Volume 3 Issue 10, March 2014

International Journal of Innovative Technology and Exploring Engineering

IJITEE

ISSN : 2278 - 3075
Website: www.ijitee.org

Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.
Exploring Innovation: A Key for Dedicated Services

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Volume-3 Issue-10, March 2014, ISSN: 2278-3075 (Online)
Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.

S. No			Page No.
1.	**Authors:**	**Ramani Devi R, Kathirvel R, Seeni Mubarak M, Mohamed Rabeek S, Fazal Mohamed M.I.**	
	Paper Title:	**Synthesis, 2DNMR and Crystal Structure Analysis of Piperidin - 4 - one Derivatives**	
	Abstract: The compounds 3-chloro-3-methyl-2,6 diphenyl piperidine-4-one(1) and 3-chloro-2,6-bis-(4-methoxy-phenyl)-3-methyl-piperidin-4-one(2) have been newly synthesized and characterized by elemental analysis, IR, 1H NMR, 13C NMR and 2D NMR. X-ray crystal structure analysis has been carried out to determine the composition and molecular structures of the two compounds. The crystal packing exhibits bond lengths and bond angles. **Keywords:** 3-chloro-3-methyl-2,6-diphenylpiperidin-4-one, 3-chloro-2,6-bis-(4-methoxy-phenyl)-3-methyl-piperidin-4-one: IR, 1H NMR,13C NMR, 2D NMR and XRD studies. **References:** 1. O. P. Agarwal, "Chemistry of Organic Natural Products".,Goel Publishing House Meerut., Vol 1, 2002. 2. L. Finer, "Organic Chemistry" ELBS., Vol 2, 1975. 3. V. Baliah, V. Gopalakrishnan, R. Jeyaraman, Indian. J.Chem, Soc.,Sec.B, 6B, 1978, 1065. 4. V. Baliah, R. Jeyaraman. Indian.J.Chem., 15B, 1977, 1207. 5. Baliah, V.;Jeyaraman, R. Indian.J.Chem., 9, 1971, 1020. 6. M. I. Fazal Mohamed, M. Krishnapillay, Indian J.Chem., 70, 1993, 258. 7. C. Noller, V. Baliah, J.Am.Chem. Soc., 70, 1948, 3853. 8. V. Baliah, A. Ekambaram, T. S. Govindarajan, Curr. Sci., 23, 1954, 264. 9. V. Baliah, T. S. Govindarajan, Curri. Sci., 23, 1954, 91. 10. V. Baliah, A. Ekambaram, J.Indian. Chem. Soc., 33, 1955, 274. 11. V. Baliah, V. Gopalakrishnan, J.Indian. Chem. Soc., 31, 1954, 250. 12. M. I. Fazal Mohamed, M. Krishna Pillay,Indian. J. Chem.,36B, 1997,50. 13. M. I. Fazal Mohamed, M. Krishna Pillay, Indian. J. Heterocyclic chem., 9, 2000, 209. 14. M. Seeni Mubarak, et al., Oriental J. Chem., 27(1), 2011, 333. 15. V. Baliah, R. Jeyaraman, Indian.J.Chem., 9, 1971,1020. 16. D.B. Lovejoi, D.R. Richardson, Blood., 100(2), 2002, 666. 17. M. Hong, H. Yill, D. Wang, Z. Gao, Acta Cryst., E 61, 2005,m801. 18. B. Sireesha, B. Krishna Rao, Sarala Devi Ch, P. Raghavaiah, Indian J.Chem, 47B, 2008, 592. 19. Refat EI-Sayed, Indian J.Chem., 45(A), 2006, 738. 20. Thomas Steiner, J. Molec Struct., 39, 1998, 447. 21. C. Katika, D. Vesna , K. Vlado, G. M. Dora, B. Aleksandra, Molecules., 6, 2001, 815. 22. Padmaja, Aliya Begum, P. Ragavaiah, Indian J.Chem., 50B, 2011,326-329. 23. Afshan Banu, D. E. Vasundhara, S. Ravi, Lamani, J.Saudi Chem Soc.,17,2013,211-217.	**1-4**
2.	**Authors:**	**Fatima Faydhe AL-Azawi, Zainab Faydh AL-Azawi, Rafed shaker AL- Fartosy**	
	Paper Title:	**Design and Simulation of Pulse Code Modulation Multiplexing (PCMM) and De-Multiplexing Technique in MATLAB**	
	Abstract: Pulse Code Modulation Multiplexing PCMM is a part of transmitting multi analog signals through single channel, PCM Can be implanted by passing information signals through Quantizer using MATLAB simulink and recovered (De-multiplexing) the information with the use of multi low pass filters LPF according to each frequency signal that been sent, Auto correlation and cross correlation tests were applied on the multi input signal to improve the inequality and no interference between multi input signal, delay time at the receiver is overcoming by reducing the order of LBFs and using delay block from Simulink library. **Keywords:** PCMM, Multiplexing techniques, PCM with MATLAB, PCMM simulation. **References:** 1. jon G. van Boss, 'signaling in telecommunication networks', 2007. 2. Horan, S., Introduction to PCM Telemetering Systems, 2nd Edition, CRC PRESS, 2002 3. Roger L. freeman,'fundamentals of telecommunication', 1999. 4. George F. Pfeifer, Pulse Modulation and Demodulation,2004. 5. Steven T. Karris, Introduction to Simulink® with Engineering Applications,2006 6. Chen-Nee Chuah,'Capacity Scaling in MIMO Wireless Systems Under Correlated Fading', IEEE, 2002 7. Botao Miao, R.egan Zane, 'A Modified Cross-Correlation Method for System Identification of Power Converters with Digital Control', IEEE,2004 8. Jing Yang , ' delay minimization In multiple access channels' , I	EEE, 2009. 9. F. Adachi and K. Takeda, 'Delay- time=code division multi-access in frequency-selective channel', Redistribution subject to IET licence, 2008.	**5-8**
3.	**Authors:**	**Firoj U. Pathan, Santosh N. Shelke**	
	Paper Title:	**Design of Cold Rolling Mill Components**	
	Abstract: the process of plastic deformation of metal by passing it through the rolls called as the metal rolling. Rolling is widely used forming process, which can have high production figures and precise control of final product. Rolling is classified in two major parts the cold rolling and hot rolling. Every part has its own theory, development of rolling process and subsequently the designing of the cold rolling mill components, like rolls and rolling mill housing. The aim of the present paper is to understand the various methodologies which are used to design the cold rolling mill. We have focused on the history of the rolling process; it is understand that the rolling process was adopted since year 1590. Although it was raw method but it initiated the slitting rolling mill and the actual experimentation were started from year 1670. In those days rolling was concerned with rolling of bars only after few years the rolling of bars were started. We also tried to discuss the earlier patents which were granted in 18th century	**9-13**

and was related to the tandem mill which were using copper and brass as the rolling materials. In year 1783, after the entry of grooved rolls the rolling production increased up to 15 times and that was the start of modern rolling mill. While reviewing the design of rolling mill components our area of interest is to visit design of rollers and rolling mill housing. We have discussed the different parameters and factors that affect the roll design. The calculations for the power required for rolling operation and the roll dimensions are also discussed. In reviewing the design of rolling mill housing, we try to explain the load that comes on the rolls during the rolling operations and how it affects the bearing life. The rolling mill housing designed optimisation has achieved by using different Finite Element Analysis techniques and various experimentation for rolling mill housing structural analysis is also reviewed.

Keywords: cold rolling, plastic deformation, design methodologies, housing, rolls, Split end, central burst

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4.

Authors: **Md.Minhaj Ahmed**

Paper Title: **Innovative Technologies and Organizations in Global Energy Systems**

Abstract: This course will examine a broad range of global energy systems including electricity generation, electricity end use, transportation and infrastructure. Discussions will be based on two key trends: (a) the increasing ability to deploy technologies and engineering systems globally, and (b) innovative organizations, many driven by entrepreneurship (for profit and social) and entrepreneurial finance techniques. The course will consider these types of innovations in the context of developed economies, rapidly developing economies such as India and China, and the developing world.

Keywords: global energy systems, electricity generation, electricity end user, transportation and infrastructure, deploy technologies, innovative organizations.

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5.

Authors: **Valeria A. Gonzalez, Benjamin Varela, Joseph Voelkel**

Paper Title: **Factors Affecting the Setting Time and Compressive Strength of Alkali Activated Ground Granulated Blast Furnace Slag Reinforced with Wollastonite**

Abstract: We conducted a Design of Experiments to analyze and optimize the effect of the SiO2/K2O , H2O/K2O molar ratios of a Potassium base activating solution, slag/solution, Wollastonite/Slag mass ratios and mixing amount in the compressive strength and setting time of alkali activated Ground granulated Blast Furnace Slag. It was found that the total amount mixed had little to no effect in the compressive strength and the setting time. The setting time was largely affected by the slag/solution mass ratio followed by the SiO2/K2O molar ratio in the activating solution. For the compressive strength the larges correlation was found in the joint effect of the slag/solution and Wollastonite/slag mass ratios. The optimum formulation had seventh day compressive strength of 8000 Psi (55 Mpa) and setting time of 36 minutes was found when the activating solution had molar ratios of SiO2/K2O =1, H2O/K2O =10 and mass ratios of slag/solution = 1.75 and Wollastonite/Slag=0.37.

Keywords: Geopolymers, Alkali Activation, Ground Granulated Blast Furnace Slag, Non-Traditional Cements, Wollastonite, Design of Experiments.

23-28

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6.

Authors: **R. Sampath, A. Saradha**

Paper Title: **Analysis of Brain Images to Detect the Alzheimer's Disease Using Segmentation Approach**

Abstract: Brain image analysis is an important area under medical research. The brain image analysis results to detect brain diseases. A lot of researches are going on in medical image analysis along with this segmentation is also used in analysis of medical images. Alzheimer's disease is the most common type of senile dementia. Low brain activity and blood flow causes greater risks for strokes or Alzheimer's diseases. A lot of researches are going on for segmenting the medical images automatically. Hippocampus is the component of brain. It plays an important role in the normal behavior of human beings. It takes many hours for a specialist to segment the hippocampus manually. There are many techniques available for segmentation process. A modified approach based on the watershed algorithm for segmenting the hippocampus region. The brain images converted into binary form using two approaches. The first approach implements block mean, mask and labeling concepts and in the second approach tophat, mask and labeling concepts have been implemented. It is found that certain part of the image contains holes which interrupt the segmentation process. To overcome this image hole filling techniques are implemented and related components are grouped into connected components. The analysis of hippocampus structure and shape analysis will result in classifying the Alzheimer's disease.

Keywords: Alzheimer's disease, MRI, Segmentation, Hippocampus.

29-32

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7.

Authors: **Aishvarya Bansal**

Paper Title: **Computerised Human Resource Information System– An Emerging Trend for Managing Human Resources**

Abstract: A Computerised Human Resource Information System makes use of computer software to manage data

33-35

about movement of human resources in the organisation. This paper focuses that with globalisation and emergence of MNCs with large pool of employees it has become a necessity for the organisations to have computerised records at one place. The turnover rates, absenteeism and new recruitments taking place in the global marketplace makes it essential for organisations to have effective and efficient HRIS. Nonetheless, Information technology is expected to drive Human Resource Management (HRM) to Strategic Human Resource Management (SHRM) in coming years. This strategic role not only adds important dimension to the HR function, but also raises the competency of HR practitioners and analysts. This paper will highlight the fact that, Human Resource Information System in organizations can gain competitive advantage by leveraging on technology, therefore purpose of this paper is to analyse and compare the current HRIS of MNCs and examine the future scope of growth in HRIS.

Keywords: Human Resource Information System (HRIS), Multi-Nationals (MNCs), Strategic Human resource management System (SHRM), Computerization, Globalisation, Human resources, Human resource analysts

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8.

Authors: **Velvizhi.J, D.Padma Subramanian**

Paper Title: **Performance Enhancement of PV Based Water Pumping System**

Abstract: Design aspects and simulation procedure leading to Performance Enhancement of PV based Water Pumping System is presented in this paper. Design procedure for implementing maximum power from PV panel using Perturb and Observe concept is presented. Step by step methodology to design a Two Inductor boost Converter (TIBC) with auxiliary transformer is discussed. PV panel – TIBC with auxiliary transformer set up is simulated in MATLAB Simulink platform. Analysis is performed with simulation results. Analysis reveals that the efficiency of water pumping is increased with MPPT than when it is used without MPPT and hence performance of water pumping system is enhanced.

Keywords: Photovoltaic panel, Maximum power point tracking, Two inductor boost converter

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36-40

9.

Authors: **Pavithra Mani, Deebitha.S**

Paper Title: **Analysis of Agile Software Development Utilising Cloud Computing Capabilities**

Abstract: The evolution of agile development has changed the method of software development. The agile development strategy was at large missing a development platform for supporting rapid development. Cloud computing provides this necessary acceleration needed to enhance the agile development. This paper describes the link between the agile methods and how cloud computing can aggravate the development phases.

Keywords: Cloud computing, Agile software development

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41-43

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10.

Authors: **Dishant Shah, Hardik Aboti, Chirag Joshi, Vidya Sawant**

Paper Title: **Simulation and Analysis of Rectangular Micro- Strip Patch Antenna for 1.9 GHz using IE3D**

Abstract: A coaxial probe fed rectangular micro-strip patch antenna using glass epoxy dielectric was designed and simulated using IE3D software. The antenna design operates at frequency of 1.9GHz and is suitable for GSM applications for DECT (Digital European Cordless Telephone). Emphasis was on designing and analyzing the rectangular patch so as to improve its directivity and hence causing less danger from harmful radiations while communicating on a wireless handset. Initially the design was simulated using a silicon dielectric substrate and later using glass epoxy substrate in order to improve its results significantly and to reduce the fabrication cost.

Keywords: Micro-strip Antenna, Glass Epoxy, IE3D, GSM-DECT.

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44-47

11.

Authors: **Sundeep Kumar, Shilpi Gupta**

Paper Title: **Design of an Efficient Clustering Using GNG and SOM**

Abstract: Clustering is the process of grouping the data into classes so that objects have the high similarity in comparison to one another object within a cluster. Because they are very dissimilar to object in other clusters. Dissimilarities are assessed based on the attribute value describing the object. Different types of raw data are available on the World Wide Web. Various data mining techniques can be applied on raw data to manage and organize like data preprocessing. The preprocess data is achieved through data cleaning, data reduction and data integration algorithm which can be used in variety of applications such as Clustering, Neural Network, association rules, and sequential pattern etc. In this paper we performed the data preprocessing activities like data cleaning, data reduction, data integration and related algorithm. A novel approach Growing Neural Gas and Self Organizing Maps algorithms is introduced and apply on preprocess data for clustering and performance evaluated through certain parameter error graph, time elapsed and mean weight difference kind of clustering.

Keywords: Clustering, Growing Neural Gas (GNG), SOM (Self Organizing Map), Data Preprocessing.

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48-51

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Authors: **N. Mohan Teja, R S Ravi Sankar, Talath Anjum, P.Sanjay**

Paper Title: **Waveform Analysis of New Diode Clamped and Cascaded H-Bridge Multilevel Inverters with PWM Technique**

Abstract: This paper presents the waveform analysis of new diode clamped and cascade H-bridge multilevel inverters using Pulse width modulation technique. Multilevel voltage source converters are emerging as a new breed of power converter options for high-power applications. The multilevel voltage source converters typically synthesize staircase voltage wave from several levels of dc capacitor voltages. One of the major limitations of the multilevel converters is the voltage unbalance between different levels. The techniques to balance the voltage

52-55

between different levels normally involve voltage clamping or capacitor charge control. An analysis of how existing multilevel carrier-based PWM affect switch utilization for the different levels of a new diode clamped and H-bridge inverter are conducted and compared.

Keywords: Clamping Diodes, cascaded H-bridge inverter, Multi Level Inverter, Pulse Width Modulation

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13.

Authors: **Mala Dutta, Kamal K Sethi, Ajay Khatri**

Paper Title: **Web Based Integrated Development Environment**

Abstract: Integrated Development Environment is an application which provides facilities to programmer for software development such as code completing and fixing, source code editing and management, automated testing, etc. Software is rapidly moving from the desktop to the Web. The Web provides a generic user interface that allows ubiquitous access, instant collaboration, integration with other online services, and avoids installation and configuration on desktop computers. Moving IDEs to the Web is not just a matter of porting desktop IDEs, a fundamental reconsideration of the IDE architecture is necessary in order to realize the full potential that the combination of modern IDEs and the Web can offer. This paper discusses implementation of Web based IDE environment for compilation and execution of codes written in different languages like C, C++, C#, VB, Java, Pascal, Perl, Python, Ruby, Fortran, PHP, SQLite, CSS, HTML, JavaScript, VBScript languages. Users can edit, write, compile, debug and store their code on server. Users need not to spend their time for finding and installing an IDE for different languages. User can use IDE in any device like PC, tablet and mobile devices which has browser with internet connection. Web Based IDE can be used in low configuration systems also.

Keywords: Integrated Development Environment, Web, Compiler, programs.

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14.

Authors: **Shilpa G. Nikam, S.K. Wagholikar, G.R. Patil**

Paper Title: **Seismic Energy Disssipation of a Building Using Friction Damper**

Abstract: Conventional methods of seismic rehabilitation with concrete shear walls or steel bracing are not considered suitable for some buildings as upgrades with these methods would have required expensive and time consuming foundation work. Supplemental damping in conjunction with appropriate stiffness offered an innovative and attractive solution for the seismic rehabilitation of such structures extensive use of friction joints in new and retrofitted buildings has demonstrated the economic advantages of this form of device to control the amplitude of building motion due to seismic action. The paper highlights in particular the use of friction devices in conjunction

with rigid structural frames, either steel or concrete. The introduction of supplemental damping provided by friction devices dramatically reduces forces on structure, amplitude of vibration and floor acceleration.

Keywords: Friction damper, slip load, Hysteresis, Energy Dissipation

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15.

Authors: **Chinta Someswara Rao, Bhadri Raju MSVS**

Paper Title: **Privacy Measure for Publishing the Data- A Case Study**

Abstract: Privacy-maintaining data release is one of the most important challenges in an information system because of the wide collection of sensitive information on the World Wide Web (WWW). Many solutions have been proposed by several researchers for privacy-maintaining data release. This paper provides an inspection of the state-of-the-art methods for privacy protection. The paper discusses novel and powerful privacy definitions which can be categorized into micro data anonymity methods and differential privacy methods for privacy- maintaining data release. The methods include K-anonymity, L-diversity, T-closeness and JS-reduce defense. This paper proposes a study which will provide sequential background knowledge and provides some anonymization.

Keywords: WWW, Privacy preserving, K-Anonymity; L-Diversity; T-Closeness; JS-Reduce.

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65-67

16.

Authors: **V. Narayani, S.Raj Kumar**

Paper Title: **Replenish Approach in Non Homogeneous Structured Dataset Using Interpolation Techniques**

Abstract: Replenish approach refers to the behavior of filling the fill the gaps in a table. Suppose that one has a table listing the population of some country in 1970, 1980, 1990 and 2000, and that one wanted to estimate the population in 1994.It lead us to implement the Numerical methods scxenario to solve this issue.The basic operation of linear interpolation between two values is so commonly used in computer graphics that it is sometimes called alerp in that field's jargon. The term can be used as a verb or noun for the operation. e.g. "Bresenham's algorithm lerps incrementally between the two endpoints of the line.". The behaviors in Distributed Database environment are joining a relation, sharing resources, extraction on queries, etc. we aim to learn to predict the missed datum in distributed database. The connections in this environment are not homogenous. To address the interdependency among data instances, relational learning has been proposed, and collective inference based on network connectivity is adopted for prediction. However, the connections in distributed database are often multi-dimensional. The heterogeneity presented in network connectivity can hinder the success of collective inference. Interpolation-based approach has been shown effective in addressing the heterogeneity of connections presented in distributed database system. The scale of these networks entails scalable learning of models for replenish prediction. This scheme is very sensitive to handle heterogeneity of distributed database system.In this paper we aim to predict the heterogeneity of two different environments by applying the interpolation schema which result the expected tuples. This method improves the performance of data extraction. Handling the heterogeneity of all distributed environments will be the future work.

Keywords: Data mining, DDBMS, Interpolation, Replenish, Replication.

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17.

Authors: **Mousa Kadhim Wali, Md. Hussein Baqir, Majid S. Naghmash**

Paper Title: **Facial Expression Detection Based On Local Binary Pattern and Back Propagation Neural Network**

Abstract: Facial expression has always been used to show human's feeling. There are many types of human's emotion. Nevertheless, there are six primary emotions are shown in the similar way by people throughout the world regardless of culture, which are sadness, anger, happiness, fear, disgust and surprise. Since facial expressions are universal, therefore utilizing them to create several applications is possible. Face detection is crucial process where it would directly affect the emotion detection accuracy. So, this work utilizes Open CV implementation of Viola-Jones face detection library to detect faces automatically using Japanese Female Facial Expression database. Image processing and emotional classification was done in Matlab since it has excellent support tools for image processing and neural network training. Four Features namely; contrast, correlation, energy, and homogeneity were extracted based on Gray-Level Co-occurrence Matrix method after preprocessing by histogram and adaptive filter. Back propagation neural network been used in this research which yield of 87.5 % detection accuracy. A Graphical User Interface (GUI) was developed using Graphical User Interface Development Environment in Matlab.

Keywords: Facial, BPNN, LBP, GLCM

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72-77

18.

Authors: **K.N.Jayachandran, N.Nithin, D.Thanikaivel Murugan**

Paper Title: **CFD Analysis on Performance of Open and Closed Single Cavity Based Scramjet Combustion at Mach 2**

Abstract: The proposal of supersonic combustion has become inevitable to fly at hypersonic speeds, but the problem of efficient mixing, flame holding and flame stabilization in supersonic combustors is yet to be overcome. Cavity based flame holders, which was used in subsonic combustors earlier is now extensively studied as supersonic combustor flame holders. The mixing characteristics of supersonic cavity flame holders depend on the formation of subsonic recirculation zone inside it. In this paper, open and closed single cavities with and without aft wall angle are analyzed to find out the optimum cavity configuration among them. The geometry was designed in ANSYS Design Modeler and the numerical analysis was done in ANSYS FLUENT 13.0 using the two dimensional density based energy equation and the turbulent characteristics are modeled using standard k-ε turbulence model. The contours of static pressure, static temperature, turbulence kinetic energy, total pressure and x-velocity were taken along the model length for comparison. From the results obtained, it is observed that cavity with L/D=10 and 45° aft wall angle showed better performance in terms of mixing characteristics and flame holding capability with no significant increase in total pressure loss compared to the other models. Single cavities with L/D=10 as well as cavities with aft wall angle showed better performance compared to single cavities with L/D=5 and with no aft wall angle respectively.

78-83

Keywords: aft wall angle, supersonic combustion, single cavity, turbulence kinetic energy

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19.

Authors:	**Prasanth C, Saavan Ravindranath, A.Samraj, T.Manikandan**
Paper Title:	**Mode-I Fracture Analysis of Thermally Aged of Glass and Glass-Carbon Hybrid Composites**

Abstract: Fibre reinforced polymer composites find application in domains leading from aerospace to sports gear manufacturing, however the influence of environmental factors such as temperature, and corrosion adversely affects their structural integrity. The objective of the research endeavour is to characterize the fracture toughness behaviour of glass/epoxy and glass-carbon hybrid fibre reinforced composites under detrimental thermal aging conditions. The tests were conducted to predict the mechanical behaviour of both normal and exposed specimens at different thermal aging conditions. The study focuses on the Mode-I Interlaminar Fracture Toughness in terms of strain energy release rate G_I of FRP composites under three different temperatures (-10°C,-20°C and room temperature) with three different aging periods of 150 hours, 300 hours and 500 hours. The energy release rate of material has reduced from room temperature to low temperature due to the catastrophic state of crack propagation. From the final test carried out after 500 hours of aging, the energy release rate of glass-epoxy aged specimens decreases to 10-15% to that of pristine specimens of same material at -20°C but for glass-carbon hybrid specimens the decrease in order of 5-10%. Hence more changes were observed in glass/epoxy specimen than that of hybrid due to an interfacial failure between fibres. The failure mechanism is initiated with matrix cracking at room temperature to fiber shrinkage and fiber breakage at low temperatures. The micro structural failure of pristine and thermally exposed specimens was studied by SEM image.

Keywords: Glass-epoxy and Glass-Carbon hybrid composites, Mode-I interlaminar fracture toughness, Energy release rate, Thermal aging.

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84-89

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