2</sub>, 400 mg L<sup>-1</sup> Fe(III)).</p>

	<p><b>Key words:</b> hydrogen peroxide, ferric ions, ultraviolet, photochemical treatment</p>
 <p><b>Jaiprakash S Dargad</b> GICICRST1713108</p>	<p style="text-align: center;"><b>Synthesis, Structural, And Transport Properties Of Chemically Deposited Cdms Thin Films</b></p> <p style="text-align: center;"><b>Jaiprakash S Dargad</b> Dayanand Science College, Latur-413 531, M.S, India</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Cd1-xMnxS thin films with x value ranging between 0 to 0.5 were deposited onto the glass substrates using a chemical deposition process. The composition of the as- grown samples was determined by an EDS technique. The polycrystalline growth resulted over the whole range studied and both CdS and Cd1-xMnxS films exhibited hexagonal wurtzite structure with growth orientation along (101) direction. Typically, the lattice parameter ‘a’ decreased from 4.131A0 to 4.110A0 for the change of x from 0 to 0.1 and thereafter it returned to its original value. Similar changes in c with x were also observed (6.710 A0 to 6.688 A0). Average crystallite size increased with increase in x from 0 to 0.1 and then decreased for further increase in x. The electrical conductivity is found to be enhanced with x upto 0.01 and then decreased with further increase in x. The activation energies were calculated in both the conduction regions. The transport characteristics such as thermoelectric power, carrier concentration (n), mobility (<math>\mu</math>), and barrier height (<math>\phi_b</math>) were studied as a function of the working temperature and materials composition and attempted to correlate with the observed changes in structural characteristics. <b>Keywords:</b> DMS, Chemical growth process, Mn<sup>2+</sup> magnetic ions, spin-spin exchange, lattice parameters.</p>
<p><b>Kharchi Nassima</b> GICICRST1713109</p>	<p style="text-align: center;"><b>Study of Poly (Vinylidene Fluoride)-Clay Nanocomposites Properties prepared by Reactive Extrusion</b></p> <p style="text-align: center;"><b>Kharchi Nassima</b> Multiphase Polymeric Materials Laboratory, Department of Process Engineering, Faculty of Technology.</p> <p style="text-align: center;"><b>Abstract</b></p> <p>In this study, a fast process of preparation of PVDF- untreated clay nanocomposites has been successfully performed in one step by reactive melt extrusion with a short shearing time. The materials intervening in this method are; the polymer, an organic peroxide, sulfur (S) and an activator. To investigate the micro and nano-structure modifications, various characterization methods: DSC, WAXS and SAXS were used. The possible exfoliation of tetrahedral nanolayers was examined by WAXS and SAXS tests. The sample with 4 wt% clay appears to show total exfoliation. We name this composition nPVDF4. Nevertheless, the 2.5 wt % composition is quite similar. No intercalation step was observed for all nPVDF compositions. Finally, a slight increase in the degree of crystallinity with clay content is observed. <b>Key words:</b> Clay, PVDF, nanocomposites, exfoliation, reactive melt-mixing.</p>
<p><b>YoungKwon</b> GICICRST1713110</p>	<p style="text-align: center;"><b>Survey Of Related Field For Artificial Intelligence Window Development</b></p> <p style="text-align: center;"><b>YoungKwon</b> ChungAng University School of architecture and Building Science 84, Heukseok-ro, Dongjak-gu Seoul Republic of Korea</p> <p style="text-align: center;"><b>Abstract</b></p> <p>To develop an artificial intelligence based automatic ventilation system, recent research trends were analyzed and analyzed. This research method is as follows. In the field of architecture and window technology, the use of artificial intelligence, the existing study of machine learning model and the theoretical review of the literature were carried out. This paper collected journals such as</p>

	<p>Journal of Energy and Buildings, Journal of Renewable and Sustainable Energy Reviews, and articles published on Web-sites. The following keywords were searched for articles from 2000 to 2016. We searched for the above keywords mainly in the title, key word, and abstract. As a result, the global artificial intelligence market is expected to grow at a CAGR of 14.0% from USD127bn in 2015 to USD165bn in 2017. Start-up investments in artificial intelligence increased from US \$ 45 million in 2010 to US \$ 310 million in 2015 and the number of investments increased from 6 to 54. Although AI is making efforts to advance to advanced countries, the level of technology is still in its infant stage. Especially in the field of architecture, artificial intelligence (AI) is very rare. Based on the data of this study, it is expected that the application of artificial intelligence and the application of architectural field will be revitalized through the activation of artificial intelligence in the field of architecture and window.</p> <p><b>Keywords:</b> Artificial intelligence; window; fine dust; thermal comfort, ventilation system</p>
<p style="text-align: center;"><b>Ardalan Aflaki</b>  <b>GICICRST1713111</b></p>	<p style="text-align: center;"><b>Aero-Façade: A Passive Design Strategy For Indoor Ventilation Enhancement By Grouped Airfoil Slices</b></p> <p style="text-align: center;"><b>Ardalan Aflaki</b>  School of Mechanical Engineering, Shiraz University, Shiraz, Iran</p> <p style="text-align: center;"><b>Mahmood Yaghoubi</b>  School of Mechanical Engineering, Shiraz University, Shiraz, Iran</p> <p style="text-align: center;"><b>Norhayati Mahyuddin</b>  Faculty of Built Environment, University Malaya, Kuala Lumpur, Malaysia</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Using air conditioning system in the modern buildings could not effectively bring fresh air which causes some health problems for human. On the other hand, natural ventilation as passive design strategy has been considered as an effective design alternative to provide an acceptable indoor thermal and environmental conditions. The current study applies airfoils as an innovative design on the building façade to find out how this design could significantly increase the air change per hour inside a residential unit. Therefore, a case study has been selected in a high-rise residential building to evaluate the efficiency of new concept. Numerical simulation has been conducted as a research technique to evaluate different form and shape of airfoils in groups and find the best alternative for market. The results show that symmetrical triple airfoil slices could increase the ACH up to 23 times per hour when the wind velocity was perpendicular to the slices and it was 0.37 ms<sup>-1</sup> at 10 meters above the ground. The flat-bottom airfoils provided the minimum ACH which was 10 times per hour as it was less aerodynamically shaped. The study recommends further study on the application airfoils on the building façade through various design alternative and the environmental conditions.</p>
<p style="text-align: center;"><b>Aicha Serraye</b>  <b>GICICRST1713113</b></p>	<p style="text-align: center;"><b>Valorization of treated wastewater by aerated lagoon in irrigation - case of the el-oued region</b></p> <p style="text-align: center;"><b>A.Serraye</b>  University Kasdi-Merbeh, Department of Biology ,Ouargla ,Algeria</p> <p style="text-align: center;"><b>T.Idder</b>  University Kasdi-Merbeh, Department of Biology ,Ouargla ,Algeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Like many cities in the Algerian Sahara, the city of El-Oued suffers from an acute problem of urban water surpluses that caused the rise of the surface ply and the deterioration of sanitary conditions in the oasis. The treatment of</p>

	<p>urban wastewater by aerated lagoons and discharge of treated water into a natural outlet located 45 km north of the agglomeration was the solution adopted by governments to deal with this alarming situation. The main objective of our work is to evaluate the effectiveness of the treatment technique in lagoons Saharan climate and examine the possibilities of valorization the treated water for reuse in irrigation. The average yields for the main pollution parameters were generally significant.</p> <p>For BOD5, COD and TSS, the yields were respectively, 83.0%, 81.45% and 79.14% but they are not comply with Algerian norms instructions of treated wastewater irrigation. For faecal coliforms, faecal streptococci and helminthes, we obtained respective yields of 96.18%, 65.75% and 100%. These values are valid for mobilization in irrigation. the results announce a fairly good adaptation of lagooning as an urban wastewater treatment technique for this region , and consequently to all the agglomerations of the Saharan environment.</p> <p><b>Keywords:</b> Excess water, aerated lagoons, treatment performance, Algerian Sahara, El-Oued city, irrigation.</p>
<p><b>Yusuf Aytac Onur</b>  <b>GICICRST1713066</b></p>	<p style="text-align: center;"><b>Computer Aided Lifting Hook Modeling And Stress Analysis</b></p> <p style="text-align: center;"><b>Yusuf Aytac Onur</b>  <b>Bulent Ecevit University</b>  <b>Department Of Mechanical Engineering, Zonguldak Turkey</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Lifting hook is one of the important components used in materials handling systems for safely transporting and lifting the loads. In this study, 3D modeling of lifting hook that has 4 tons capacity specified in DIN 15400 and DIN 15401 standards and stress analysis of lifting hook model by using boundary conditions have been performed. Critical points have been determined based on stress analysis results. After critical points are determined curved beam theory is used to calculate stresses on critical points on lifting hook. An illustrative example has been given to compare the stress results obtained by curved beam theory and finite element simulations. <b>Keywords:</b> Lifting hook; stress analysis; curved beam theory.</p>
<p><b>Jyoti Bharj</b>  <b>GICICRST1713069</b></p>	<p style="text-align: center;"><b>Study Of Change In Surface Roughness Of Ptfе + Mwcnt Nanocomposite With Respect To Change In Weight-Colume Percentage Of Cnts</b></p> <p style="text-align: center;"><b>Jyoti Bharj</b>  <b>Department of Physics, Dr B R Ambedkar NIT Jalandhar, India</b>  <b>Rabinder Singh Bharj</b></p> <p style="text-align: center;"><b>Department of Mechanical Engineering, Dr B R Ambedkar NIT Jalandhar, India</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Nanocomposite materials have emerged as suitable alternatives to overcome limitations of composites. They are reported to be the materials of 21st century in the view of possessing design uniqueness and property combinations that are not found in conventional composites</p> <p>The present exploratory study is sought to analyze the surface roughness analysis of the Polytetrafluoroethylene (PTFE), a synthetic fluoropolymer of tetrafluoroethylene by preparing a PTFE+ MWCNT Nanocomposite. The PTFE/CNT Nanocomposite were prepared on glass substrate in form of thin films. Dip coating was used to coat the Glass slab that was used as a substrate. Different coatings of bare PTFE and PTFE+MWCNT Nanocomposite were prepared and analyzed for the change in surface roughness by changing the percentage of CNT.</p> <p>Atomic Force Microscopy technique was used to observe the change in roughness of the prepared PTFE+ MWCNT Nanocomposite. AFM images obtained were analyzed for parameters Roughness Average Ra, RMS Roughness Rq and Maximum Roughness Depth Rmax. The roughness of</p>

	<p>samples with and without CNT is compared and an increase in roughness is observed with the addition of CNT.  <b>Keywords:</b> Carbon Nanotubes, Polytetrafluoroethylene (PTFE), Nanocomposite, Atomic Force Microscopy</p>
<p style="text-align: center;"><b>Geeta Partap</b>  <b>GICICRST1713072</b></p>	<p style="text-align: center;"><b>Modeling Of Axisymmetric Vibrations In Micropolar Viscoelastic Plate</b></p> <p style="text-align: center;"><b>Geeta Partap</b>  <b>Department of Mathematics,</b>  <b>Dr. B.R. Ambedkar National Institute of Technology,</b>  <b>Jalandhar-144011, India</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>The present paper deals with the modeling of axisymmetric vibrations in a homogeneous isotropic micropolar viscoelastic plate. The upper and lower surfaces of the plate are subjected to stress free conditions. The mathematical model has been simplified by using the Helmholtz decomposition technique and the frequency equations for different mechanical situations are obtained and discussed. The regions of secular equations, thin plate results and short wavelength waves are also obtained. The dispersion curves and attenuation coefficients for symmetric and skew-symmetric wave modes are computed analytically and depicted graphically.  <b>Keywords:</b> micropolar; viscoelastic plate; secular equations; phase velocity; attenuation coefficients.</p>
<p style="text-align: center;"><b>Belgacem Bouzida</b>  <b>GICICRST1713075</b></p>	<p style="text-align: center;"><b>Computational Thermodynamic Applied To Dy-Zn Binary System</b></p> <p style="text-align: center;"><b>Belgacem Bouzida</b>  <b>Laboratory of Physical and Chimical Study of Materials</b>  <b>Physics Department, Faculty of Matter Science, Batna 1 University, Batna</b>  <b>(Algeria)</b></p> <p style="text-align: center;"><b>Hidoussi, Y. Djaballah</b>  <b>Laboratory of Physical and Chimical Study of Materials</b>  <b>Physics Department, Faculty of Matter Science, Batna 1 University, Batna</b>  <b>(Algeria)</b></p> <p style="text-align: center;"><b>Belbacha and F. Filali</b>  <b>Laboratory of Physical and Chimical Study of Materials</b>  <b>Physics Department, Faculty of Matter Science, Batna 1 University, Batna</b>  <b>(Algeria)</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Phase diagrams have been an important source of information for the development and design of new alloys. The determination of phase diagrams by experimental methods is a time consuming and costly task especially when the number of components increases. The calculation of phase diagrams can be very powerful in reducing the number of these costly experiments.  In this work an evaluation and assessment of the Dy-Zn binary system is presented The thermodynamic modeling of the Dy-Zn binary system was carried out using CALPHAD method. The thermodynamic assessment of this system was performed by considering the ab-initio computed enthalpies of formation and the experimental phase equilibrium data. A set of self-consistent thermodynamic parameters has been obtained, where the obtained results are in satisfactory agreement with the experimental data. <b>Keywords:</b> Thermodynamic modeling, Calphad, Dy-Zn alloys, Phase diagram</p>
<p style="text-align: center;"><b>Belbacha and F. Filali</b>  <b>GICICRST1713076</b></p>	<p style="text-align: center;"><b>Ab-initio investigation of the B-V binary system</b></p> <p style="text-align: center;"><b>Belgacem Bouzida</b>  <b>Laboratory of Physical and Chimical Study of Materials</b>  <b>Physics Department, Faculty of Matter Science, Batna 1 University, Batna</b></p>

	<p style="text-align: center;">(Algeria)</p> <p style="text-align: center;"><b>Hidoussi, Y. Djaballah</b> Laboratory of Physical and Chirical Study of Materials Physics Department, Faculty of Matter Science, Batna 1 University, Batna (Algeria)</p> <p style="text-align: center;"><b>Belbacha and F. Filali</b> Laboratory of Physical and Chirical Study of Materials Physics Department, Faculty of Matter Science, Batna 1 University, Batna (Algeria)</p> <p style="text-align: center;"><b>Abstract</b> The aim of the present work, based on ab-initio calculations, is to investigate the relative stabilities of the different compounds involved in the (B-V) system. Having our calculations performed at 0K, We will be mainly focusing on the determination of the ground state line of this system. Our calculations were based on density functional theory (DFT) as implanted in the VASP code. We used the projector augmented-wave (PAW) method, which is an all-electrons technique within the frozen core approximation. Only generalized-gradient approximation (GGA) was considered. Keywords : ab-initio calculations, binary alloys, B-V compounds, phase diagram</p>
<p style="text-align: center;"><b>Y. Djaballah</b> GICICRST1713077</p>	<p style="text-align: center;"><b>Ab-initio investigation of the Au-Sc binary system</b></p> <p style="text-align: center;"><b>Belgacem Bouzida</b> Laboratory of Physical and Chirical Study of Materials Physics Department, Faculty of Matter Science, Batna 1 University, Batna (Algeria)</p> <p style="text-align: center;"><b>Hidoussi, Y. Djaballah</b> Laboratory of Physical and Chirical Study of Materials Physics Department, Faculty of Matter Science, Batna 1 University, Batna (Algeria)</p> <p style="text-align: center;"><b>Belbacha and F. Filali</b> Laboratory of Physical and Chirical Study of Materials Physics Department, Faculty of Matter Science, Batna 1 University, Batna (Algeria)</p> <p style="text-align: center;"><b>Abstract</b> Alloys with scandium addition have been considered to be a new generation of high performance alloy structural materials for aerospace, ships and weapons. Our choice is focused on Au-Sc alloys which have attracted significant attention for a variety of applications. The Au-Sc system has five intermediate phases which are: Au<sub>4</sub>Sc, Au<sub>3</sub>Sc, Au<sub>2</sub>Sc, AuSc and AuSc<sub>2</sub>. The aim of the present work, based on ab-initio calculations, is to investigate the relative stabilities of the different compounds involved in the Au-Sc system. Having our calculations performed at 0 K, we will be mainly focusing on the determination of the ground state line of this system Keywords : ab-initio calculations, Au-Sc compounds, Enthalpies.</p>
<p style="text-align: center;"><b>Anne Sørebo</b> GICICRST1713086</p>	<p style="text-align: center;"><b>Non-monetary Price and Consumers' Intention to Buy Online</b></p> <p style="text-align: center;"><b>Anne Sørebo</b> The University College of Southeast Norway, School of Business, Department of Business, Marketing and Law</p> <p style="text-align: center;"><b>Abstract</b> While online shopping is considered efficient and easy there is also another side</p>

	<p>of the medal, the consumers feeling of risk, uncertainty and strenuous when they shop online. Such risk and effort can be viewed as an additional cost beyond the price, usually named as the nonmonetary price in the consumer behavior literature. We draw from this theory of nonmonetary price combined with what is known about the intention to purchase from online stores, to build and test a model of customers' web store purchase intentions. Field data from 275 respondents was obtained and analyzed. The results indicate that purchase intention is influenced by the feeling of risk and effort in addition to the perceived value (such as competitive price and easily available products). The most interesting finding is that customers' whom invest a lot of effort in, e.g., comparing stores and identifying deals seems to generate strong purchase intentions, a finding that is the opposite of what we expected to find.</p>
<p><b>Øystein Sørebo</b> GICICRST1713087</p>	<p style="text-align: center;"><b>The Role of Motivation Fin Explaining Employees level of User Satisfaction and Job Satisfaction</b></p> <p style="text-align: center;"><b>Øystein Sørebo</b> The University College of Southeast Norway, School of Business, Department of Business, Marketing and Law</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The purpose of this research is to investigate how motivation in connection with employees' use of utilitarian systems influence their level of user satisfaction. More specifically, our first objective is to evaluate how employees' ICT motivation, and lack of ICT motivation, influence their level of satisfaction when they use utilitarian systems. Our second objective is to evaluate how employees' level of ICT motivation, which is hypothesized to be mediated through user satisfaction, influence on their level of job satisfaction. The results from an empirical intervention indicate that employees level of motivation (i.e., intrinsic motivation), and their lack of motivation (i.e., amotivation), influence on both their level of user- and job satisfaction. Thus, this study contributes to research on employees' ICT motivation by theorizing and evaluating how ICT motivation influence user- and job satisfaction.</p>
<p><b>Wafa Abdullah Alghameeti</b> GICICRST1713096</p>	<p style="text-align: center;"><b>Studying Changes in Thin Films Structure of Nickel Doped Copper Oxide (CuO) –Nanoparticles</b></p> <p style="text-align: center;"><b>Wafa Abdullah Alghameeti</b> Master student, physics department King Abdulaziz University, Jeddah, Saudi Arabia</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Thin films of undoped and nickel doped cupric oxide were deposited on a glass substrates by RF magnetron sputtering technique at different doping concentrations (0, 20, 30, 50, 70, and 80 %) at room temperature. The films were also annealed in air at temperature of 473 K and 673 K for one hour. The crystallographic structure of these films was performed using x-ray diffraction (XRD) and field emission scanning electron microscopy (FESEM). The structural studies revealed the deposited films exhibited polycrystalline nature with monoclinic structure. XRD measurements indicate an improvement in crystallinity with increases annealing temperature of all the Ni-doped CuO samples, exception of the 80 % Ni-doped CuO sample.</p>
<p><b>Nurlan Ibrayeva</b> GICICRST1713115</p>	<p style="text-align: center;"><b>Influence of iron ore industry on the Radon situation of nearby human settlements</b></p> <p style="text-align: center;"><b>Nurlan Ibrayeva</b> National Laboratory Astana, Nazarbayev University, 53, Kabanbay Batyr Avenue, Astana, Kazakhstan</p> <p style="text-align: center;"><b>Abstract</b></p> <p>At the moment science gives special attention to the environmental problems of</p>

	<p>industrial regions with a developed mining infrastructure. This type of production and mining leaves a significant impact into the ecology of nearby territories. One of the directions of this field of research is the problem of natural radioactivity. Long-term studies of the effect of small doses of radiation on human health indicate the relevance of the problem even in comparison with irradiation from artificial sources. Speaking about the problems of natural radiation the scientific society implies the problem of Radon and its derivatives. The purpose of this work is to measure the concentration of radon in the air in residential buildings of different design, date of construction and different functional directions to assess the potential risk to human health living near industrial areas.</p>
<p style="text-align: center;"><b>Fasih Ud Din</b>  <b>GICICRST1713117</b></p>	<p style="text-align: center;"><b>Accident Prevention Using Eye Blink and Head Movement Monitoring</b></p> <p style="text-align: center;"><b>Fasih Ud Din</b>  <b>Department of Electrical Engineering, APCOMS (Affiliated with UET, Taxila), Rawalpindi, Pakistan</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Traffic accidents have been recognized as a serious threat to the world. Among other reasons, driver's drowsiness is considered as an important cause of the accident. There are several physiological changes such as closing of the eyes and head movement, which are the main symptoms of drowsiness. To prevent accidents this condition of a driver can be detected using different techniques. This research paper demonstrates a new avenue for the safety of driver by using Infra-Red (IR) sensor along with Inertial Measurement Unit (IMU) interface with Arduino nano. The IR sensor monitors the opening and closing of an eyelid. If the eyelid is closed and the IMU detects the tilting of the head to a certain degree, it sends data to Arduino nano which takes appropriate action and triggers the alarm to alert the driver. If, despite the buzzer, a driver remains in a specific position for a prolonged time, SMS is sent to the dedicated person using GSM along with the coordinates of the driver through GPS. Our system has increased reliability as it uses IMU and IR both and gives a response in 3 seconds as compared to the existing designs.</p>
 <p style="text-align: center;"><b>Jacek Hendel</b>  <b>GICICRST1713117</b></p>	<p style="text-align: center;"><b>Selected problems of large scale modeling of Coal Mine Methane (CMM) production</b></p> <p style="text-align: center;"><b>Jacek Hendel</b>  <b>Department of Drilling, Oil &amp; Gas, AGH - University of Science and Technology, Krakow, Poland</b></p> <p style="text-align: center;"><b>Marzena Gancarz</b>  <b>AGH – University of Science and Technology, Krakow, Poland</b></p> <p style="text-align: center;"><b>Damian Janiga</b>  <b>AGH – University of Science and Technology, Krakow, Poland</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>Coal Mine Methane – methane released during/after hard coal extraction and stored in post-mining gobs - could be valuable source of clean energy for electricity and heat production respectively. The main problem of commercial gob gas production is property estimation of Gas In Place (GIP) reserves. Prediction of GIP in gobs and overlying strata are extremely difficult because of complex relations of porosity and permeability of gobs and its changes in time. Lifespan of Gob Gas Ventholes (GGVs) are also limited by multiple other factors e.g. boreholes location and diameter, surface elevation, distance between borehole and mining panel, time after coal extraction, atmospheric pressure etc. In previous investigations, authors, based on data collected from GGVs, used multi-rate drawdown tests for estimations CMM reservoirs. In some cases, differences between average results and the lowest/ highest ones reached more than 100%. That range of differences is unacceptable from economic point of view. Due to those limitations authors decided to built</p>

	<p>detailed three dimensional geological models of extracted coal seams and overlaying strata. Authors digitalized more than eight hundreds wellbore profiles from former KHW (Katowice Coal Company Ltd) of mining concessions area. Created model covered move than 65 of cubic kilometres of post-mining strata. Within this paper authors presented some technical issues of large scale modelling of mine methane migration, storage and production. Key words: coal mine methane, gobs, Upper Silesian Coal Basin (USCB)</p>
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### **LISTENER**

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