Proceedings

(Book of Abstracts)

of

World Congress on Engineering and Applications

(WCEA – 2016), Bangkok

&

International Conference on Business Management, Economics, Social Sciences and Humanities (BMESH – 2016), Bangkok

16 -17 December, 2016

Organized by

Asian Society for Research in Engineering Sciences (ASRES),

SPJ Centre for Multi-disciplinary Research (SCMR)

Editors

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Bangkok, 16 – 17 December, 2016

International Conference on Business Management, Economics, Social Sciences and Humanities (BMESH – 2016), Bangkok

16 -17 December, 2016

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WCEA - 2016

Paper No. ACE01

Performance of expanded metal reinforced brick masonry: an experimental investigation

Ishwar P. Sonar
Associate Professor in Civil Engineering Department
College of Engineering, Pune

Abstract: To avoid cracking in masonry walls and to improve strength of walls steel reinforcements can be used in brick masonry. Normal reinforcement in the form of chicken mesh or similar type of reinforcement requires more plaster which is costly considering rising cost of sand and also it adds dead load on structure. Use of expanded metal reinforcement in brick bed mortar is an advanced technique to improve the tensile resistance of brick masonry. This technique will reduce heavy plaster on walls required in conventional chicken wire mesh reinforced plaster and hence saving in cost of plaster material and dead load of walls. An experimental program was conducted to investigate the possible improvement in strength characteristics in half brick thick masonry element reinforced using of galvanized expanded metal reinforcement in bed mortar. The paper presents comparison of shear bond and flexural resistance of reinforced wall elements with non reinforced wall elements.

Paper No. ACE02

Peak hour factor of Multi-lane Highways: A case study in Chonburi province Thailand

Surachai Ampawasuvan[1], Supornchai Utinarumon[2]
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[2]Associate professor, Department of Civil Engineer, Faculty of Engineering, King Mongkut's University of Technology North Bangkok

Abstract: The characteristic of traffic arrival is varies for minute to other minutes within an hour, and affecting traffic analysis. Peak hour factor (PHF) is a significant key for fine adjustment to traffic analysis. So, the suitable Peak hour factor would lead to accurate traffic analysis. The multi-lane highway is mostly major arterial road which rank high-hierarchy. Therefore, it is necessary to choose an appropriate peak hour factor. The study aimed to focus on multi-lane high traffic highways, which have traffic volume more than 28,000 and 44,000 vehicles per day per direction in 4-lane highway and 8-lane highway consequently. The study found that volume capacity would start from 0.82 and progress up to 1.00 with traffic volume of more than 2,339 vehicles per hour per lane for 4-lane highway. The volume capacity would start from 0.85 and progress up to 1.00 with traffic volume of more than 1,512 vehicles per hour per lane for 8-lane highway. The study suggests choosing peak hour factor of 0.82 to 0.95 for 4-lane highway and 0.85 to 0.95 for 8-lanes highway.

Paper No. ACE03

Investigation of the production of smart concrete with piezoelectric quartz and carbon nano-fibre subjected to short-duration impact loading

Savas Erdem[1] and Khalid Saifullah[1]

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Abstract: Smart concrete which has been emerged with developing construction technology is a designed smart material for building industry and has appeared owing to the need to monitor the concrete. There are two ways for making smart concrete. By attaching or embedding piezoelectric materials – which have the ability to transform mechanical strain into electrical charge or convert an applied electrical potential into mechanical strain energy when subjected to mechanical stress- in concrete or by adding small amount of microscopic carbon fiber into concrete. Even by adding carbon fibers, the extra cost of material has increased, this expense is still significantly cheaper than attaching or embedding sensors into concrete. Turkey falls into the first degree earthquake zone. So the performance of concrete plays a very important role for structural safety. In the structures which are built using smart concrete, smart concrete could be used in monitoring the internal condition of these structures during an earthquake. In addition, the European Union countries and many other countries have brought legal regulations about the design of green and smart structures that have the ability of self-producing energy. For these reasons, the dissemination of smart concrete technology is of vital importance. The existed studies in the literature are about to expand smart concrete that is a very new material. However, there is no study with regard to the use of piezoelectric natural material in concrete. In this study, first, piezoelectric quartz crystals which generate an electrical field under dynamic loads were used as aggregate in concrete and then it was investigated whether the quartz crystals show similar behavior in concrete exposed to high-rate impact loading. For that purpose, a small amount of carbon nano-fiber (0.5 % by weight of cement) were first added to the concrete mixtures to acquire smartness quality. In addition, the fine aggregate in the mixtures were totally replaced with piezoelectric quartz crystals, and then the electrical changes on the specimens were monitored under the drop-weight impact load by means of the two copper electrodes. The results showed that the produced concrete with quartz crystals and carbon nano-fibre exhibits the reverse piezoelectric effect producing a considerable amount of strain accompanied by dimensional change when an electric field is applied just before the drop-weight impact loading. The recorded shape change of the concrete sample was of about 0.8 % of its original dimension. In addition, it was observed that the peak impact load of the smart concrete was about %17 higher than that of the plain reference concrete. Finally, its impact energy was 3.2 times higher than that of the reference concrete. Findings from this study may provide significant contributions to the design engineers and the researchers to detect earthquake signals in advance and the improvements on the impact resistance obtained may enable to use this product in nuclear plants, strategic buildings and military structures.

Paper No. ACE04

Determination of architectural and structural properties of Ottoman Baths and a related example: Davutpaşa Bath

Ali KOÇAK[1], Başak ZENGİN[2], Burak TOYDEMİR[3], Melih BULGUR[4]

[1]Yildiz Technical University, Department of Civil Engineering, İstanbul
[2]Yildiz Technical University, Graduate School of Natural and Applied Science, İstanbul
[3] Istanbul Gelisim University, Istanbul
[4] MPI Engineering Project Construction, İstanbul

Abstract: Bath has an important place in Turkish history from past to present as well as other countries and regions. Each country or region has different architectural properties and functions in construction of bath. In Ottoman society bath has another important role in social life as a meeting and recreation point for the people due to its closed structure. In this regard, bath is not built for just taking a shower, it also was built for social life and entertainment. In this study, the historical Ottoman baths were discussed and Davutpaşa Bath taken as an example.

Paper No. ACE05

The earthquake performance of high-rise buildings having different carrying systems using by shake table and numerical modelling

Savas Erdem[1] and Khalid Saifullah[1]

[1]School of Civil Engineering, University of Istanbul, 34320, Istanbul-Turkey

Abstract: High-rise buildings which are kind of structures what have had variations compared to the traditional methods are the structures which are satisfying the working needs, requiring high technology and knowledge for design, application and operating because of their height that they have reached. Turkey is at the important seismic region due to its location and for this reason to construction of high rise buildings have had started at 1950's. Gradually increasing requirements, rising value of land and improving construction technologies had increased the construction of high-rise buildings in our country. These bring possibility of heavy damage and loss of lives at the potential earthquake of the high-rise buildings which has been constructed by inadequate knowledge. While minimizing these possibilities at the same time it is needed to carrier system which will supply the optimum states. Determining the behavior of structure under the earthquake load and correspondingly at the regulation of earthquake-resistant structure, the behavior of the members which are constituting the structure must be known. Under the repetitive effect of earthquake loads behavior, strength and especially ductility of structure members and their joint plate are very important to carry these loads. Effect of earthquake takes importance by increasing the height of structure and it

substantially effects the design of structure after certain height. It is possible to overpower the earthquake by traditional or innovative carrier systems. In this project, high-rise buildings with 3 different carrier systems as frame, shear wall and diagrid were both investigated experimentally and numerically. Scaled models of 30 story high-rise buildings made by balsa strip were analyzed by means of shake table and the results were compared by computer modeling. Displacement and acceleration of structures at the roof level were recorded. The results showed that the building model with diagrid structural system had the most effective carrying system in terms of displacement (7.86 mm) and acceleration (16.44 m/sn²) under earthquake loading. In addition, the values obtained from experimentation were very close to that of the finite element model. With implementing of project, the behavior of high-rise buildings under earthquake effect may be understood and it may be also contributed to the working of academicians who are doing experimental and theoretical researches about the topic. With respect to results which were obtained from project, new carrying system advices may be developed and the positive and the negative sides of existing designs may be seen comparatively.

Paper No. ACE06

Re-centering properties of pseudo-elastic nitinol wires; an experimental study

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[2]M.Tech student, Vidya Academy of Science and Technology, Thrissur

Abstract: Majority of the bridge failures occurred during the past earthquake were due to the excessive movement of the bridge superstructure in the longitudinal direction. The use of restraining devices was a solution to prevent or limit the relative hinge displacement. The most effectively used restraining technology in the moderate to high seismic region is of steel restrainers in the form of rods or bundled wires. But these steel restrainers failed in subsequent earthquake due to significant loss in strength and stiffness after 2% strain. An alternative option was to use shape memory alloy restrainers to prevent hinge displacement. Shape memory alloys are unique materials having the ability to regain its original shape even after a large strain ~ 8% upon unloading or heating. The Pseudo-elastic SMAs also possess a non-linear stress-strain hysteresis which provides constraints on the forces transmitted to the connected members. The area under stress-strain hysteresis decides the energy dissipation capacity of pseudo-elastic SMAs. So the pseudo-elastic SMA can act as both restrainers and dampers in bridges. Previous studies on pseudo-elastic SMAs concentrated on the effect of length, temperature on re-centering capabilities and comparison of pseudo-elastic SMAs with other restraining methods. Still many questions need to be addressed regarding the behavior of SMAs in structures such as, effect of ambient temperature on energy dissipation capacities of SMAs, the shape of restraining device, effect of diameter on the energy dissipation as well as re-centering capacity of pseudo-elastic SMAs and effectiveness of SMA rod and bundles wires on the energy dissipation capacity. This paper presents the numerical and experimental investigations conducted to address the above mentioned questions.

Paper No. ACE07

Estimation of soil loss from watershed for identifying high risk erosion zones – A case study

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[2] Former Graduate Student, Environmental Engineering
Water & Environment Division, National Institute of technology, Warangal, India

Abstract: Soil erosion is one of the most serious environmental problems in the world today because it threatens agriculture and also the natural environment. Since soil erosion affects the productivity of land and while adversely affecting downstream areas, soil conservation takes a lead role in today's development programs. In reality, it is not possible to conserve all areas under the threat of erosion because of the financial constraints. In this context, prioritization of watersheds is required for different watershed components so as to plan appropriate conservation measures. Therefore, in practice, vulnerable areas are prioritized and then undertaken for development. For planning soil conservation measures, it is essential to consider factors such as critical areas of erosion, threats to lives and property, social constraints, political suitability, etc, Reasonable assessment of soil erosion is the core of any such decision-making on prioritization. This paper presents the results of prioritization of Janagoan Mandal using Geographic Information System (GIS) techniques. Universal Soil Loss equation (USLE) is used for estimation of soil loss from the catchment. The average annual erosion from the watershed under study is estimated using USLE in conjunction with GIS techniques.

Paper No. ACE08

A re-evaluation of irradiance impact in semiconductor photocatalysis with kinetic modelling based on pseudo-steady-state hypothesis

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[2] Department of Environmental Engineering, Faculty of Engineering, Burapha University, Bangsaen, Chon Buri 20130, Thailand

Abstract: Advanced oxidation treatment of gas pollutants based on heterogeneous photocatalysis using environmentally benign TiO_2 which generates active electrons (e^-) and holes (h^+) that initiate reduction or oxidation of target chemical compounds is an actively researched area with variety of applications. Semiconductor photocatalysts can be band-gap engineered to impart specific redox characteristics that would

suit specific applications including energy production and pollution treatment, among others. Use of this technology will increase with research progress leading to enhanced photocatalytic efficiency, less catalyst poisoning, better photoreactor design, and better understanding of photoreaction kinetics. Presently, we attempted to re-evaluate and compare the irradiance level dependent fundamental rate constants derived from classic or amended Langmuir-Hinshelwood (L–H) kinetic modeling. The data used presently was obtained from experiments on gas-phase photodegradation of calbon disulfide (CS_2) as model compound with TiO_2 and platized counterpart (Pt/TiO_2) being employed as photocatalyts. It was found that the amended L–H kinetic model, unlike the classic counterpart, could sufficiently take into account the influence of surface and photon adsorption characteristics of the semiconductor photocatalyst on reaction rates and order in relation to the level of irradiance.

Paper No. AME01

Structural optimization and thermal analysis of two wheeler brake disc rotor

Pravin N. Jawarikar[1], Subim N. Khan[2], Shrikant A. Borkar[3], Amarsinh A. Shinde[4]
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[2]Associate Professor, Mechanical Engineering Dept.RSCOE, Tathawade, Pune (M.S), India

Abstract: Disc brakes rotor design is varied for rotors of the same intended use for many companies and some still use the same initial rotor designs that were introduced over a decade ago. This investigation is done by modelling and finite element analysis of the existing brake disc rotor models available in market. The stress level, deformation and temperature variation at specified load conditions is analyze and studied. In one of the model Bajaj Pulsar 150 of rear wheel the scope for design optimization is found where the stress level can be reduced at high stress area. The topology optimization technique is used to find the design solutions. The outer diameter & inner mounting position of holes on wheel hub is considered as the constraints for design. The goal was to design a rotor with minimum stress level and that maintains similar structural performance as rotors that are currently commercially available. The optimal solution out of modified rotor designs was compared to existing rotor. The optimized stress, deformation of the modified disc brake rotor is achieved with good heat dissipation.

Paper No. AME03

Design and optimization of Automobile Cross Car Beam

Pritam R Ghat[1], V.K.Tripathi[2]
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College of Engineering, Pune, Maharashtra, India

Abstract: Original Equipment Manufacturers are keen on developing a commercially viable mass reduction strategy for mainstream vehicles. They are focused on clean transportation with use of lightweight materials and efficient design and demonstrated substantial mass savings. Lighter vehicles are cleaner and more efficient. Lightweight architectures and efficient performance are just two core competencies. In automotive dashboard cross car beam is heavy part which carries all weight of dashboard so by reducing weight of cross car beam we can reduce overall weight of the dashboard. Weight reduction can be achieved by reducing size, redesign, reduce Content and selecting alternative lightweight material which can fulfill all performance.

Paper No. AME05

Multi-state reliability analysis of CNC turning center

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[2]MAEER's MIT College of Engineering, Kothrud, Pune, India
[3]College of Engineering, Pune, India

Abstract: Reliability is widely recognized as a critical design attribute for most of the industrial systems. In recent papers, various types of analysis of CNC assisted systems are conducted using binary state system approach. In this paper, reliability analysis of CNC turning center is presented using multi-state system (MSS) approach. The field failure database has been used for the statistical analysis. The failures of the CNC turning center are classified into three degraded states, one failed state and one fully operational state and thus provide more insights through finer resolution into the degradation behavior of the system and its propagation towards complete failure. This work highlights the importance of conducting multi-state (MS) failure analysis of any engineering system when seeking to understand its failure behavior.

Paper No. AME06

Experimental study on wear analysis of an advanced super bush bearing material

P. S. Shinde, V. K. Tripathi, K. P. Pawar
College of Engineering Pune, Maharashtra, India

Abstract: The objective of this study was to analyze the wear performance of a Zinc-aluminum alloy (ZA-27) which is one of the best-suited super bush bearing material. The wear performance parameters like friction, sliding distance, and dry sliding wear rate of ZA-27 were experimentally evaluated through a pin on disc tribotester. These wear parameters were compared with those obtained for the conventional bearing materials like aluminum bronze and gun metal, characterized under identical test conditions. From the experimental observations, it was found that the gun metal showed considerably better wear behavior than zinc based alloys. However, the wear rate of gun metal with respect to the pre-determined sliding distance at a specified pressure was more than Zinc based alloys. The ZA-27 was found to be best-suited bearing material because of its lower wear rate and better seizure characteristics

Paper No. AME09

Numerical investigation on an active vibration suppression of Timoshenko smart beams

Veer Alakshendra, S.M. Murigendrappa*
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National Institute of Technology Karnataka, Surathkal, Mangalore, India

Abstract: The paper presents an active vibration control of Timoshenko smart beams using finite element approach. Smart beam is modelled by Timoshenko beam theory considering the effects of rotational inertia and shear deformation. Single input-single output and multiple input-multiple output active control systems have been considered. A linear, quadratic regulator controller based on optimal control theory is utilized for the vibration suppression of the smart beam. The output responses of both the systems with controller are effective and efficient to suppress the active vibration of the smart beam. However, to control the vibration, the later system has more effective than the first.

Paper No. AME13

Structural study of steam turbine blade disk under centrifugal loads

Laxminarayan. K, Khushal Kesrod
Design Tech Systems Ltd.

Abstract: Low Pressure (LP) disk is considered for evaluating the structural strength at constant speed loading condition. Disk is modelled with Hexa-elements for accurate result prediction. The main objective in this case is to study the response of the structure when subjected to harmonic excitation. In the process of investigation, mathematical formulations have been made based on the principles of theory of elasticity for the geometry of disk. The same geometric models have also been analyzed using the commercial FEA software. The occurrence of flutter (Self exited Vibration) in aero engines is always a matter of great concern since this kind of aeroelastic instability can lead to high cycle fatigue (HCF) failure of engine components. The level of fidelity in the individual disciplines, together with a simultaneous integration scheme is required wherein the unsteady aerodynamic loads and motion of the structural configurations are considered for accurate prediction of structural dynamics of turbomachinery components. A harmonic response analysis has been performed to assess resonant vibratory stress amplitudes for the higher modes. Forced harmonic analysis, has been employed with gas loads at critical resonance points to estimate the alternating vibratory stresses. These are imposed on Goodman diagram, to obtain the vibratory margins available at resonant modes for the predictions of HCF life margin, for the given material and temperature. Evaluation of vibratory stresses employing Goodman criteria at resonance points indicates the capacity of blades to achieve 1e8 cycles. It is been observed that peak stress reduction is achieved which lead to LCF increase. Hence SCF chart is considered with Analysis results.

Paper No. AME15

Effect of bioethanol-diesel blends, pilot injection timing on performance, emission and combustion characteristics on diesel engine

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Abstract: Biofuel is gaining admirable prominence because it is renewable and alternative to the fossil fuels. This investigation is focused on the effect of pilot injection and various bioethanol-diesel blends (E10, E20 and E30) on the performance, exhaust emission and combustion characteristics of common rail direct injection (CRDI) engine fueled with bioethanol blended diesel using computational fluid dynamics (CFD) simulation. The simulation is carried out for different bio-ethanol/diesel blend (10%, 20%, and 30%), one

pilot injection timing, and four dwell timing between pilot and main injection at injection pressure of 90MPa.Three dimensional computational code was employed to solve the conservation equations based on finite volume method. Extended coherent flame model-3 zone was employed to carry out combustion analysis. The results indicate that, the mean CO and soot formation decrease as compared to neat diesel for optimum cases. On contrary for 10% bio-ethanol/Diesel (E10) mean NO formation is found to be highest. Obtained results are validated with available literature data and found good agreement.

Paper No. AME17

Simulation of low pressure carburizing and high pressure gas quenching process using ABAQUS for finding distortions in component

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Abstract: Heat treatment processes such as case hardening are performed on critical machine components such as gears to increase its wear resistance. During this process distortion occurs which causes significant cost impact to the manufacturer, because distorted components are often need to be hard-machined after heat treatment. Distortion can be significantly reduced by using low pressure carburizing (LPC) and high pressure gas quenching (HPGQ) techniques. HPGQ provides a very uniform heat transfer coefficient. In this study LPC and HPGQ processes are simulated using ABAQUS software for a spur gear and distortion is calculated.

Paper No. AME19

Thermal Performance of a flat-plate and U-tube Solar Collector using Al_2O_3 Nanofluid

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Abstract: The efficiency of the flat-plate and U-tube solar collector was investigated and analyzed experimentally as a function of the concentration of Al_2O_3 nanofluid. When $T_i = T_a$, the efficiency of the flat-plate solar collector with 1.0vol%-Al_2O_3 nanofluid was 70.9%, which is the highest value and 16.2% higher than that with water. Besides, the maximum efficiency of U-tube solar collector was 67.6%, which is a 16.3% higher than that with water. In this study, the efficiency of the solar collector with 1.0vol%-Al_2O_3 nanofluid

was the highest. In addition, the flat-plate solar collector had a higher maximum efficiency than U-tube solar collector, but the decrease of efficiency of flat-plate solar collector was much steeper than U-tube solar collector because of a higher heat losses.

Paper No. AME20

Analysis and experimentation of storage pressure vessel

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Abstract*:* Pressure vessels are probably one of the most widespread equipment within the different industrial sectors. For many years an ISO committee (ISO TC/11, Annaratone, 2007) was dedicated to study pressure vessels and provide design guidelines with necessary codes and design procedure of pressure vessel as per ASME sec VIII Div-1 to adequately cover the intended subject matter. Our object to do just basic valve design so we following all design criteria as per ASME codes. Application of the vessel is Buffer valve, Pressure relief valve, Balancing valve, pressure control valve etc. However, even when the code includes specific regulations to determine the thickness of the different components, and taking minimum thickness it will leads to make thinning vessel with required factor of safety at design temperature and pressure With minimum thickness of the shell we can make light weight vessel and low cost vessel. At the same time it may operate at safe conditions facing some issues related to structural analysis. In this project first we design a CATIA based model will be created using this information using suitable mechanical parts design software like Catia/Ansys .A Finite element analysis is carried out on this model. Then a various testing under load and dynamic condition will be tested using analysis software like ANSYS.

Paper No. AME21

An experimental investigation on effect of Al_2O_3Nanofluids minimum quantity lubrication (MQL) in CNC Machining of EN353

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Abstract: Application of cutting fluids changes the performance of machining operations because of their lubrication, cooling, and chip flushing functions. But the conventional cutting fluids are not that effective in such high production machining, particularly in continuous cutting of materials likes steels. So, Nano fluids have novel properties that make them potentially useful in heat transfer medium in cutting zone And Minimum quantity lubrication (MQL) presents itself as a viable alternative for turning with respect to tool wear, heat dissipation, and machined surface quality. This study compares the mechanical performance of MQL Vegetable oil & MQL Nanofluids for the turning of EN353 based on experimental measurement of cutting temperature, cutting forces, surface finish, and dimensional deviations. This study prepares the effect

of MQL and Nano fluids with 3% volume Al_2O_3 on the machinability characteristics of EN353 mainly with respect to Surface Roughness and Temperature dissipation. Experimental analysis for two different conditions MQL + oil and MQL + Al_2O_3 Nanoparticles was carried out.

Paper No. AME22

An investigation of optimum cutting conditions in end milling of EN-19 alloy steel using TiAlN coated carbide tool

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Abstract: CNC Vertical End Milling Machining is a widely accepted material removal process used to manufacture components with complicated shapes and profiles. During the End milling process, the material is removed by the end mill cutter. The effects of various parameters of end milling process like spindle speed, depth of cut, feed rate have been investigated to reveal their impact on Material Removal rate and surface roughness using Taguchi based grey relational analysis. Experimental plan is performed by a Standard orthogonal Array. The results of analysis of variance (ANOVA) indicate that the proposed mathematical model can be adequately describing the performance within the limit of factors being studied. The optimal set of process parameters has also been predicted to minimize surface roughness and maximize the MRR. The experiment is performed under compressed air coolant and oil coolant using PVD coated TiAlN carbide cutter.

Paper No. AME23

GPU Computing Tool for Structure Topology Optimization

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Abstract: The field of topology optimization has been explored from last two decades to generate optimal structures. Many methods for topology optimization have been developed in which a structure is analyzed using finite element (FE) analysis in each iteration of an optimization technique. It results in a computation expensive optimization problem. In this paper, we attempt to perform FE computation in parallel using general purpose graphics card (GPGPU). The aim is to reduce the computation time. The algorithm is tested on a cantilever beam problem and results are reported with speedup of 90 x on GPU with respect to the CPU.

Paper No. AME26

Flame Oscillation in Laminar Lifted Jet Flame

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Abstract: Experiments in laminar lifted nitrogen-diluted propane coflow-jet flames were performed to investigate distinct differences between buoyancy-driven self-excitation (BDSE) and Lewis-number-induced self-excitation coupled with heat loss near flame extinction (LISE_CHL) in normal- and micro-gravities. The flame stability map with 9.4 mm nozzle diameter was presented as the functional dependency upon fuel mole fraction $X_{F,O}$ and nozzle exit velocity U_O. The results showed that only the BDSE was observed. Further experiments were conducted with 0.95 mm nozzle diameter (buoyancy-suppressed), and the flame stability map was also presented. Two self-excitations existed separately when the helium mole fraction $X_{He,coflow}$ in coflow-air varied in the range of 0.1 to 0.2. The two self-excitations had different characteristics in flame dimensions with time (flame width, and flame tip and base lengths) and phase diagram of effective Damköhler number versus light-off height. The BDSE was observed at relatively larger $X_{F,O}$; meanwhile, the LISE_CHL was at smaller $X_{F,O}$. Both the self-excitations were characterized with different functional dependencies of Strouhal number upon their related physical parameters. The mechanism of LISE_CHL, caused by repetitive interaction between burning rate and heat loss from premixed wings to trailing diffusion flame in addition to Lewis number larger than unity, was suggested. Further confirmation on both self-excitations was made through microgravity experiments using a 10 m drop tower.

Paper No. APE01

Respiratory Health of Brick Kiln Male Workers: A Study on Indian Unorganized Sector

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Abstract: The brick industry depends on fuel-wasting equipment and technologies which contribute to air pollution and emissions of greenhouse gases and therefore have a negative impact on the socio - economic conditions of brick manufacturers and the ecology of cities**.** Brick kiln workers are exposed to dust particles and are susceptible to multiple pulmonary complications. Spirometric parameters including: FVC, FEV_1, FEF_{25-75}, PEFR, PIFR were recorded in each follow-up. The data were analyzed using paired sample t-test. Mean respirable dust exposure in firing section was the highest (19.51 mg/m^3) while mean respirable dust exposure in mixing & molding section was the lowest (10.08 mg/m^3). It was concluded that workers engaged in the brick manufacturing industry are at risk of developing obstructive ventilatory impairment and/or restrictive ventilatory impairment.

Paper No. AMME01

Investigations on the craze-inclusion interaction in glassy polymers

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Abstract: The inclusions or fillers are introduced into glassy polymeric matrixes in order to improve the toughness properties since the brittleness is one of the fatal drawbacks for glassy polymers. It is well-known that crazing is the common phenomenon in polymers. However, little research work on the interaction between the craze and inclusion can be found in open literature for polymer composites. The objective of this study is to investigate the influence of the inclusion on the craze behaviors and toughness performance of the glassy polymers using the distributed dislocation method. Results demonstrate that in the case of a stiffer inclusion, the stress intensity factors at both craze tips are less than 1.0 and they decrease with the increasing shear modulus ratio.

Paper No. AMME03

Structure analysis of bt (benzoxazine-triazine) resin for high temperature packaging materials

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Abstract: Benzoxazine has outstanding heat resistance because of nitrogen and aromatic structure in its structure. In addition, after benzoxazine is crosslinked it shows superior properties such as dimensional stability, electrical resistance, etc. Since Holly and Cope first synthesized benzoxazine structure, many studies of benzoxazine have been performed. However, there have been only few studies on structural analysis by ^{1}H-NMR analysis. ^{1}H-NMR analysis is not enough to understand the exact structure. In this study, we synthesized benzoxazine using bisphenol-A as phenolic material and analyzed the structure of synthesized benzoxazine oligomers by tandem mass analysis method. The structure of benzoxazine which has bisphenol A structure as a phenolic component analyzed by tandem mass analysis. From the results, it is clear that dimethylol aniline is produced and depending on the reaction mechanism of dimethylol aniline, the final structure of oligomers are decided.

Paper No. AMME05

Synthesis of silver nanoparticles using aqueous olive (*olea europaea* l.) tree leaves extract

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Abstract: Synthesis of nanoparticles using plant extract is a cost effective, green and eco-friendly technology beside being available for large scale production. The phytochemicals present in plant extracts may act as reducing and stabilizing agents for the synthesis of nanoparticles in plant extracts. In the present work, silver nanoparticles have been synthesized using aqueous olive tree extract. The synthesized nanoparticles were characterized with UV-Vis spectroscopy, X-ray diffraction (XRD) and transmission electron microscopy (TEM). The existence of peak (absorption maxima) at 429 nm confirms the formation Ag nanoparticles in the extract. According to XRD pattern, the synthesized AgNP's have fcc crystalline structure. It was also found that the size of silver nanoparticles synthesized was 6.0 ± 4.0 nm and spherical.

Paper No. AME02

Comparative evaluation of mechanical properties of five different dental materials

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Abstract: For the comparative study, specimens of different dental materials were fabricated using cylindrical Teflon mould measuring 5mm×5mm for compressive strength, 5mm×3mm for hardness and 25mm×5mm×3mm for flexural strength. They were grouped with 4 specimens in each. Group I: Filtek Z350 XT(Composite),GroupII: Beautifil-II(Giomer),GroupIII:Ketakmolar(RMGIC), GroupIV:Zirconomer(Zirconia Reinforced Restorative). Group: Compoglass. The collected data from one-way ANOVA followed by Tukey's Kramer poc hoc test suggested that the mechanical properties of composite Z-350 showed statistically significant difference in Flexural property as compared to the others specimens. Meanwhile, Compoglass was found to be more prominent in micro-hardness.

Paper No. AME07

Fabrication and mechanical characterization of bi-directional jute fiber reinforced epoxy composite

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Abstract: Now days the natural fiber composites are finding wide variety of applications in automobile Industry due to its outstanding properties like low cost, light weight, Biodegradable nature, good acoustical and Mechanical properties. During last couple of years, the importance in using natural fibers as reinforcement in composites has elevated significantly both in terms of their industrial applications and basic research. The current work explains the fabrication and characterization of natural fiber based polymer composite consisting of bi-directional jute fiber as reinforcement fiber and epoxy resin as matrix material. Hand lay-up technique was used to manufacture the composite. The fabricated composite laminate was tested to study the mechanical properties of the laminate.

Paper No. AME25

Experimental Investigation and Optimization of Cutting Parameters in Near Dry Machining for Cutting Tool – Chip Interface Temperature in turning of OHNS O1 grade Hardened Tool Steel

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Abstract: Near dry machining is the goal of today's metal cutting industry that tirelessly endeavors to reduce machining costs and impact from chemicals in the environment. Modern tool tips are already capable of maintaining their cutting edge at higher temperatures, but even with these improvements in tool materials, the cutting edge will eventually break down. In Hard turning, cutting velocity (Vc) is high due to which high amount of heat is generated at the tool-chip interface which not only increase the tool wear but also deteriorates the job quality in terms of surface finish. In the present study, MQL setup used for Near Dry Machining (NDM) in turning round bars of 25mm diameter of Oil Hardening Non-Shrinking Die Steel (OHNS – AISI O1 grade) hardened to 53-57 HRC by TNMG 160404 MT TT5080 insert. The machining was carried out at three levels of Cutting Speed (v_c), Feed Rate (f), and Depth of cut (a_p)to investigates the performance of MQL setup in hard turning of OHNS O1 grade. Full factorial (3^k) DOE was employed and 27 experiments were analyzed by using Response Surface Methodology (RSM) and regression equations were developed. ANOVA was used to find out the significant parameters. Depth of cut is the most influential factor in increasing the avg tool-chip interface temperature but has no effect on machining time. Second influential

factor for avg tool-chip interface temp is feed rate which is highest influential in contributing to machining time. The optimum responses are at cutting speed of 170.275 m/min, feed rate of 0.07 mm/rev, 0.5 mm depth of cut for which machining time will be 19.723 sec and Avg. temperature at tool-chip interface to be 247.88^{o}C.

Paper No. APMM01

Iran's Strategy for Natural Gas

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Abstract: Using natural gas as a heating fuel is one of the various uses of this invaluable fuel. The real and major importance of natural gas can be realized regarding the natural gas plentiful added value and its capabilities for being converted into thousands of valuable economic commodities in the oil and petrochemicals industry as the primary material and the energy resource. The growing need for gas to provide energy and fuel, and the foreign currency resulted from sales and export for investment and launching primary industries in the country, reinforced the idea of bundling gas industry related activities. Therefore, in line with this, and based on the legal statute, NIGC as one of the four major subsidiaries of Iran's Oil Ministry was established.

Paper No. AEG01

Review on water hyacinth weed as a potential bio fuel crop to meet collective energy needs

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Abstract: Water hyacinth (Eichhornia Crassipes) is freshwater monocotyledonous aquatic ornamental crop as it is blue attractive round to oval leaves and purplish flowers. It is native to equador and Brazil region. Soon it was realized it is weed and invasive species due to interface with human activity and adaptability to hide fresh water region. There is lot of amount spent to control this weed. However it is realized that they are sustainable in ecosystem and utilization of this weed is highly beneficial for energy production generating ample avenues with research, development and marking the end product (biogas and bioethanol). For this 21st century i.e. the age of modernization and industrialization water hyacinth holds a strong promise as an

alternative for fossil fuels. This review focuses on such uses of water hyacinth with added components which gives high energy yields.

Paper No. AEG02

Increasing Energy Efficiency by optimized Cryogenic capable pressure vessel for Liquid Hydrogen fuel in automobiles

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Abstract: In automobiles, capacity of storage pressure vessel used for liquid hydrogen fuel at ambient temperature can be increased two to three times by use of cryogenic capable pressure vessel. This means, more mileage from vehicle from one filling of the fuel tank, or, less frequency of filling the tank yielding less chances of wastage of fuel during filling and lesser safety issues. If the pressure vessel can designed to minimize the heat transfer to the vessel, the energy efficiency and safety can be further improved. Moreover, an optimized design which minimizes the volume of the tank in addition to minimizing the heat transfer will reduce the weight of the tank and add to increase in energy efficiency of the vehicle. Reduction in weight will give an additional advantage in terms of the cost of the vehicle. Earlier studies show that BMW is constantly working on optimizing the design of Cryogenic capable pressure vessel. Keeping the aforesaid challenges in mind, in this study, for the first time a cryogenic capable pressure vessel for automobiles is optimized with multiple objectives like minimizing heat transfer and volume both. First trial results showing an optimum design range for pressure vessel are shown. Final results for optimum design of the pressure vessel will be obtained by using sophisticated optimization techniques in the study. Those results will be presented in the revised paper later on.

Paper No. AEE01

Load dispatch optimization by variable control method of IEEE three generators six bus system

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Abstract: In the modern world, rapid growth in urbanization & in Industrialization electrical power utility increased exponentially. The Economic Load Dispatch (ELD) is one of the modern classical optimization problems of electric power system deals with power generation to minimize the fuel cost and transmission losses to meet the particular load demand. Lagrange Multiplier is used to calculate the optimal combination of generation level of all generating units. All generating units

operate within the limits of constrains. The economic load dispatch problem, which has non linear cost function solved by using variable control method to calculate Lagrange multiplier where the optimum value of power generation is possible. The total loss of the transmission system is minimized.

Paper No. AEE02

An Overview of Different Pitch Angle Control Methods for Variable Speed Wind Turbines

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Abstract: The speed of wind variable in nature, this makes more complex to the wind power plant. Pitch angle control is provides the controlling of wind wheel blade of the wind turbine generator that controls the speed of the generator and provides constant output power to the grid. When the speed of wind is less than rated wind speed, the turbine speed is controlled at the optimal value so that maximum energy is extracted for the wind turbine. And when the speed of wind is greater than the rated wind speed, the output power of the generator is controlling by the pitch angle of wind wheel blade since the capacity of generator and converter are limited. In this paper deal with the different pitch angle control methods and compare their results. Different conventional pitch angle control techniques are describe and validated through the MATLAB/simulation results.

Paper No. AELE01

Stereo Vision Based Parametric Disparity Calculation using RASPBERRY PI

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Abstract: Vision is the power of sensing with the eyes and the most important sense for humans. Stereo vision is a vision seen by two eyes so there are two views and they are combined together. Apart from many other low and higher level perception tasks, stereo vision has been proven as a reliable tool in order to exploit depth data and provides remarkable results when it comes to depth estimation. In this paper various algorithms for estimating precise and consistent correspondence match for stereoscopic image pairs is presented, which is based on correlation techniques. By taking neighboring disparity values into account, precision and consistency of the estimated disparity values are increased. Here we present a comparison between different stereo correspondence parametric matching algorithms like SAD, SSD, NCC &SAD by derivatives and analyze the best match to ground truth images taken from Middlebury online dataset and the database created by us, using the performance measure tools viz.,RMS error and BAD PIXEL match.

Paper No. AELE02

H.246 video codec for video transmission over wireless networks

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Abstract: Channel errors have a very detrimental effect on the perceptual video quality. Despite the research done in the field of wireless multimedia, delivery of real-time interactive video over noisy wireless channels is still a challenge for researchers. This project presents a method for improving the quality of video transport using H.264/AVC over wireless networks that is the prioritization of different parts of I and P-frames.. The video streaming and encoding model is implemented using Matlab Simulink model. The performance of the video streaming has been evaluated using JM 19.0(Joint Model) software. This paper focuses to improve the storage capacity and enhance the transmission rate by increasing the compression efficiency maintaining the same better video quality.

Paper No. AME18

Design and Development of Active & Passive Fluid Damper for a Router Mechanism

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Abstract: Router is a tool used to remove an area or material from the face of a relatively hard work piece, particularly from wood or plastic, especially the main application of wood routers is in woodworking machinery. In this attempt, Design includes application of scientific principles, technical information and sometimes assumptions for development of new or may be improvised machine or mechanism to perform a particular function with maximum economy and efficiency. This attempt involves the study of hand-arm vibration (HAV) due to the use of hand held tools and comparative analysis of passive & active fluid dampers for a router mechanism to overcome the defects of vibration. HAV is a vibration transmitted from a work processes to the workers' hands, arms and shoulders. This can be caused by operating hand-held tools, hand-guided equipment, or by holding materials continuously processed by machines.

Paper No. ACS02

Design energy efficient MAC-ROUTE cross layer technique for PEGASIS protocol in Wireless Sensor Network

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Abstract: In Wireless Sensor Network (WSN) nodes are compactly deployed and are prone to failure. Sensor nodes are tiny devices limited in power, computation capacity, memory, sensing range and mobility. The major factors responsible for energy consumption in WSN's are idle listing, collision, overhearing, overhead, congestion and unnecessary high transmission range. This paper explores to optimize the energy consumption across MAC and ROUTE layers to prolong the life time of the WSN. Because of wireless nature of WSN, traditional layered protocol architectures is found to be inefficient, hence cross layer plays a vital role in present range of study. We highlight the energy efficiency must be support across all layers of the protocols stack through a cross layer design. In this context, we design energy efficient MAC-ROUTE cross layer technique for PEGASIS protocol to minimize energy consumption and delay compare to PEGASIS called Cross Layer PEGASIS. Mathematical model result shows cross layer PEGASIS is more energy efficient than ideal PEGASIS.

Paper No. ACS03

Levelset based image restoration model under data-dependent noise distributions

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Abstract: In this work a distance regularized levelset based gradient vector flow model is designed for restoring images corrupted with data-dependent noise distributions. The regularized distance function is combined with the gradient fidelity term to handle constant patch formation in the homogeneous intensity regions, while restoring images from the data-dependent noise observation. The image itself is considered as the distance regularized levelset function which evolves with respect to the artificial time parameter and disappears in finite amount of time. The smaller levelsets corresponding to the noise features disappear faster compared to the larger ones corresponding to the structures present in the images. A noise adaptive fidelity term derived based on Bayesian maximum a posteriori estimate (MAP) is being used along with adaptively varying parameter that controls the gradient fidelity term and the locally varying regularization parameter that drives the diffusion and reactive terms of the filter. The filter is found to preserve textures and finer details in the course of its evolution due to the presence of the locally adaptive fidelity term and the piecewise linear

approximation is reduced considerably by the gradient fidelity term present in the model. The model is suitable for many kinds of images from the field of satellite and medical imaging. The experiments show the efficiency of the model to restore images from the data-dependent noise observations, while preserving the textures without forming constant patches in the homogeneous regions during the evolution process.

Paper No. ACS04

Hybrid Image Classification using ACO with Fuzzy Logic for Textured and Non-Textured Images

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Abstract: The classification is the process of grouping the pixels into groups, called "*clusters*" that have some common characteristics. In this paper a Hybrid, and yet powerful classification method is proposed, which can be used to classify the textured and non-textured images. Traditional classification methods such as statistical classifiers, knowledge-based systems, and neural networks have number of limitations in classifying the images because of strict assumptions, particularly in the presence of the coarse pixels. The Ant Colony Optimization (ACO) is used to generate classification rules. Due to feedback property of the ACO, it considers all the changes into account in constructing the rules. These rules are then used in the process of classifying test set of the image. An entropy based fuzzy partitioning along with ACO is used to generate rules. ACO enables to construct simple rules to obtain better performance.

Paper No. ACS05

Dynamic Modeling in Computation

Pradip Peter Dey, Bhaskar Raj Sinha, Mohammad Amin, Laith Al Any, Shatha Jawad and Hassan Badkoobehi
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Abstract: Dynamic models of computation such as Turing Machines, Pushdown Automata and Finite Automata are useful in modeling real world computational problems. This paper presents visualization of a dynamic model with revealing features. The visualization is available at the following web site:http://www.asethome.org/mathfoundations/tmd/.When the same model has multiple equivalent representations, one may have preferences for certain representation over others. 39 out of 41 (95.12%) users found the visual representation helpful in understanding Turing Machines.

Paper No. ACS06

Crop Yield Prediction with Aid of Optimal Neural Network in Spatial Data Mining: New Approaches

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Abstract: Data Mining is the process of extracting useful information from large datasets. Data mining techniques till now used in business and corporate sectors may be used in agriculture for data characterization, discrimination and predictive and forecasting purposes. Data mining in agriculture is a novel research field. Recently Knowledge Management in agriculture facilitating extraction, storage, retrieval, transformation, discrimination and utilization of knowledge in agriculture. Agriculture data are highly expanded in provision of nature, interdependencies and resources. The agriculture yield is primarily depends on weather conditions, diseases and pests, planning of harvest operation, geographical and biological factors and the likes. As far as data mining techniques is concern in the most of cases predictive data mining approaches is used. Predictive data mining is used to predict the future crop, weather forecasting, pesticides and fertilizers to be used, revenue to be generated and so on. Crop yield prediction has been a topic of interest for producers, consultants and agricultural related organizations. As defined by the Food and Agriculture of the United Nations, crop forecasting is the art of predicting crop yields and production before harvest takes place, typically a couple of months in advance.

Paper No. ACS07

A new approach: Weighted Page Rank Algorithm based on Visits of Links

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Abstract: The World Wide Web consists of billions of web pages and huge amount of information available within web pages. To support the users navigate in the result, various ranking methods are applied on the search results. In this paper a page rank algorithm called enhancive weighted page rank based on visits of links is being devised for search engine. This algorithm works on basis of weights of pages and number of inbound links of web pages and outlinks of web pages and popularity of web pages. This algorithm is the extension of page rank and weighted page rank algorithm which reduces the search space for large scale.

Paper No. AME04

Advanced Surrogate Models for Design Optimization

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Abstract: In this paper, surrogate based global design optimization strategies have been illustrated for application problems in engineering. In order to simulate this complex behavior realistically, automotive crash for example involves simulation and modeling of complex non-linear behavior. These non- linear phenomena include simulation of very large deformations, non- linear material and contact modeling with Finite Element Analysis (FEA). Even with today's increased computational power, the solution time has increased substantially with increasing model complexity. The Kriging model is used as surrogate model for the modeling the objective function and constraints used in the FE model. Genetic Algorithm (GA) is used to estimate the model parameters of Kriging. The global optimization is achieved by infill points based on maximizing the constrained expected improvement criterion. For the applications of these techniques a constrained cantilever beam problem and frontal crash simulation on partial car body is illustrated.

Paper No. ACHE01

Studies in Silicone-Polyether Ketone blend based High Performance Coating

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Abstract: Silicone polymer although have some exceptional superior properties have limitations when it is exposed to harsh chemicals. Poly Ether Ketone (PEK), a high performance polymer is well known for its resistance towards acid, alkali and many solvents. PEK exhibits good environmental protection with better thermal stability. In the present study, the coatings were prepared using varying ratios of silicone and Poly Ether Ketone (PEK) with required coating additives, to study the effect of concentration of PEK on mechanical, chemical, thermal and performance properties. The clear coatings of Silicone/PEK cured films were characterized for TGA, FTIR, thermal resistance, corrosion resistance, resistance to 10% HCl, NaOH, NaCl, detergent solution and humidity resistance. The coating films were found to be stable up to 450 ^{0}C as indicated by TGA analysis. It is seen that the performance of silicone / PEK coating films increases with increasing concentration of PEK.

Paper No. ACHE02

Aegle marmelosmediated green synthesis of iron hexacyanocobaltate nanoparticles: Solid support-cum catalyst for the oxidation of 2, 4-dinitrophenol

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Abstract: A green route was successfully developed to synthesize iron hexacyanocobaltate (FeHCC) by using *Aegle marmelos* (bael) as a natural surfactant and water as a solvent. Nanocubes of FeHCC were obtained with size below 50 nm as confirmed by FE-SEM analysis. The significance of synthesis is in its quick approach with no thermal heat involvement, cost effectiveness and ability to fabricate uniformly distributed nanoparticles with small sizes. The catalytic potential of nanocubes synthesized was examined in treatment of simulated water containing 2, 4- dinitrophenol. Within few minutes of catalyst loading prominent oxidation occurred which was confirmed by GC-MS analysis. This is also supported by finding of small and non-toxic by-products like 4-oxobut-2-enoic acid, acrylic acid and 2-hydroxyacetic acid those ultimately fate into mineralization. With high potential in removal of 2, 4- dinitrophenol,FeHCCnanocubes can be used as important adsorbents in waste water treatment with a bright future.

Paper No. ACHE03

Green synthesis of Copper chromatenanoparticles: Catalytic oxidation of phenol

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Abstract: An ecofriendly green route was employed for the synthesis of mixed metal oxide (MMO) nanoparticles i.e., Cu-Cr oxide ($CuCr_2O_4$) using *Aegle marmelos* (Bael) as a natural surfactant. From FE-SEM analysis the size of nanoparticles was found to be ~50 nm with cubical shape. The synthesized nanoparticles were used as oxidizing agentcum catalyst for the selective oxidation of phenol to benzoquinone. Various reaction parameters were optimized such asconcentration of H_2O_2, solvent and amount of catalyst.Using$CuCr_2O_4$ nanoparticles as catalyst and water as a solvent, the reaction occurred very quickly i.e. in 5 min. The novelty of this work lies in the fact that green solvent and natural biosurfactant has been utilized for synthesizing MMO nanostructuresalong with best results for the oxidation of phenol obtained using water as a solvent.

Paper No. ACHE04

Application of high electric field pulses for plant cell disintegration

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Abstract: High Electric Field Pulses (HELP) is a non-thermal cell disintegration method for extraction of intracellular compounds. The aim of this study is to investigate the effect of HELP process parameters on cell disintegration of plant cell materials. And also evaluated the prediction model for sugar cane HELP treatment using Response Surface Methodology (RSM). At 9 kV/cm and 60 pulses up to 70% cell disintegration of sugar cane was observed. Similarly, cell disintegration of coconut meat using HELP at 4 kV/cm, 60 pulses was achieved. Comparison between heat and HELP cell disintegration clearly indicated that it is possible to disintegrated plant cell with similar or higher disintegration degree at very shorter time (about 1 min) compare to thermal method (15 min). In addition the energy consumption for HELP treated sample was distinct lower (3 kJ/kg) compare to thermal treatment (200 kJ/kg).

Paper No. APS01

Effect of acoustic reflector layers on the temperature coefficient of solidly mounted resonators

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Abstract: The microwave resonators have a substantial role in many devices such as filters, oscillators, tuned amplifier and frequency meters. The temperature coefficient of frequency (TCF) is a very important parameter for devices working at higher frequencies. In the present work, 1-D Mason model is used to simulate the temperature compensated solidly mounted resonators. For 2-D and 3-D modeling and simulation, finite element method (FEM) is employed through COMSOL Multiphysics software. The results for both models are almost the same. These designed SMRs are fabricated with different configurations to obtain TCF as near zero as possible in both longitudinal and shear wave modes with an optimized response. The temperature coefficient of shear and longitudinal wave modes have also been calculated. Influence of different material properties on TCF is also studied.

Paper No. ABB01

Determination of Optimum Configuration for Blood Diagnosis Chip using CFD Techniques

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Abstract: There are many vital diseases which if not diagnosed properly in a certain time would cause the disease to reach to a vital stage and affect the condition of a patient or may even cause death. Moreover the equipment required for the diagnosis is large and thus makes the process cumbersome. A device is developed which would reduce the equipment and time required for the same. This device is to be portable and inexpensive and reliable enough to detect the diseases easily. The basic idea is from the lab-on-a-chip technology based on microfluidics where microfluidic channels are made and simulated for the flow of a fluid so as to achieve the purpose. There are various configurations possible for the considered device. Some configurations are analyzed to find out the optimum configuration for the diagnosis of blood using CFD technique.

Paper No. ABB02

Mathematical Modeling for Finding Field Distribution in a Closed Object

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Abstract: Electrical Impedance Tomography (EIT) is an imaging technique of conductivity distribution in a close object. A low alternating current at high frequency is applied to a closed object through pair of electrodes. The resulting voltages at remaining pair of electrodes are measured on the surface. The current – voltage distribution relationship is determined by Poisson's or Laplace's equation with given boundary conditions. An inside electrical resistivity/ conductivity distribution can be obtained for a closed object using an appropriate image reconstruction algorithm. In this context an algorithm based on Finite Difference Method has been developed and discussed in detail. The software will create meshes, nodes for the given numbers of boundary voltages. The resultant pixel intensity of a mesh will be calculated by direct / iterative method.

Paper No. ABB03

Assessing cardio-respiratory interaction using Partial directed Coherence during Postural Change

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Abstract: Detecting and quantifying the directional interaction among the simultaneously measured signals from cardio-respiratory system plays a significant role in the study of short -term cardiovascular regulation. Traditional frequency domain analysis based on power spectrum and coherence are insufficient to quantify nonlinear structures and complexity of physiological subsystems. In this study, Granger causality based partial directed coherence has been used to identify directional interaction between cardiac and respiratory signal during supine and standing posture. It was observed that respiration is responsible for the changes in ECG signal during supine position and during standing the outflow of information from respiration reduces result in reduction in interaction from respiration to ECG. Therefore the proposed partial directed coherence approach helps to understand the direction of information transfer between cardio-respiratory signals during the autonomic regulation.

Paper No. ABB04

Meditation in Promoting Physical Activity and Health

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Abstract: This paper is discussing about the various benefits of meditation in physical activities and health. These include more focused concentration, less fatigue, less depression, less distractions etc. This paper summarizes the effects of meditation on mental health. This also helps in refinement of the state of mind which leads to repairmen of the body. Mental calmness and peace acquired through meditation results in handling of situation appropriately.

Paper No. MMA01

Controllability of nonlinear Fractional Integro-differential equations with Delay Dynamical systems

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Abstract: This paper is concerned with the controllability of nonlinear fractional dynamical systems with delay in the state variable. By employing Laplace transformation technique and using Mittag-Leffler function the solution representation for the considered fractional delay differential equations can be formulated. Furthermore, we establish the necessary and sufficient condition for the controllability of linear fractional delay dynamical systems. Especially, the sufficiency condition for the controllability results is obtained by using the fixed point argument. In addition to that, we have provided two examples to illustrate the essence of our obtained theoretical statement.

Paper No. MMA02

Analyzing Tourism Demand of Thailand with Artificial Neural Network Models

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Abstract: Tourism demand forecasting becomes important because it would enable tourist related industries like airlines, hotels, food and catering services, etc., to plan and prepare their activities in an optimal way. Therefore, many methods have been suggested in the literature in order to accurately forecast future tourism demand. Artificial neural networks (ANN) method, which has been successfully used for the time series forecasting in many applications, is one of these methods. This paper focuses on ANN models to forecast international tourist arrivals to Thailand. In order to reach high accuracy level, different feed forward neural networks architectures were constructed and examined. These models were applied to tourist arrivals to Thailand. Also, a conventional time series method exponential smoothing was applied to the data for the aim of comparison. As a result of the implementation, all obtained forecasting results are compared to each other and discussed. It was seen that ANN method produces very accurate forecasts for international tourist arrivals to Thailand.

Paper No. EOA01

Line overload contingency filtering and fast corrective generation re-dispatch action using linear programming

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Abstract: This paper presents a fast and efficient technique for the removal of line overload contingency using generation re-dispatch. Identification and filtering of base as well as cascading line contingencies are performed with the help of Line Outage Distribution factors (LODF) and generation dispatch discussion is taken with the help of Generation shift Distribution factors (GSDF). The sensitivity of every line of the system with respect to the generators as well as other lines are used to determine the changes in the generation to be made without any cascading overloading problem. The technique developed uses Linear Programming optimization algorithm for solving the objective function and its constraints. The approach presented in this paper is very simple and has minimal computational expenses. Unlike other algorithm and iterative techniques used in other papers, this technique will give a very clear and accurate decision making solution to the power system operator in issues of load dispatch during overloads. The effectiveness of the technique in elevating line overload in IEEE 14 bus and 30 bus are investigated. The results demonstrate the ability of the technique to effectively bring rated loading to every line in the power system after the corrective re-dispatch action.

Paper No. EOA02

Optimizing Sintering Process to Produce Highest Density of Porous Ti-6Al-4V

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Abstract: This study was aimed to fabricate porous Ti-6Al-4V structure through Metal Injection Molding (MIM) technique using palm stearin (PS) binder system. Titanium alloy powder (Ti-6Al-4V) was used to mix with sodium chloride (NaCl) as a space holder and binder components that consists of palm stearin (PS) as a primary binder and polyethylene (PE) as a backbone binder.The density of the sintered part were resulted from tremendous densification of the sample. Sintering parameters have been optimized using Taguchi method of L9 (3^4) orthogonal array. The result from Taguchi method, combination of A2, B2, C1 and D1 as the best set of factors. This means that the sintering temperature at 1300^{o}C; sintering duration, 120 min; heating rate 4^{o}C/min and cooling rate 9^{o}C/min were the optimum level that could statistically result in

produce highest density of porous. The analysis of variance (ANOVA) was employed to determine the significant level (α) and its contribution to the variables of the final density. The study demonstrated that sintering temperature was the most influential variable contributed to the best final density, followed by sintering duration, cooling rate and heating rate.

Paper No. EOA03

Performance Evaluation of Original Equipment Manufacturers of a Firm using Fuzzy AHP and Fuzzy TOPSIS Techniques

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Abstract: This work presents a novel framework to evaluate and categorise the original equipment manufacturers (OEM) of firms by using fuzzy decision making techniques and cluster analysis. The framework provides a procedure to monitor the performance of OEMs of manufacturing firms and establishes strategic formulation in order to achieve competitive advantage. One of the critical strategic decisions of a manufacturing firm is the evaluation of suppliers in order to align their capabilities and performances with its desired objectives. Various decision making approaches have been proposed in the literature to select and evaluate new suppliers of a firm. However, evaluation and encouragement of current suppliers of a firm has not been addressed so far in the open literature, which may result in the development of strategic partnerships. In this work an exploratory study is carried out to develop a methodology for categorising the OEMs of a sample firm. The OEMs are categorised by first obtaining their performance scores and then grouping these values into clusters. The sample organisation selected for this purpose is one of the leading automobile manufacturing firms of India. Twenty vital OEMs of the firm were selected on the basis of Pareto analysis. These key OEMs supply the finished parts which are used in the final assembly of the automobiles that the firm produces. These OEMs were evaluated against twelve generic criteria using Fuzzy Analytical Hierarchal Process (FAHP) and Fuzzy Technique for Order of Preference by Similarity to Ideal Solution (FTOPSIS) to obtain the performance priority scores. Distance based dynamic clustering technique, using small data set and K-mean clustering method are then applied to obtain a taxonomy of these OEMs. After determination of priority scores of OEMs, three taxons were obtained and labelled as "Prominents", "Intermediators" and "Marginals". These three groups illustrates the manufacturing strengths and weaknesses of the twenty OEMs of the firm on the basis of 12 attributes. Hence three different strategies can be formulated by the management to improve the effectiveness of its supply chain management.

Paper No. AME16

Crash analysis for size optimisation for weight reduction using surrogate modelling

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Abstract: To remain competitive in market, mileage is one of the most appealing specifications. Also improving fuel efficiency helps decreasing carbon footprint, which in turn helps in reducing global warming. For this purpose reducing weight of vehicle is very effective way. Objective of this study is to generate initial sampling plan and to do crash analysis at those points. Crash analysis is done to obtain data of internal energies and accelerations at centre of gravity to further generate surrogate model to reduce the mass of car model. These quantities are constraints for the reduction of mass because crash worthiness is the most important aspect of vehicle testing. Surrogate models are response surfaces which are constructed using results in some initial analysis. In this study HyperWorks and LsDyna software are used for crash analysis.

Paper No. AME08

Design Optimization of Piston of IC Engine for Weight Reduction

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Abstract: This paper includes a detailed study of optimization of IC engine piston for weight reduction. A piston is one of the most important components in internal combustion engine. It is important from weight point of view, as it includes inertia forces. It also contributes to the total weight of engine. Therefore the objective of this project is to minimize the weight of piston of internal combustion engine. In this work, there are two steps of design optimization of the piston, Design and Analysis. At First, design the piston model with given design specification on the modeling software CATIA V5R19. The boundary conditions are then applied on the piston after importing the piston model in IGES format into the analysis software ANSYS. Then analysis of different parameters (stress and deformation) is done and easily the results are obtained. In this work, piston is optimized for weight by removing the material of the piston.

Paper No. AME10

Topology optimization of front lower arm of Maruti Suzuki Alto

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Abstract - Weight minimization of existing components is critical for the automobile industry today because of oil and steel prices. Powerful engineering software packages and computers have also made the optimization of components a rapid and inexpensive process. The Maruti Suzuki Alto is an entry level car. The lower control arm of the Macpherson suspension connects the lower steering pivot to the chassis and takes braking, acceleration and cornering loads. Preliminary studies had indicated that the component was overdesigned and that significant weight savings could be achieved. Hence the component was modelled in CATIA using the wireframe and surface module. The model was imported into Hypermesh for meshing. Finally, Optistruct was used to carry out Static Analysis. Some sections of the front lower arm had very low stresses. Weight optimization was performed. Results and conclusions are discussed.

Paper No. AME12

Minimization of Weight of Connecting Rod with Fatigue Considerations

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Abstract: The connecting rod forms an integral part of an internal combustion engine. The connecting rod is acted upon by different types of loads while undergoing its operation. One of the main reasons contributing to its failure in fatigue is fluctuating stresses that acts on the connecting rod during engine operation. The main aim in engine design is to maximize the efficiency which can be achieved by obtaining high power to weight ratio. Therefore it becomes imperial to minimize the overall weight of the engine. The principle objective of this project is to design connecting rod which is light in weight by using various optimization techniques. In this project connecting rod is designed for a 3 cylinder petrol engine which is later modeled in CREO 2.0. This CAD model is used for optimization using Shape Finder in Ansys Workbench 14.5.

Paper No. AME14

Rigid body dynamics coupled finite element method structural simulation of commercial vehicle air compressor

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Abstract: In current range of commercial vehicle air compressors, there is a need for development of more competent and complex designs due to increase in competition. The reciprocating air compressors play an important role to supply air for brake actuation as well as suspension systems. In this paper mathematical models are prepared for parametric study of kinematic and dynamic characteristics of piston-crank mechanism .An alternative approach of Rigid body dynamics simulation of this mechanism in ANSYS software is presented and validated through analytical models and experimental results. The thrust forces and moments obtained from rigid body analysis are used to perform static FEM analysis of various parts for stress evaluation. This RBD-FEM approach is widely established for IC engine crank trains but less work is done regarding air compressors. This new simulation methodology for reciprocating compressors proves useful for designers to verify new designs and take better design decisions.

Research papers

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Paper No. ABM01

Exploring M-commerce Shoppers' Behavioursin Emerging and Developed Markets

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Abstract: With the growth in the usage and penetration of smartphones, mobile commerce (M-commerce) has become an increasingly important area that has drawn much attention in both academia and industry. According to eMarketer (2014), more than one quarter (i.e., 2 billion) of global population will be smartphone user by 2016. Criteo (2015) predicted that by the end of 2015, mobile share of e-commerce transactions would reach 33% in the US and 40% globally. While the forecast for the overall retail and e-commerce revenue annual growth rate is 4% and 10%, respectively for 2015 through 2016, m-commerce is expected to grow at a much faster rate (i.e., 43%) (Siwicki 2014). Although m-commerce growth shows a promising trend and provides ample potential for retailers across the globe, several studies have recently shown that m-commerce so far has failed to attract the hearts and minds of potential consumers across different countries (Wang, Malthouse, & Krishnamurthi, 2015; Zhang, Zhu, & Liu, 2012). Although increased affordability and availability of mobile technologiesand the rapid uptake of mobile phones worldwide have facilitated strong growth in some markets, notably advanced Western countries; the lack of market growth elsewhere, including South East Asian countries indicates that improved affordability, functionality and availability do not result automatically in widespread adoption of m-commerce (AlHinai, Kurnia, & Smith, 2010; Zhang et al., 2012). According to a survey of 445 business leaders', only 45% confirmed taking advantage of m-commerce, and 37% cited "lack of strategy" as top challenge in implementing m-commerce across the globe (Strong View 2012). With increased global penetration of mobile telecommunications, examining cross-national difference in m-commerce consumers' attitude and behaviour has become critical (Morgeson et al. 2015). Unlike past studies that examine single countries and/or developed markets, this study advances the literature by comparing m-commerce consumers' behavioural intentions and actual behaviour using data from more than 1,500 m-commerce users across seven different countries from four different continents (Asia, Europe, Australia, and North America). This seven-country context provides a unique opportunity for understanding how m-commerce consumers' behaviour differs across disparate national markets (i.e., small/large, developing/developed, and culturally heterogeneous). In particular, four objectives guide this research. First, treating ubiquity as a multi-dimensional construct, this study explores and empirically validates the role that ubiquity plays in use of m-commerce. In doing so, our research answers the call by (Aksoy et al. 2013) to investigate the effect of ubiquity on consumers' intention to use m-commerce and actual m-commerce usage. Second, rather than treating individuals' cultural orientation on the national level and/or conceptualizing cultural factors as unidimensional bi-polar constructs, this research conceptualizes collectivism-individualism and uncertainty avoidance—dimensions that are more appropriate to the unique context of m-commerce—as multi-dimensional constructs at individual level. More specifically, this research explores the influence of

individual cultural dimensions (i.e., individualism, collectivism, risk aversion and ambiguity avoidance) on consumers' intention to use m-commerce. Third, rather than equating country with the adoption stage or technology readiness, this research distinguishes m-commerce customers into two distinct groups (1) early adoption stage and (2) advance adoption stage by explicitly measuring customers' readiness towards m-commerce using 36 item Technology Readiness Scale (TRI) (Parasuraman 2000). Technology readiness is defined as peoples' propensity or readiness to use a new technology to accomplish their goals. Fourth, unlike past research that has explored the influence of rational, deliberate and cognitive factors on intention to use mobile service, we incorporate habit – a factor that is more internal to individuals – and explore its influence on m-commerce usage behaviour. In contrast to deliberate and cognitive concept of intention, habit refers to the automatic and deliberate response of individuals and is more relevant to smartphones due to their ubiquitous nature.

Paper No. ABM02

Risk taking, gender and culture in entrepreneurial activities: evidences from southern Africa

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Abstract: Entrepreneurship is critical to any economy. It helps in innovation, job creation, small businesses contributes in the form of informal sector to the economy. Hence study of entrepreneurship is very important in developing economy set ups. Risk taking, gender and culture are the three core elements that impact entrepreneurship. However there are very limited studies that deal with these variables in Southern African context. This paper reports the study of these variables in different settings in Southern African context mainly South Africa and Botswana. Various models have been reported from various case studies done by author. In most of the cases Partial Least Squares was used to study the impact of these variables on business performance models. While descriptive statistics was used to study the gender differences. Results in different settings in Southern Africa suggest that risk taking was not related to business success; however small business operators had awareness of business risk and its management, were willing to take risk and expand. Male and female behaved differently in risk taking, male were high risk takers than female, there was no relationship between gender and business performance. Similar were the findings for culture; risk taking varied with cultural group but the culture was not found to be associated with business performance. The findings of these studies will support policy makers in respective Governments in terms of allocating resources to the small businesses. On theoretical front the findings provide empirical evidence on the behaviour of entrepreneur in terms of risk taking, gender and culture. The findings are applicable to Southern African context.

Paper No. ABM03

Adoption and performance of websites by hotel industry in Botswana

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Abstract: Internet has brought revolution in the way business is conducted. Hotel industry is one such industry that needs websites to promote the business and provide accessibility to tourists and other clients. However studies on the adoption and evaluation of websites are still at infancy stage. This paper provides one such study from Botswana hotel industry. There is no study in the context of Botswana hotel industry that has evaluated performance of web sites used by various hotels in Botswana. Based on the previous literature, this study used six dimensions (hotel information, product information, non-product information, payment, customer relationship management, and reservation) for measuring website performance of hotel industry in Botswana. There were 28 listed hotels in Botswana. The website adoption rate was found to be 62.5%. This is higher compared to other countries like Iran. Majority of hotels web sites studied provided hotel overview (80%), photo gallery (87%), room description (93%), virtual tours (60%), information to reach hotel (93%), on line payment facility (preference for credit card compared to debit card) , promotion and special offers (73%) and on line booking and modification facilities. This study provides contribution in the domain of evaluating web site in developing countries. The importance of using Information technology is crucial in such countries due to the lack of physical infrastructure. The adoption of such websites is very crucial for the marketing of tourism in Botswana. The findings are limited to the sample studied, it cannot be generalized to the universe.

Paper No. ABM04

Antecedents of unilateral relation-specific investment

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Abstract: On the theoretical basis of transaction cost economics, relation view, and network theory, the present study aims to explore the antecedents of unilateral relation-specific investment (URSI). Three constructs including expected external benefits, past experience (linkages), and resource complementarity are proposed to have positive impacts on the focal firm's URSI. The research propositions are expected to fill up the theoretical windows on URSI of the transaction cost economics and network theory, as well as to provides valuable suggestions for alliance management practices.

Paper No. ABM05

Uttarakhand state: state of elementary education

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Abstract: Education has always been viewed as an important instrument to increase productivity. Role of education in development, as mentioned above is not economic alone. In developing counties like India – the issue of broadening and strengthening the sphere of choice – by creating capabilities to earn and giving voice to large number of underprivileged are equally important. A democratic and welfare state like India In general and state like Uttarakhand in particular has perforce to deal with issues of inequality and exclusion on a multidimensional scale. Experience across countries reveals that education contributes immensely in this endeavor. The success of various affirmative action and programmes which intends economic inclusions and foster equality depends to a large extent on spread and quality of education.

Paper No. ABM06

Role of non-training issues alongside training needs for better performance of frontline managers: A case study of four DISCOMs

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Abstract: The O-T-P Model of McGehee and Thayer (1961) dominating the literature for past three decades, identifies performance deficiency as an indicator to training needs assessment (TNA). The authors took this model as a base to study if non-training issues like allocation of resources, inability to learn, non-cooperative peer environment, insufficient motivation also impact managers' performance. Views of 356 frontline and middle managers of four power distribution companies (DISCOMs) operating in India were collected after pilot survey using stratified probability proportional to size sampling. Cronbach alpha was calculated to confirm internal consistency of data collected. Validity of questionnaire was established using data reduction technique. Questionnaire was also tested for convergent and discriminant validity. The study revealed that non-training issues significantly impact the performance of DISCOMs' frontline managers. Results recommend including them also while conducting training needs assessment.

Paper No. ABM07

The Contribution of Women in Arabic Poetry

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Abstract: Arabic Literature is regarded as one of the oldest literature in the world history. Arab woman have a great position in the history of literature. A large number of Arab women contributed to the field of literature specially in poetry. By reading their poetic pieces one point becomes clear that they wish to share their vision and their mission, their emotion and their aspirations with us. They want to share their identity in the society. The names of know Arabic woman poets are Janub Al-Hudhaliyyah, Al-Khirniq, Al-Khansa, Fatima Al-Zahra,Laila al-Akhyaliyya, Shyriyah, Ulayyabint al-Mahdi, May Ziadeh and Nazil al-Malaika etc. The poetry of woman poets shows how they are dedicated to bring about a change in society. This paper will discuss to provide an introduction of Arabic women poets and to make visible a great number of women poets of Arabic literature who are virtually unknown to the reader of Arabic literature, as well as to provide a short discussion on famous women poets of Arabic literature during the pre-Islamic as well as the Islamic, Umayyad, Abbasid and Modern periods.

Paper No. ABM08

Relative efficiency of healthcare systems: evidence from European regions

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Abstract: In the paper, a non-parametric methodology is applied to evaluate the relative efficiency of 151 regions in old EU member states (EU-15) and 54 regions in new EU member states (EU-13) in the period 2007–2012. The empirical results show that efficiency differs significantly across the selected regions. In general, less developed regions show a relatively high level of efficiency whereas capital regions seem to be the least efficient regions since they mainly serve as national medical centres employing a disproportionally large amount of health resources.

Paper No. ABM09

Is the Demand for Money Sensitive to Changes in Interest rates?

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Abstract: The stability of the demand for money in Pakistan is investigated in this research. The incompatible results of previous studies shows doubt on the significance of monetary target. Different econometrics techniques are used to get required results. The Demand for aggregate money is shown to be stable. Moreover, the real income elasticity estimates shows the values within the range of the Baumol-Tobin framework. Nevertheless, M2 is cointegrated with its determinants. This study shows the long-run relationship between dependent and independent variables. The monetary institution and policy makers should focus on long-run stabilization policies in Pakistan.

Paper No. ABM11

Strategies for Enhancing Export Capacity of Textiles in Myanmar

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Abstract: The textile and garment industry is considered strategic for Myanmar since its government had actively adopted export promotion policies. However, Myanmar's textile and garment industry has focused more on a simple production mode, the so-called CMP (cut, make, and pack), generating relatively small profit margins for Myanmar's producers. Thus, the government and producers of Myanmar have been working together to transform and enhance their production mode from CMP to FOB (Free-On-Board), a business model where the producer purchases its own inputs, rather than simply assembles inputs provided by a buyer (CMP). This paper provides policy recommendations for Myanmar's textile and garment industry, focusing on the action plans in the report of National Export Strategies and based on Korea's experiences in developing its textile industry.

Paper No. ABM12

Children as an advertisement audience: interpretation of advertisements through drawings

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Abstract: As a form of communication, advertising is one of the most important tool of marketing, announcer of goods, brands, products and services for existing customers and potential target audiences through traditional and new media. Reaching by wide audience, television is still, one of the most powerful, traditional and "dateless" advertising medium. Tv as a commercial medium, achieves to create "consumers" and has pervasive influence on children and adolescents. Currently, children and child related marketing is unquestionably one of the most appreciated divisions in the part of marketing communication. Childish world has been long integrated to adult world within the pull-push power of technology and market economy. Although children cannot technically define marketing, advertisement and consuming; they can decode the impulses coming from communication channels, convert them to feelings and ideas, and learn and rationalize them with the help of their internal nature. The advertisements that the children face any time and everywhere, as a consequence of technological development, play a key role in explaining the outside world by occupying their mental agenda and support them to socialize as a consumer. Current study is an endeavor to discover the image of 'Television advertisements' in child's mind, who not only promotes the consumption in the family, but also is a consumer by him/herself. Considering the question of 'What is tv advertisement for children?' subjective judgments, experiences and interpretation are evaluated qualitatively in the drawings of 50 elementary school children.

Paper No. ABM13

ICHIP Application for knowledge transfer of Intangible Cultural Heritage in the category of traditional craftsmanship in Thailand

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Abstract: The purpose of this study was to develop a tool for knowledge transfer of Intangible Cultural Heritage and intellectual property in the category of traditional craftsmanship in Thailand. This proposed tool was designed with simplicity to ease its use, but with more efficiency when compared to other knowledge transfer tools. This study utilized mixed-method research design, quantitative research was used to collect data from 330 samples, Instrument used for data collection was questionnaires. Qualitative research was conducted in an aspect of in-depth interviews with 20 stakeholders in the creative cultural industries, and

acceptance testing of ICHIP application platform. The study found that participants highly satisfied with the reliability of the information that displayed on the platform 93% and the appropriate basic function for the user and the beautiful display feathers are moderate 87%. Data revealed that the ICHIP application platform meets the requirements for ICH and IP information, the user interface was developed to provide a convenient and simple to use.

Paper No. ABM14

ARIMAX versus Holt Winter Methods: The Case of Blood Demand Prediction in Thailand

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Abstract: National and Regional Blood Center are the main blood transfusion centers to acquire blood from donors and distribute to hospitals in Thailand. However, the estimation of blood availability can be difficult because of specific factors such as a very high number of blood donors during the birthday of King and Queen and a seasonal blood shortage during major holidays like the New Year. This paper focuses on statistically prediction of blood demand in Thailand. Monthly data from January 2012 to December 2015 are separated into 2 periods, 45 months for model training and 3 months for model validation. Box-Jenkin's models with independent variables (ARIMAX) and Holt Winter's techniques are compared to report the best model fit using the smallest value of Mean Absolute Percentage Error. The two independent variables affecting the blood demands based on geolocation are Platelet Demand and Dengue Fever Patients. The result finds that majority predictions by ARIMAX provide better model fit. R script in Tableau is used for tool development.

Paper No. ABM15

The analysis of the burnout level of travel agencies' employees

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Abstract: Burnout syndrome which is a set of undesirable behaviors of employees towards their job and environment that they developed mentally and physically is one of the major problems faced by the organizations recently. It has negative effect on both personal and organizational dimensions. One of the factors effecting the efficiency and health of employees is burn out degree, which is defined as emotional burnout, intensitivity, low personal success feeling and also called professional exhaustion. The aim of this study is to find out the level of burnout in travel agencies employees. The sample chosen for the research comprises travel agencies employees in Konya/Turkey. To find out the bornout in this research Maslach Burnout Inventory (MBI) was used. The data were analyzed in SPSS 20.0 computer program.

Paper No. ABM16

Electronic customer loyalty in social networking sites of airlines companies: Konya airport research

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Abstract: Developing mobile technologies in recent years has led to many companies tend toward electronic

market. The companies which want to get a share of the electronics market and aim to serve their customers better have to analyze better he desires of customers in social media so this aim requires to work in this direction. Airline companies could not remain indifferent to this event. Social media pages configured according to the needs and worked to serve the demands of consumers. Their study aims to assess whether they have the intention to enter the page again as a result of consumers. In this study, through the questionnaire survey to passengers who are using Konya Airport; it was tried to measure how effective the accounts of the airline companies are in the travel decisions of the people. Within the scope of the results obtained from the research, it has been tried to determine what should be taken care of by airline companies in social media and what influences of passengers are influenced.

Paper No. ABM17

The analysis of the social media and mobil applications' effects on customer's destination choices related with the service quality in Hatay

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Abstract: With the development and the spread of the technology internet usage rates in the world and in our country is increasing rapidly. This situation makes the tourism sector compulsory in using the social media and internet. This study aimed to determine the relationship with social media, mobile applications and services affecting the quality of the tourist destination of customers choices. For this purpose, the survey was administered to hotel customers in Hatay. The results of the correlation and regression analysis of the data obtained from the survey that it was determined there is a very strong positive relationship between social media and service. It can also said that the service variable shape depending on the social variables. Also, we can say that the relationship between social media and the perception of service is statistically significant.

Paper No. ABM18

Exploring residents' perceptions towards a mega event - A case of Dubai World Expo 2020

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Abstract: The purpose of this research is to explore residents' perceptions of economic, socio-cultural and

environmental impacts of mega event organized at a destination. The chosen destination for study is Dubai and the mega event is World Exposition for which Dubai has won bid to organize in 2020. The study examines Dubai residents' perceptions of impacts of word expo on their lives and also attempts to gauge their level of involvement in organizing this mega event which aims at attracting 25 million visits, 70 percent of which will be from overseas. Data is collected through structured questionnaire framed after an extensive review of literature. The study is exploratory and follows a descriptive design while utilizing path analysis. It is found that the residents perceive more positive economic impacts than socio-cultural and environmental impacts of the event; but at the same time are quite concerned about the possible negative impacts, mainly rise in prices. The research also reveals that there is a lot of scope to improve the level of their involvement in organizing the event. The findings are relevant to the event organizers to identify the gaps and undertake appropriate actions, making the event truly sustainable thus matching its theme. The paper is beneficial to students, practitioners and government authorities to analyze the role and importance of residents in organizing a mega event, issues pertaining to them and how to keep them involved. Although an adequate sample size was utilized for conducting this study, a bigger and stratified sample of respondents might reveal better results.

Best wishes to the participants of WCEA -2016 and BMESH – 2016.

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