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KEYNOTE SPEAKER



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"The impact of e-commerce to improve the quality of banking services."

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ABSTRACT

This note aims to demonstrate the impact that come out of electronic commerce to improve the quality of banking services, and to answer the questions raised in the problem, also aims to find out the methods applied in the banks to improve the quality of banking. And it was identified conceptual framework for electronic commerce and electronic banking. In addition to the inclusion of a case study includes the Algerian Popular Credit Bank to measure the impact of electronic commerce on the quality of banking services.

Has been focusing on electronic banking services as a field of modern knowledge including fields are characterized by high module in content and content, where banking management concluded that the service and style of electronic submission is the only area to compete and improve their quality. After studying the exploration of some of the banks operating in Algeria and concluded that the majority relies sites especially on the Internet to introduce itself and its affiliates as well as the definition of customer coverage for traditional and electronic which are still at the beginning of the road where only some plastic cards, e-Banking, Bank of cellular , ATM and fast transfers.

The establishment of an electronic network that requires the use of effective banking system overall settlement of all economic sectors, also requires the Algerian banks ready to receive this technology through modernization of management, and modernization of services (expand the use of credit cards, electronic money, and expansion of the Internet). As well as the development of the banking media to contribute to the dissemination of electronic banking culture in the community.

Has been reached that the use of the communications revolution has made e-banking services inevitable impose itself in determining the future of banks and development, has also been reached that there is the impact of electronic commerce on the improvement of banking services through the provision of information base and extensive refresher on-site research and development, and apply strategies Marketing, all of which help banks to increase the performance of its services, despite the presence of some of the risks of the means of providing electronic service and not the nature of the service itself and clear impact also by changing the shape or location of service from traditional to electronic which works to reduce and the costs of providing high-quality service and thus access to the largest segment



**Ikuba John Ona
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Enzyme Hydrolysis of Starch Rich Cellulosic waste (Cassava Peels)

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ABSTRACT

The enzyme hydrolysis of cassava peels provides an interesting research opportunity to convert starch rich lignocellulose waste into renewable fuel production and other value added products. The research involved the pretreatment of cassava peels with steam explosion and hot water pretreatment processes as well as combining both amyolytic and cellulolytic enzymes to produce simple sugars. This research compared the simultaneous hydrolysis by amylases and cellulases of the cassava peels and a consecutive hydrolysis process where cassava peels are resuspended for further enzyme treatment after an initial hydrolysis by a different set of enzymes. The hydrolysis rate and yield were compared for each process. Minor changes that incorporated steam explosion pretreatment and hot water pretreatment were also studied. Results showed that a consecutive treatment that incorporates an initial hydrolysis by cellulolytic enzymes followed by a subsequent treatment by amyolytic enzymes yielded reducing sugars of 0.64g per gram of milled cassava peels. A reverse treatment where the cellulolytic enzymes were used to first treat the peels before a second treatment by amyolytic enzymes yielded 0.61g reducing sugar per gram of milled cassava peels. A simultaneous hydrolysis by both cellulolytic and amyolytic enzymes produced a maximum reducing sugar of 0.58g per gram of milled cassava peels. A modification that incorporates hot water pretreatment, simultaneous and consecutive treatment was carried out. The milled cassava peels treated with hot water at 100°C and amylase enzymes for 2 hours were further subjected to a simultaneous saccharification by cellulases and glucoamylase enzymes yielded a reducing sugar of 0.62g per gram of peels.



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ALGAL BIOFUELS: CURRENT TRENDS AND FUTURE PROSPECTS

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ABSTRACT

Increasing industrialisation, mechanisation and motorization in the world has led to a steady and consistent increase in energy demands. Global energy demands are provided by fossil fuels. Oil, coal and natural gas accounting for 35%, 29% and 24% respectively, proved to be the main fuels, while nuclear provides about 5% and hydropower 6% made up the total of the primary energy consumption. Depletion of fossil fuels, progressively, in addition to associated greenhouse gas emissions and projected climatic changes could have adverse effects on the environment and human systems. Research has established that, technically, viability of biofuels production from algal biomass exists at present, the technologies are still being developed and improved; there is however, a lot to do for their products to be able to compete

	<p>favorably with fossil fuels especially in finding stable and realisable energy balance between production and output. Overall, with the commitment of researchers, technical viability, successes in bioengineering of the biomass and development of chemical routes to achieve higher yields and energy efficiency, the future prospects of algal biofuels are bright.</p> <p>Keywords: Biofuels, Algae, Biomass, renewable energy</p>
 <p>Hend Mohamed El-Sayed Mandour GICICRST1609051</p>	<p>Genetic analysis an in vitro selection for drought tolerance in wheat (<i>Triticum aestivum</i> L.)</p> <p>Hend Mandour National Research Centre,Dokki,Giza,Egypt hanoda_roky@yahoo.com hendmandour144@gmail.com</p> <p>ABSTRACT</p> <p>Selection for drought tolerance of fifteen wheat genotypes (five parents and their ten F1 hybrids) was performed under laboratory .Three different callus induction media were used to determine the optimum hormone balance for callus induction from mature embryos of wheat genotypes and also to study the genetic response of the studied wheat genotypes to callus induction. MS media supplemented with different concentrations of poly ethylene glycol (PEG) were used to evaluate the obtained calli for drought tolerance. Then the drought stressed calli were then transferred to plant regeneration medium for studying their ability to regenerate.M2 medium (2mg/l 2,4D+300 mg/l casein hydrolysate) gave the highest callus induction frequency (85.5%) followed by M1 (2mg/l 2,4D) medium (85%) and M3 (2mg/l 2,4D +4 mg/l AgNo3) medium (81.6%). The differences between the three callus induction media were significant for all characters except callus induction frequency (CIF %) and M2 medium was the best media for callus induction. Regeneration was obtained in all genotypes under 0, 5 and 10% PEG, and in most genotypes under 15% PEG, but was completely absent under 20% PEG. Data obtained revealed that the parental cultivars, Giza168 and Sids13 and their hybrid (Giza168 xSids13) were the most drought tolerant genotypes, while the parent Misr1 was the most sensitive to drought.A set of ISSR markers for drought tolerance and (BSA) approach were used in molecular studies. Five tolerant molecular markers appeared in positive molecular markers for drought tolerance.</p>
 <p>Md. Shamim Hossain GICICRST1609052</p>	<p>Neuronal Orphan G-Protein Coupled Receptor Proteins Mediate Plasmalogens-Induced Activation of ERK and Akt Signaling</p> <p>Md. Shamim Hossain, Department of Integrative Physiology, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan</p> <p>Kurumi Mineno Department of Integrative Physiology, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan</p> <p>Toshihiko Katafuchi Department of Integrative Physiology, Graduate School of Medical Sciences, Kyushu</p>

	<p style="text-align: center;">University, Fukuoka, Japan</p> <p style="text-align: center;">ABSTRACT</p> <p>The special glycerophospholipids plasmalogens (PLs) are enriched in the brain and reported to prevent neuronal cell death by enhancing phosphorylation of Akt and ERK signaling in neuronal cells. Though the activation of Akt and ERK was found to be necessary for the neuronal cells survival, it was not known how PLs enhanced cellular signaling. To answer this question, we searched for neuronal specific orphan GPCR (G-protein coupled receptor) proteins, since these proteins were believed to play a role in cellular signal transduction through the lipid rafts, where both PLs and some GPCRs were found to be enriched. In the present study, pan GPCR inhibitor significantly reduced PLs-induced ERK signaling in neuronal cells, suggesting that PLs could activate GPCRs to induce signaling. We then checked mRNA expression of 19 orphan GPCRs and 10 of them were found to be highly expressed in neuronal cells. The knockdown of these 10 neuronal specific GPCRs by short hairpin (sh)-RNA lentiviral particles revealed that the PLs-mediated phosphorylation of ERK was inhibited in GPR1, GPR19, GPR21, GPR27 and GPR61 knockdown cells. We further found that the overexpression of these GPCRs enhanced PLs-mediated phosphorylation of ERK and Akt in cells. Most interestingly, the GPCRs-mediated cellular signaling was reduced significantly when the endogenous PLs were reduced. Our cumulative data, for the first time, suggest a possible mechanism for PLs-induced cellular signaling in the nervous system.</p>
<p>Betka Achour GICICRST1609053</p>	<p style="text-align: center;">CONTROL OF A STAND ALONE PV-FUEL CELL HYBRID SYSTEM</p> <p style="text-align: center;">Tiar Mourad LGEB Laboratory, Electrical Engineering Department, University of Biskra, Algeria tiarmourad@yahoo.com</p> <p style="text-align: center;">Betka Achour LGEB Laboratory, Electrical Engineering Department, University of Biskra, Algeria betkaachour@gmail.com</p> <p style="text-align: center;">Drid Said , LSPIE Laboratory, Electrical Engineering Department, Batna University, Email: s_drid@yahoo.fr</p> <p style="text-align: center;">cheikh Ridha LGEB Laboratory, Electrical Engineering Department, University of Biskra, Algeria cheikh_red@yahoo.fr</p> <p style="text-align: center;">ABSTRACT</p> <p>The present paper describes how an optimal operation of a small scale hybrid generation system based on a photovoltaic array and a fuel cell that supplies a stationary AC load can be achieved. In fact, both the proposed power manager and the various control algorithms permit the system to permute smoothly between two operating modes, to cover permanently the load demand via a proper tuning of the</p>

	<p>different system power converters. In model, the PV converter is controlled to track permanently the maximum power point via a fuzzy logic MPPT routine regardless the atmospheric condition variations; whereas, the fuel cell stack is set to cover the remaining power. In mode 2, the photovoltaic array provides the necessary power to satisfy the demand in case of light loads. Besides, to feed the AC load with a pure sine wave, a back stepping algorithm is proposed to control the front-end single-phase inverter. The presented simulation results conducted with a given load profile have proven the effectiveness of the proposed control techniques, where the system arrive to change its configuration according to the load demand and the fuel cell capability. Keywords – photovoltaic, fuel cell, fuzzy logic, back stepping, power management, Lyapounov theory.</p>
 <p>Nikhil Rastogi GICICRST1609055</p>	<p>Electrical Simulation of Organic Solar Cell at Different Series Resistances</p> <p>Narender Singh 2Department of Physics, School of Sciences, IFTM University, Moradabad, UP, India nspal_physics@rediffmail.com</p> <p>Nikhil Rastogi 1,2Department of Physics, School of Sciences, IFTM University, Moradabad, UP, India nikhilrastogi@iftmuniversity.ac.in</p> <p>ABSTRACT</p> <p>The bulk heterojunction organic solar cell has been electrically simulated by GPVDM software at different series resistances. Organic bulk heterojunction solar cell consists of mixture of P3HT and PCBM as active layer materials, ITO is a transparent electrode, PEDOT: PSS is electron blocking layer and Al is a back electrode. In this study the electrical simulation has been done at different series resistances 1Ω, 3Ω, 5Ω and 7Ω. We observed that J-V characteristics are affected by the series resistance. The best J-V characteristic is obtained at 1 Ω series resistance. Key words: GPVDM software, Series resistance, Bulk heterojunction, Organic solar cell.</p>
 <p>Phanindra Prasad Thummala GICICRST1609056</p>	<p>CFD and Experimental Evaluation of Two Batch Type Electrocoagulation Stirred Tank Reactors Used in the Removal of Cr (VI) from Wastewater</p> <p>Umran TEZCAN UN Department of Environmental Engineering, Anadolu University, 26555 Eskisehir, Turkey</p> <p>Phanindra Prasad THUMMALA Graduate School of Sciences, Department of Environmental Engineering. Anadolu University, 26555 Eskisehir, Turkey phanindrapt@anadolu.edu.tr</p> <p>ABSTRACT</p> <p>In this study, hydrodynamics of two batch type electrocoagulation stirred tank reactors, used for the treatment of Cr(VI) wastewater, was carried using CFD. The aim of the study was to evaluate the impact of mixing characteristics on overall performance of electrocoagulation reactor. The CFD simulations were carried using ANSYS FLUENT 14.4 software. The mixing performance of each reactor was evaluated by numerically modeling tracer and studying its dispersion in each reactor</p>

	<p>configuration. The uniformity in tracer dispersion was assumed when 90% of the ratio of the maximum to minimum concentration of the tracer was realized. In parallel, experimental evaluation of both the electrocoagulation reactors for removal of Cr(VI) from wastewater was also carried out. The results of CFD and experimental analysis clearly show that the reactor which can give higher uniformity in lesser time, will perform better as an electrocoagulation reactor for removal of Cr(VI) from wastewater.</p>
 <p>Ahmad Mohammed Gumel GICICRST1609057</p>	<p>Biosynthesis of pH responsive shape memory hydrogel and its biomedical potential</p> <p>Ahmad Mohammed Gumel Department of Microbiology and Biotechnology, Faculty of Science, Federal University Dutse, 7156, Jigawa State, Nigeria</p> <p>ABSTRACT</p> <p>Multifunctional hydrogels combining the capabilities of cellular pH responsiveness and shape memory, are highly promising for the realization of smart membrane filters, controlled drug released devices, and functional tissue-engineering scaffolds. Free radical biocatalytic polymerization catalyzed by immobilized <i>Candida antarctica</i> lipase B was used to fabricate the pH-responsive and shape memory hydrogel using medium-chain-length poly-3-hydroxyalkanoates-co-polyethylene glycol methacrylate (PHA-PEGMA) as macromer. The accelerative wound healing potential of the biosynthesized smart PHA based hydrogel was evaluated herein. The thermal stability of the macromer highly depends on the PEGMA fraction from 10 to 50% (mass). Similarly, the change in PEGMA fraction was also found to highly influence the hydrogel's hydration rate (r) from 2.83×10^{-5} to 7.63×10^{-5} mL/s. The hydrogel's equilibrium weight swelling ratio (q_e), protein release and its diffusion coefficient (D_m) were all found to be pH dependent. For example, increasing the phosphate buffer pH from 2.4 to 13 resulted in increased q_e from 2 to 16 corresponding to the enlarging of network pore size (ξ) from 150 to 586 nm. Twenty-four rats weighing 200–250 g each were randomly assigned to four groups of six rats. Rats in group I (negative control) were dressed with sterilized gum acacia paste in 10% normal saline while PEGMA-alone hydrogel (PH) was used to dress group II (secondary control) rats. Group III rats were dressed with PHAs cross-linked PEGMA hydrogel (PPH). For the positive control (group IV), the rats were dressed with Intracel® gel. Biochemical, histomorphometric and immunohistomorphometric analyses revealed a significant difference in area closure and re-epithelialization on days 7 and 14 in PPH or Intracel® gel group compared to gum acacia or PEGMA-alone groups. Furthermore, wounds dressed with PPH or Intracel® gel showed evident collagen deposition, enhanced fibrosis and extensively organized angiogenesis on day 14 compared to the negative control group. The findings suggested that topical application of PPH accelerated the rats' wound healing process by improving angiogenesis attributed to the increased microvessel density (MVD) and expressions of VEGF-A in tissue samples. Thus, PPH has been demonstrated to be effective in the treatment of cutaneous wounds in rats, and could be a potential novel agent in the management and acceleration of wound healing in humans and animals. Key Words: Biotechnology; Biomedicine; Biocatalysis; Biomaterials; Biopolymers; Renewable polymers; Composites; Hydrogel; PHA; PEGMA; Wound Healing.</p>

 <p>Hamman Tukur Gabdo GICICRST1609058</p>	<p>Geological Background As A Factor In Uranium And Thorium Concentrations In River Water: A Case Study Of Pahang State Malaysia</p> <p>Gabdo H.T1, Department of Physics, School of Sciences Federal College of Education Yola, Nigeria ghtukur@fceyola.edu.ng</p> <p>Ramli A.T, Universiti Teknologi Malaysia (UTM).</p> <p>Saleh M.A, Universiti Teknologi Malaysia (UTM).</p> <p>Sanusi M.S Universiti Teknologi Malaysia (UTM).</p> <p>Garba N.N Universiti Teknologi Malaysia (UTM).</p> <p>ABSTRACT</p> <p>Studies were carried out to determine the geological effect of uranium and thorium concentrations in rivers with Pahang state, Malaysia as a study area. Water samples were collected from major rivers in the state. The concentrations of uranium and thorium were analyzed using inductively coupled plasma mass spectrometer (ICP-MS). The samples were found to contain permissible levels of the radionuclides, which vary with the type of geological formation in the area. The mean activity concentrations in the rivers were found to be 8.49 ± 0.34 mBq L⁻¹ and 1.74 ± 0.27 mBq L⁻¹ for uranium and thorium respectively. Highest concentration of uranium and thorium in the rivers with values 31.54 mBq L⁻¹ and 6.17 mBq L⁻¹ respectively, were obtain from rivers underlain by acid intrusive geological formation or due to continuous flow of water over acid intrusive formations. Lowest concentrations of uranium and thorium with values 1.36 mBq L⁻¹ and 0.40 mBq L⁻¹ respectively were obtain from rivers underlain by Carboniferous geological formation.</p> <p>Keywords; river water; uranium and thorium concentrations; activity concentrations</p>
 <p>Radhika Chelamalla GICICRST1609060</p>	<p>Design, Synthesis and In silico studies of new 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides for anticonvulsant activity</p> <p>Radhika Chelamalla Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, Telangana, India cradhika8@gmail.com</p>

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ABSTRACT

Purpose: To synthesize series of 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazol-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides and evaluate their anticonvulsant activity and in silico properties.

Methods: Derivatives of 5-substituted-2-(2-(5-phenyl-1H-1,2,4-triazol-3-ylthio)acetyl)hydrazine carboxamides/carbothioamides were obtained by condensation of Ethyl-2-(5-aryl-1H-1,2,4-triazol-3-ylthio)acetates with thiosemicarbazide or semicarbazide. The synthesized compounds were characterized by Fourier transform infrared spectroscopy (FTIR), nuclear magnetic resonance spectroscopy (1H NMR) and mass spectrometry (MS) while their anticonvulsant activity was screened against pentylenetetrazole-induced seizure (PTZ) against phenytoin and diazepam as reference standards. Molecular docking (in silico) studies were performed using 4-aminobutyrateaminotransferase in order to predict possible protein-ligand interactions.

Results: Among the target compound 3f exhibited lower activity with 50% protection. The compounds 3e and 3h showed good to moderate levels of anticonvulsant activity with 83.3% protection at 100 mg/kg. The compounds 3g and 3i afforded most significant anticonvulsant activity with 100% protection at a dose of 30 mg/kg. In silico results also revealed maximum binding affinity to GABA-AT protein which was higher than other compounds.

Conclusion: The synthesized compounds showed potent anticonvulsant activity. Molecular docking results should give an insight into how further modification of lead compound can be carried out for higher inhibitory activity.

Keywords: Anticonvulsant, 1,2,4-triazole, carbothioamides, pentylenetetrazole, In silico studies, Molecular docking.



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Optimization of Monometallic (Cobalt) Catalyst Production for Carbon Nanotube Synthesis using Factorial Design Method

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ABSTRACT

This study focused on the preparation and optimisation of monometallic cobalt catalyst on ka-olin support for carbon nanotubes production via catalytic vapour deposition method (CVD). The catalyst was prepared by the wet impregnation method and optimized using factorial de-sign of experiment to determine the influence of process variables (mass of support, stirring speed, drying temperature and drying time) on the Co/kaolin catalyst yield. The highest cata-lyst yield of 72.5 % after calcination was obtained at operating temperature of 110 OC, stirring speed of 7 rpm, drying time of 7 hrs, and mass of support of 8g. Statistical analysis results showed that the mass of catalyst support had the most significant effect on yield of the pro-duced catalyst. The highest yield catalyst crystallinity, morphology, functional groups, surface area/elemental composition and particle size were determined using XRD, SEM/EDX, FTIR, BET and DLS characterization techniques respectively. The result of characterization indi-cates that hydroxyl group and nitrates are the dominants functional groups. There was also adequate and uniform dispersion of the cobalt particles on the support material as revealed by the SEM. Meanwhile the dominant parti cles are in the rangr 500-700 nm as shown by the DLS. The result further revealed that the catalyst has a specific surface area of 269.5 m²/g and thermally stable upto a temperature of about 700 OC. The catalyst produced was used for the synthesis of CNTs by CVD method. The influence of temperature and time of synthesis on the yield of CNT were investigated. The result also shows that the highest yield of 19 % at 55 minutes and 850 OC was achieved. The best yield of CNT was also characterized using BET, TGA, FTIR and DLS method. The result of the characterization of the CNT produced indicates that it has an average diameter of 47 nm and specific surface area of 454.6 m²/g. TGA analysis also indicated that the CNT produced is stable up to 700 OC. The XRD in-dicated the presence of the cobalt used and other compounds present in the kaolin support. The TEM analysis of the CNT produced shows that it is a multi-walled type carbon nanotube. It can therefore be concluded from the various analysis conducted that the cobalt kaolin (Kankara kaolin) supported catalyst used is suitable for the synthesis of CNT using CVD method.

Keywords: catalyst, CNTs, CVD, optimization.

<p>Fatma Mustafa M. Omimana GICICRST1609063</p>	<p>Fuzzy Complex Valued Metric Spaces</p> <p>Fatma Mustafa Moftah Omiman Department of Mathematics, Faculty of Sciences, Al-Margib University, Al-Khums, Libya. omiman_f@yahoo.com</p> <p>Soad Muftah Elmahdi Abdurahman Department of Mathematics, Faculty of Sciences, Al-Margib University, Al-Khums, Libya. so81ad@yahoo.com</p> <p>ABSTRACT</p> <p>In this paper, we introduce the concept of fuzzy complex valued metric space by using the notion of complex fuzzy set, moreover, we define the topology induced by this space and some related results of them. In order to illustrate our results we equip the paper with some examples. Also, we state and prove the fuzzy complex valued Banach contraction theorem.</p> <p>Keywords: Complex valued metric space, fuzzy metric space, complex fuzzy set, fuzzy complex valued metric space, fuzzy complex valued contractive mapping.</p>
<p>Onur Canpolat GICICRST1609064</p>	<p>Second Hand Car Purchasing Problem Via An Integrated Multi-Criteria Decision Making Software</p> <p>Onur Canpolat Industrial Engineering Department, Sakarya University, Sakarya, Turkey, onurcanpolat@sakarya.edu.tr</p> <p>Kadriye Canpolat Computer Engineering Department, Sakarya University, Sakarya, Turkey, kadriye.canpolat@gmail.com</p> <p>Halil Ibrahim Demir Industrial Engineering Department, Sakarya University, Sakarya, Turkey, hidemir@sakarya.edu.tr</p> <p>ABSTRACT</p> <p>Automotive industry shows a growing trend in recent years. Both new car and used car market is one of the leading sectors in many countries. In recent years, people prefer to purchase used or second-hand cars rather than new cars. Therefore, it is important to make right decision while purchasing second hand car. Consequently, second hand car purchasing problem (SHCPP) is an up-to-date multi criteria decision problem (MCDMP) almost throughout the world. In this study, a software is developed using C# programming language to be used for solving SHCPP. This software calculates weights of criteria of multi-criteria decision making problems using Entropy or Fuzzy Analytic Hierarchy Process (FAHP) methods and determines the optimum alternative using Multi-Attribute Utility Theory (MAUT) or Technique for Order Performance by Similarity to Ideal Solution (TOPSIS) which can be selected by user. Software has the flexibility to solve many different problems and has the diversity to select both methods of calculating weights of criteria and solution methods by user. Keywords FAHP, TOPSIS, MAUT, Entropy, Multi</p>

	criteria decision making
 <p>Murwan Hassan Mohmed Ahmed Siddig GICICRST1609067</p>	<p style="text-align: center;">Flowgraph Models and Analysis for Markov Jump Processes</p> <p style="text-align: center;">MUHAMMAD FIKRI BUDIANA School of Mathematics, Faculty of Engineering AND Physical Science, The University of Manchester, Oxford Road, Manchester, M139PL, U.K. fikribudiana@gmail.com</p> <p style="text-align: center;">MURWAN H.M.A. SIDDIG School of Mathematics, Faculty of Engineering AND Physical Science, The University of Manchester, Oxford Road, Manchester, M139PL, U.K. murwan_siddig@hotmail.com</p> <p style="text-align: center;">ABSTRACT</p> <p>10 Flowgraph models provide an alternative approach in modelling a multi-state stochastic process. One of the most widely used to chastic process tha thasm any real-world application sespecially in actuarial models is the Markov jump process or continuous-time Markov chain. However, finding waiting time distributions between any two states in a Markov jump process can be very difficult. Flowgraph analysis for Markov jump p rocess comprises of modelling the possi- 15 ble states of the process, the interstates waiting time distribution, and working on the moment generating function domain to obtain the total waiting time distribution in form of density or survival function. This paper gives the theory and computational method of flowgraph analysis, uses it in Markov process problems, and compares the traditional Markov process construction method with the flow graph method to demonstrate the convenience and practicality of flowgraph 20 analysis. Some key words: Exact inversion method, Loop flowgraph, Markov jump process, Parallel flowgraph, Semi-Markov process, Series flowgraph, Time homogenous.</p>
<p>Dr. Yashfika Abdul Bari GICICRST1609068</p>	<p style="text-align: center;">Effect of chlorohexidine on probing depths of periodontitis patients.</p> <p style="text-align: center;">Dr. Yashfika Abdul Bari Dow University of Health Sciences, Dow University of Health Sciences, Karachi, Pakistan</p> <p style="text-align: center;">Dr. Mohammed Abdul Waheed Quadri Dow University of Health Sciences, Dow University of Health Sciences, Karachi, Pakistan</p> <p style="text-align: center;">ABSTRACT</p> <p>Objective: The purpose of the study is to explore the effectiveness of chlorohexidine in periodontitis patients.</p> <p>Materials and Method: The study was based on sample size of 24 patients who were advised to use chlorohexidine after scaling and root planning. Before carrying out the procedure, there probing depths of mesial, distal, buccal and lingual surfaces were noticed and after follow-up of 2 weeks, there probing depths were again noticed.</p> <p>Results: There was a positive effect of chlorohexidine use.</p> <p>Conclusion: It was found that patients who used chlorohexidine for continuously 2 weeks found to have improved dental health. Hence, there exists significant</p>

	<p>association between probing depths and chlorohexidine use in periodontitis patients.. Keywords: Periodontitis, Chlorohexidine, improved dental health.</p>
 <p>Waheed GICICRST1609069</p>	<p>Effect of chlorohexidine on probing depths of periodontitis patients.</p> <p>Dr. Yashfika Abdul Bari, Dow University of Health Sciences, Dow University of Health Sciences, Karachi, Pakistan</p> <p>Dr. Mohammed Abdul Waheed Quadri Dow University of Health Sciences, Dow University of Health Sciences, Karachi, Pakistan</p> <p>ABSTRACT</p> <p>Objective: The purpose of the study is to explore the effectiveness of chlorohexidine in periodontitis patients.</p> <p>Materials and Method: The study was based on sample size of 24 patients who were advised to use chlorohexidine after scaling and root planning. Before carrying out the procedure, their probing depths of mesial, distal, buccal and lingual surfaces were noticed and after follow-up of 2 weeks, their probing depths were again noticed.</p> <p>Results: There was a positive effect of chlorohexidine use.</p> <p>Conclusion: It was found that patients who used chlorohexidine for continuously 2 weeks found to have improved dental health. Hence, there exists significant association between probing depths and chlorohexidine use in periodontitis patients..</p> <p>Keywords: Periodontitis, Chlorohexidine, improved dental health.</p>
<p>Yasmin Raza GICICRST1609070</p>	<p>Occurrences of geothermal resources and geochemical characteristics of thermal water of Southern Indus Basin, Pakistan</p> <p>YASMIN RAZA Affiliated with Geological Survey of Pakistan yasmeen_raza2211@hotmail.com</p> <p>ABSTRACT</p> <p>Most of the high grade geothermal resources of the world are found within seismic belts of weak crustal plate margins and centers of volcanic activity. Similarly, geotectonic framework of Pakistan directs towards a region which poses a commercially exploitable sources of geothermal prospects of energy.</p> <p>Presence of alteration zones and fumaroles, hot springs as well as Quaternary volcanism are all indication of good prospects.</p> <p>The Southern most Indus basin of Pakistan are lie in the Geo-Pressurized Thermal zone system. Geothermal activities are thermal spring, geysers such as in Karachi and Dadu area, as well as abnormal high temperature in drilling oil/gas wells, is due to the great thickness and geo-pressured water of sedimentary basins. The presence of two thermal springs at Mangho Pir and Karsaz, Karachi specify a Cl - HCO³ and Cl-SO₄ types of water chemistry. Reservoir temperature also reported comparatively low by the Silica geothermometers due to mixing of sea water and rock water interaction in subsurface. However, geochemistry of thermal water</p>

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 <p>Uzma Naseem GICICRST1609074</p>	<p>Workplace Bullying and Work Alienation: A Case study of the employees in the workplace</p> <p>Uzma Naseem. International Islamic University, Islamabad. Uzma_naseem@hotmail.com</p> <p>ABSTRACT</p> <p>This paper focuses on the workplace bullying and its effects on the performance of the employees in the workplace. As workplace bullying has become a general concern for many organizations. It refers to the repeated mistreatment of an employee by his or her colleagues or employers (Kohut, 2007). As the aim of the current research is to investigate the impacts of the workplace bullying and work alienation of the employees in the workplace. The data was collected from structured questionnaires which are distributed by the researcher himself. In this regard, a quantitative research has been done while utilizing the SPSS.</p> <p>Keywords: bullying, work alienation, employees and SPSS.</p>



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Using the Proper Coupled Neural Network Matrix Method and LabVIEWTM Instrumentation to the Multiple Robots Application

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ABSTRACT

One of the most important thing in the controlling of the 3D space movement trajectory is the precision of solving the inverse kinematics problem by identifying the joints' best relative displacement. To achieve this task will need to know the matrix form of the forward and inverse kinematics of the multiple robots application. In this paper will be show how can be solved the inverse kinematics problem in multi robots application with redundant chains. A hybrid method that combines the convergence process through proper Iterative Pseudo Inverse Jacobian Matrix Method (IPIJMM) with the filtering of the 3D space errors withthe Bipolar Sigmoid Hyperbolic Tangent Neural Network Method with Time Delay and Recurrent Links (BSHTNNM-TDRL) was used. We have presented complex mathematical matrix models of kinematics of the system with multiple manipulators. Was developed proper iterative algorithm to obtain spatial conventional and unconventional curves, in different Euler planes, for a case study of three simultaneous robots movements with extreme end-effector precision what was less than 0.001mm. In the analyzed case studies with three robots with simultaneously movements was used different space trajectory with the common points of all three robots or different points for each of them but following the same space trajectory. The presented method together with the employed Virtual LabVIEWTM Instrumentations (VI) can be generalized to other robots tracking in any conventional and unconventional space curves.

Keywords—Multi robots application;mathematical matrix model ofKinematics; Pseudo Inverse Jacobian Matrix; Neural Network; LabVIEW Instrumentation; Acquisition Board; Gecko drive interface; DC motor.



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Protection Of Cloud Users Work Environment Using Trusted Platform Module

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ABSTRACT

Cloud computing has recently emerged into our daily life as a utility service, where customers pay only for the used resources and services. The cloud computing is becoming the next big thing in IT industry by providing a big pool of services based on virtual computing resources through the internet.

	<p>These services are being executed and implemented via virtual machines. The customer can demand and release the image of virtual machine without checking whether the environment where their program runs is safe and trustworthy. In this paper we propose a trusted virtual machine in order to prevent insider attacks, using trusted nodes assigned by a trusted third party.</p> <p>Keywords: Trusted Platform Module, Trusted Cloud Computing, Cloud Broker, Virtual machines.</p>
 <p>Dr. Radhika Chelamalla YRSICRST1609052</p>	<p>Design, Synthesis and In silico studies of new 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides for anticonvulsant activity</p> <p>Radhika Chelamalla , Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, Telangana, India cradhika8@gmail.com</p> <p>Ajitha Makula, Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, Telangana, India</p> <p>Venkatesham Akena, University College of Pharmaceutical Sciences, Kakatiya University, Warangal, Telangana, India</p> <p>Sarangapani Manda, University College of Pharmaceutical Sciences, Kakatiya University, Warangal, Telangana, India</p> <p>ABSTRACT</p> <p>Purpose: To synthesize series of 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides and evaluate their anticonvulsant activity and in silico properties.</p> <p>Methods: Derivatives of 5-substituted-2-(2-(5-phenyl-1H-1,2,4-triazol-3-ylthio)acetyl) hydrazine carboxamides/carbothioamides were obtained by condensation of Ethyl-2-(5-aryl-1H-1,2,4-triazol-3-ylthio) acetates with thiosemicarbazide or semicarbazide. The synthesized compounds were characterized by Fourier transform infrared spectroscopy (FTIR), nuclear magnetic resonance spectroscopy (1H NMR) and mass spectrometry (MS) while their anticonvulsant activity was screened against pentylenetetrazole-induced seizure (PTZ) against diazepam as reference standard. Molecular docking (in silico) studies were performed using 4-aminobutyrateaminotransferase in order to predict possible protein-ligand interactions.</p> <p>Results: Among the target compound 3f exhibited lower activity with 50% protection. The compounds 3e and 3h showed good to moderate levels of anticonvulsant activity with 83.3% protection at 100 mg/kg. The compounds 3g and 3i afforded most significant anticonvulsant activity with 100% protection at a dose of 30 mg/kg. In silico results also revealed maximum binding affinity to GABA-AT protein which was higher than other compounds.</p> <p>Conclusion: The synthesized compounds showed potent anticonvulsant activity. Molecular docking results should give an insight into how further modification of lead compound can be carried out for higher inhibitory activity.</p>

	Keywords: Anticonvulsant, 1,2,4-triazole, carbothioamides, pentylenetetrazole, Molecular docking.
 <p>Prof. Mandela Govinda Raj GICECG1609056</p>	<p>Eco-Friendly Approach For Utilisation Of Iron Ore Waste In Brick Manufacturing</p> <p>SHREEKANT R LAMANI, M.Tech Department of Mining Engineering National Institute of Technology Karnataka, Surathkal Mangalore – 575025 Karnataka, INDIA</p> <p>ARUNA MANGALPADY, Ph. D Department of Mining Engineering National Institute of Technology Karnataka, Surathkal Mangalore – 575025 Karnataka, INDIA</p> <p>HARSHA VARDHAN, Ph. D Department of Mining Engineering National Institute of Technology Karnataka, Surathkal Mangalore – 575025 Karnataka, INDIA</p> <p>GOVINDA RAJ MANDELA, Ph.D Department of Mining Engineering National Institute of Technology Karnataka, Surathkal Mangalore – 575025 Karnataka, INDIA</p> <p>ABSTRACT</p> <p>Iron ore waste is a major problem for mine owners due to the difficulty involved in its storage, handling and other environmental related issues. An alternative solution to this is utilisation of iron ore waste (IOW) as some value added product in construction & other related industries. An attempt has been made in this paper in examining the possibility of making non-fired bricks from iron ore waste with some additives like cement and fly-ash. Each of the additives were mixed with IOW in different ratios and different sets of bricks were prepared. The prepared IOW bricks were cured for 7, 14, 21 and 28 days and their respective compressive strength and percentage of water absorption were determined. The results show that IOW bricks prepared with 9 % and above cement and with 28 days of curing are suitable for brick making and meet the IS specifications. It was also observed that the weight of the prepared bricks with 9 % cement with 28 days of curing varies between 2.35 kg to 2.45 kg whereas the weight of compressed fire clay bricks varies from 2.80 kg to 2.89 kg.</p> <p>The research work examines the various technical parameters involved and outlines the multi-dimensional environmental benefits.</p> <p>Key Words Iron ore waste, fly-ash, additives, bricks, compressive strength, water absorption.</p>

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**Aerobic biodegradation of BTEX compounds by actinobacteria isolated from
activated sludge**

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ABSTRACT

Benzene, toluene, ethyl benzene and xylene (known as BTEX) constitute an important family of volatile organic compounds. These xenobiotics contaminate several ecosystems such as soil, surface water, groundwater and various natural environments. BTEX compounds are highly hazardous to health because they are carcinogenic, neurotoxic and genotoxic. The US Environmental Protection Agency classified them as priority environmental pollutants, making their removal necessary from polluted sites. The destruction of these compounds by thermochemical methods has serious disadvantages. In contrast, biological processes have significant economic and environmental benefits. Biodegradation of these pollutants by aerobic and anaerobic bacteria has been studied for more than two decades. Initially, several studies focused on the biodegradation of BTEX components individually. However, BTEX are known to occur as a mixture in contaminated sites. Thus, for bioremediation applications, it could be advisable and advantageous to study the biodegradation of BTEX mixes by isolated microorganisms. Actinomycetes are known to degrade complex and varied substrates thanks to their rich enzymatic systems. They may therefore be important agents of various types of biodegradation in the most diverse ecosystems. In the present study we tested the degradation of BTEX by the actinobacteria isolated from samples of activated sludge from a wastewater treatment plant. The results show that 19 Streptomyces were capable of using at least one compound of BTEX as a sole source of carbon and energy. Among them, three strains from activated sludge degraded in vitro in aerobic conditions all of these volatile organic compounds at initial concentrations ranging from 1400 to 1500 mg/L. On the basis of the sequence analysis of the 16S rRNA genes, two active

	<p>strains were identified as <i>Streptomyces griseobrunneus</i> and <i>Streptomyces flavogriseus</i>, and one as <i>Streptomyces</i> sp. These strains could represent excellent candidates in bioremediation techniques for aquatic sites polluted by such xenobiotics.</p> <p>Key words: Actinobacteria, biodegradation, BTEX, activated sludge,</p>
 <p>Shaimaa Ahmed Elasyed Habib GICECG1609062</p>	<p>Synthesis, Characterization and Optical Properties of CdSe Quantum Dots.</p> <p>Shaimaa A. Habib, Physics Department, Faculty of Science, Tanta University,31527 Tanta, Egypt</p> <p>M. B. Mohamed, Chemistry Department, National Institute of Laser Enhanced Sciences , Cairo University, Cairo, Egypt.</p> <p>S. A. Saafan, Physics Department, Faculty of Science, Tanta University,31527 Tanta, Egypt</p> <p>T. M. Meaz Physics Department, Faculty of Science, Tanta University,31527 Tanta, Egypt</p> <p>ABSTRACT</p> <p>Quantum dots (QDs) are semiconductor nanoparticles with very interesting optical properties, like high quantum yield or narrow and size-tunable fluorescence spectra. Current applications of QDs are wide-spread, their use as fluorescence labels in bioassays being one of the most promising applications. CdSe semiconductor nanoparticles (NPs) have been prepared by the organometallic pyrolysis method developed by Murray et al , and modified by Peng et al. The formation of the quantum dot nanoparticles have been clearly seen in the TEM images. Powder X-ray diffraction (XRD) has confirmed the structure of the products. In addition, the crystalline phase and the size distribution of the nanocrystals have been determined by XRD and TEM, respectively .The optical properties have been assessed by UV-Vis measurements.</p> <p>Keywords: Quantum dots, pyrolysis method, XRD, TEM.</p> <p>Keywords; Bi functional magnetic-luminescent Nanocomposite, TEM, XRD, Quantum dots.</p>
 <p>Dr. Feroza Perveen GICICRST1609078</p>	<p>Incidence Of Polypharmacy Among Emergency Patients At A Tertiary Care Hospital In Karachi: An Ignored Paradigm For Quality Drug Therapy</p> <p>Dr.Munawar Khursheed, Emergency Department Pharmacy Department Aga Khan University Hospital Karachi, Pakistan</p> <p>Dr.Rakshinda Mujeeb, Emergency Department Pharmacy Department Aga Khan University Hospital Karachi, Pakistan</p> <p>Feroza Perveen, Pharmacy Department Aga Khan University Hospital Karachi, Pakistan</p> <p>Asher Feroze , Emergency Department Pharmacy Department Aga Khan University Hospital Karachi, Pakistan</p>

ABSTRACT

INTRODUCTION: A prescription containing five or more drugs is likely to result in adverse consequences that may involve hospital admission or falls. Increasing incidence of Polypharmacy among Emergency patients (EP) calls for a more judicious and cautious approach to prescribing with a focus on long term as well as short term health.

OBJECTIVE: To estimate the incidence of polypharmacy and its strength of association with respect to medication regimen among patients (pediatric and adults) visiting ED of a tertiary care hospital in Karachi Pakistan.

METHODS: Retrospective data was collected of all patients, who visited the Emergency Department (ED) of Aga Khan University Hospital, Karachi (AKUH) during January, 2012 to December, 2012. The detailed clinical records on medication prescribing from admission through discharge of all patients were reviewed.

RESULTS: Total 51,000 patients visited ED during January 2012 till December 2012, out of those polypharmacy was common in 40% of patients. Male were 56.6 % (9,837) while 43.4% (7,553) were females. Pediatric patients were 17.9% (3,145) while 79% (14,279) were adults. The most common triage category for patients were P3 with 37.2% (6,483). Most of these patients were those who were recommended admission in other wards 59.6% (10,146), 26.5% (4,514) discharged patients and 9% (1,536) LAMA patients.

CONCLUSION: The perils and problems associated with Poly pharmacy are a subject of interest as polypharmacy was significant finding among all ED patients. The results from this study serves as a baseline to identifying the drug- related problems among EP and could helpful for pharmacists and physicians to develop and implement strategy for risk management in tertiary care hospital.

Keywords: Polypharmacy, Emergency Department, Emergency patients

**Managing High Influx Of Patients Affected By Intense Heat Wave At The
Emergency Department Of A Tertiary Care Teaching Hospital In Pakistan**

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<p>Folashade Afolabi GICICRST1609079</p>	<p>First Year Learning Experiences of University Undergraduates in the Use of Open Educational Resources in Online Learning</p> <p>Folashade Afolabi Department of Education Science, University of Lagos, Nigeria</p> <p>ABSTRACT</p> <p>This study investigated examined the first year University Undergraduates'</p>

	<p>experiences in the use of OER in online learning. The design selected for the study was survey and quasi-experimental. A total number of 106 University undergraduates participated in the study after a preliminary study was conducted to ascertain undergraduates' perception and acceptability of OER. A structured questionnaire on 4-point Likert scale and Achievement Test were used to collect data. The two instruments were validated and trial tested to established reliability using Crombach Alpha. Data were analysed using simple percentage and t-test. The results clearly shown that understanding of online learners' skills, acceptability, perception and competencies is necessary to provide intervention strategy and appropriate support service which could facilitate their understanding and learning of difficult concepts. Also, OER promotes constructivist theory of learning among undergraduates, making them to be active learners rather than passive learners and gender friendly.</p> <p>Keywords: Open and Distance Education (ODE), E- Learning, Learning Management System (LMS) and Open Education Resources (OER).</p>
 <p>Mohamad Sakizadeh GICICRST1609080</p>	<p>An Investigation on temporal changes of water quality and factors affecting the Quality of water in urban Reach of Karun River, Iran</p> <p>Mohamad Sakizadeh, Environmental Sciences, Shahid Rajaei Teacher Training University, Tehran</p> <p>Fatemeh Mehrabi Sharafabadi, Environmental Sciences, Shahid Rajaei Teacher Training University, Tehran</p> <p>Alireza Khani, Environmental Sciences, Shahid Rajaei Teacher Training University, Tehran</p> <p>ABSTRACT</p> <p>Among the rivers in Iran, Karun is the longest one with the highest discharge in comparison with other rivers while it is the most import source of water for Ahvaz, (Khuzestan's capital city) for drinking and agricultural purposes as well. Unfortunately, due to unsustainable development in recent years, the quality of this river has grossly deteriorated. The main objectives of this study were to consider the quality of Karun River using 13 water quality parameters (including Turbidity, TSS, Temp., Phosphate, Total alkalinity, BOD, DO, COD, Nitrate, Nitrite, Ammonium, E-coli and Total coliforms) and prediction of BOD using other water quality parameters in its urban reach in Ahvaz City between 2011 and 2014 years. The results indicated that the level of some parameters such as biological oxygen demand (BOD) and ammonium has decreased during this time period. The worst quality of this river has been observed in 2011. The main problem of water quality has been associated with microbial parameters (e.g. E-coli and Total coliforms). The factor analysis reduced the initial 13 parameters to 6 factors accounting for 82.15 percents of the total variance. Considering the decreasing order of the importance of these factors, it can be concluded that suspended solids, turbidity next to chemical oxygen demand are the main influential factors on the quality of this river during these years.</p> <p>Keywords— Factor Analysis, Karun River, Urban Reach, Water quality</p>

 <p>Alina Latif GICICRST1609082</p>	<p style="text-align: center;">Design and Analysis of PPM based Visible Light Communication System with Dimming Support</p> <p style="text-align: center;">ABSTRACT</p> <p>Visible light communication (VLC) is a green technology which is the replacement of the existing conventional radio frequency based indoor communication system. VLC system fundamentally comprises of a light source that can accomplish dual function simultaneously i.e., illumination as well as data transmission. Dimming is an essential part of illumination and traditionally it is achieved by using PWM. This paper presents a circuit design and analysis of PPM based VLC system.</p> <p>Keywords—visible light communication; dimming; pulse width modulation; pulse position modulation</p>
 <p>Falalu Abdulrauf Musa GICICRST1609085</p>	<p style="text-align: center;">Security Threats and Countermeasures in Cloud Computing</p> <p style="text-align: center;">Falalu Abdulrauf Musa (Author) Department of Computer Science Federal Polytechnic Kaura-Namoda Zamfara State, Nigeria. Abdulfmusa@yahoo.com</p> <p style="text-align: center;">Shamsudeen Muhammad Sani (Co-Author) Department of Computer Science Federal Polytechnic Kaura-Namoda Zamfara State, Nigeria. Shamsusani78@yahoo.com</p> <p style="text-align: center;">ABSTRACT</p> <p>Security issues have given rise to immerse an active area of research because of the many security threats that many organizations have faced today. Addressing these issues requires gaining the trust of application users and cloud services. In this research paper, we highlighted the major threats to the security of cloud systems, while introducing the most appropriate responses. We mentioned and discussed the latest potential threats. After some effective countermeasures are listed and explained.</p> <p>Keywords: security challenges, cloud computing, threat and countermeasures</p>
<p>Daniel Escudero GICICRST1609086</p>	<p style="text-align: center;">Electric Vehicles and Sustainable Development: Climate Change mitigation and adaptation opportunities</p> <p style="text-align: center;">Escudero, Daniel Placido A. De La Salle University Manila</p> <p style="text-align: center;">ABSTRACT</p> <p>As society becomes more aware of the world's increased vulnerability to the impacts of climate change and its threats towards human security, economic systems, and various facets of life, climate change has been of great relevance and interest to many nations because of its many environmental and political implications. Climate Change which is brought about mainly by anthropogenic causes through the increased dependence on fossil fuels for mobility, industrial processes, and the factor of deforestation have caused the release of Green House Gases (GHG) such as carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) which have inevitably increased concentrations to the atmosphere(Houghton, 2002). In the past few decades, the changing climate has manifested itself through an increase in</p>

	<p>temperatures, noticeable sea level rise, stronger rainfall/typhoons, and prolonged droughts, all of which put at risk the sustainability of systems that support our way of life. Our response to the threat of climate change must be a cumulative action to say the least at the global level, GHG emissions grow at an exponential rate over time through every person, community, and country. Climate Change mitigation would refer to the efforts to prevent and reduce emission of harmful greenhouse gases into the atmosphere. This could be done through adapting new technologies and efficiency methods that could promote low emission development. With the guidance from transnational bodies such as the United Nations Framework Convention on Climate Change which was established in Rio de Janeiro on the year 1992 and the Intergovernmental Panel on Climate Change (IPCC) established in 1988 by the United Nations and World Metrological Organization whose main mandate is to encourage nations to reduce and stabilize greenhouse gas emissions to prevent interference with the climate systems, nations have been forming their own initiatives to mitigate and adapt to climate change.</p>
<p>Betka Achour GICICRST1609053</p>	<p style="text-align: center;">CONTROL OF A STAND ALONE PV-FUEL CELL HYBRID SYSTEM</p> <p style="text-align: center;">Tiar Mourad, LGEB Laboratory, Electrical Engineering Department, University of Biskra, Algeria tiarmourad@yahoo.com</p> <p style="text-align: center;">Betka Achour, LGEB Laboratory, Electrical Engineering Department, University of Biskra, Algeria betkaachour@gmail.com</p> <p style="text-align: center;">Drid Said, LSPiE Laboratory, Electrical Engineering Department, Batna University, s_drid@yahoo.fr</p> <p style="text-align: center;">cheikh Ridha, LGEB Laboratory, Electrical Engineering Department, University of Biskra, Algeria cheikh_red@yahoo.fr</p> <p style="text-align: center;">ABSTRACT</p> <p>The present paper describes how an optimal operation of a small scale hybrid generation system based on a photovoltaic array and a fuel cell that supplies a stationary AC load can be achieved. In fact, both the proposed power manager and the various control algorithms permit the system to permute smoothly between two operating modes, to cover permanently the load demand via a proper tuning of the different system power converters. In mode1, the PV converter is controlled to track permanently the maximum power point via a fuzzy logic MPPT routine regardless the atmospheric condition variations; whereas, the fuel cell stack is set to cover the remaining power. In mode 2, the photovoltaic array provides the necessary power to satisfy the demand in case of light loads. Besides, to feed the AC load with a pure sine wave, a back stepping algorithm is proposed to control the front-end single-phase inverter. The presented simulation results conducted with a given load profile have proven the effectiveness of the proposed control techniques, where the system arrive to change its configuration according to the load demand and the fuel cell capability. Keywords – photovoltaic, fuel cell, fuzzy logic, back stepping, power management, Lyapounov theory.</p>

<p>Z. Neffah GICICRST1609075</p>	<p>Evaluation of the Crystallization phenomenon in solar absorption cooling systems</p> <p>Z. Neffah, Solar Equipments Developpment Unit UDES/Renawble Energies Developpment Center, CDER, Bou Ismail, 42415, Tipaza, Algeria n_masse2001@yahoo.fr</p> <p>M.Abbas, Solar Equipments Developpment Unit UDES/Renawble Energies Developpment Center, CDER, Bou Ismail, 42415, Tipaza, Algeria</p> <p>L.Merabti Solar Equipments Developpment Unit UDES/Renawble Energies Developpment Center, CDER, Bou Ismail, 42415, Tipaza, Algeria</p> <p>ABSTRACT Crystallization is the result of a too high solution concentration or a too low solution temperature in an absorption machine. Despite the binary solution LiBr/H₂O presents good properties compared to the binary solution NH₃/H₂O, the crystallization is the great disadvantage in absorption systems. Different aqueous solutions lithium bromides have been performed in an experimental device that allows us to detect the crystallization temperature. The results show that the crystallization temperature is influenced by the cooling rate. Keywords: Absorption system, Water, lithium bromide, Crystallization.</p>
<p>Doctor BENZIADA Mébrouk GICICRST1609076</p>	<p>Hot springs Northern Centre of the Algeria</p> <p>Doctor BENZIADA Mébrouk Renewable Energy Development Center Algeria</p> <p>ABSTRACT This Science article summarizes the preliminary work carried out by the Renewable Energy Development Centre under the National Research Project in the Central North of Algeria from 2013 to 2016 to explore for geothermal resources and hydrogeology and hydrogeochemical and therapeutic aspects. The geology is very complex in this region and it determines the thermal water reservoirs. The value and importance of the thermal springs in Algeria is very significant. This study will be addressed by means of conventional chemical analyzes of the main hot springs major elements in the north central region of Algeria. Hydrogeochemical prospecting was carried out in detail is briefly exposed and the main results are described in particular regarding the hot springs of the Centre North of Algeria. The existing geothermal potential in Algeria is operated primarily for the balneotherapy and some applications for aquaculture. In this study we will apply the hydrogeochemical techniques to the hot springs of the Centre North of Algeria. To promote this energy source which will certainly have a socio-economic interest, it is important to know the geothermal gradient in this region and the hydrogeological and physico - chemical characteristics of the main hot springs particularly</p>

	<p>temperature, flow rate and the elements major chemical. Keywords: Hydrogeology – Hydrogeochemistry – Geothermal gradient- Therapeutic aspects.</p>
 <p>Ali Berkay AVCI GICICRST1609087</p>	<p>Achieving A Sustainable City Image In Terms Of Twenty-Four Hour City Principles: Case Of The Kemeralti Bazaar Of Izmir, Turkey</p> <p>Ali Berkay AVCI, Res. Asst. of Faculty of Architecture, Suleyman Demirel University, Isparta, Turkey, aliberkayavci@gmail.com</p> <p>Ş. Gülin BEYHAN, Prof. Dr. of Faculty of Architecture, Suleyman Demirel University, Isparta, Turkey, gulinbeyhan@sdu.edu.tr</p> <p>ABSTRACT</p> <p>İzmir is the 3rd largest and considered as the most livable city of the Turkey. In contrast with this livable city image, the center of İzmir turns into a deserted area after 19:00 pm, while it is crowded until that time. In order to achieve the sustainability of the livable city image of İzmir, it is prior to solve the problem of day and night usage disequilibrium of the city center. Present study focuses on the area of Kemeralti Bazaar, which is the historical center of İzmir. The purpose of the study is assessing the viability of the Twenty Four Hour City principles, that several cities in United Kingdom applied, as a solution for the day and night usage disequilibrium of the Kemeralti Bazaar. On account of this purpose the Twenty Four Hour City principles, which are licensing issues, retail working time, supporting restaurants and cafés, street lighting, mixed use space organization, city activities and public transportation, are introduced and their applicability for the sample area is evaluated. The method of the research comprises the pedestrian density data, on-site photography and land use diagrams in order to monitor the evaluation of the Twenty Four Hour City principles. The research showed that the area lacks the majority of the principles, which should be adopted to sustain the livable city image of İzmir and proper solutions for the problem are proposed in the conclusion.</p> <p>Keywords Twenty Four Hour City, Sustainable City Image, Livable City, Night Time City Usage, Deserted City, Kemeralti Bazaar</p>

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