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	Paper Title:	Synthesis, 2DNMR and Crystal Structure Analysis of Piperidin - 4 - one Derivatives	
	<p>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.</p> <p>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.</p> <p>References:</p> <ol style="list-style-type: none"> O. P. Agarwal, "Chemistry of Organic Natural Products", Goel Publishing House Meerut., Vol 1, 2002. L. Finer, "Organic Chemistry" ELBS., Vol 2, 1975. V. Baliah, V. Gopalakrishnan, R. Jeyaraman, Indian. J.Chem, Soc.,Sec.B, 6B, 1978, 1065. V. Baliah, R. Jeyaraman. Indian.J.Chem., 15B, 1977, 1207. Baliah, V.;Jeyaraman, R. Indian.J.Chem., 9, 1971, 1020. M. I. Fazal Mohamed, M. Krishnapillay, Indian J.Chem., 70, 1993, 258. C. Noller, V. Baliah, J.Am.Chem. Soc., 70, 1948, 3853. V. Baliah, A. Ekambaram, T. S. Govindarajan, Curr. Sci., 23, 1954, 264. V. Baliah, T. S. Govindarajan, Curri. Sci., 23, 1954, 91. V. Baliah, A. Ekambaram, J.Indian. Chem. Soc., 33, 1955, 274. V. Baliah, V. Gopalakrishnan, J.Indian. Chem. Soc., 31, 1954, 250. M. I. Fazal Mohamed, M. Krishna Pillay, Indian. J. Chem., 36B, 1997, 50. M. I. Fazal Mohamed, M. Krishna Pillay, Indian. J. Heterocyclic chem., 9, 2000, 209. M. Seeni Mubarak, et al., Oriental J. Chem., 27(1), 2011, 333. V. Baliah, R. Jeyaraman, Indian.J.Chem., 9, 1971, 1020. D.B. Lovejoi, D.R. Richardson, Blood., 100(2), 2002, 666. M. Hong, H. Yill, D. Wang, Z. Gao, Acta Cryst., E 61, 2005, m801. B. Sireesha, B. Krishna Rao, Sarala Devi Ch, P. Raghavaiah, Indian J.Chem, 47B, 2008, 592. Refat El-Sayed, Indian J.Chem., 45(A), 2006, 738. Thomas Steiner, J. Molec Struct., 39, 1998, 447. C. Katika, D. Vesna, K. Vlado, G. M. Dora, B. Aleksandra, Molecules., 6, 2001, 815. Padmaja, Aliya Begum, P. Ragavaiah, Indian J.Chem., 50B, 2011, 326-329. Afshan Banu, D. E. Vasundhara, S. Ravi, Lamani, J.Saudi Chem Soc., 17, 2013, 211-217. 		1-4
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	Paper Title:	Design and Simulation of Pulse Code Modulation Multiplexing (PCMM) and De-Multiplexing Technique in MATLAB	
	<p>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.</p> <p>Keywords: PCMM, Multiplexing techniques, PCM with MATLAB, PCMM simulation.</p> <p>References:</p> <ol style="list-style-type: none"> Jon G. van Boss, 'signaling in telecommunication networks', 2007. Horan, S., Introduction to PCM Telemetering Systems, 2nd Edition, CRC PRESS, 2002 Roger L. freeman, 'fundamentals of telecommunication', 1999. George F. Pfeifer, Pulse Modulation and Demodulation, 2004. Steven T. Karris, Introduction to Simulink® with Engineering Applications, 2006 Chen-Nee Chuah, 'Capacity Scaling in MIMO Wireless Systems Under Correlated Fading', IEEE, 2002 Botao Miao, R.egan Zane, 'A Modified Cross-Correlation Method for System Identification of Power Converters with Digital Control', IEEE, 2004 Jing Yang, 'delay minimization In multiple access channels', IJEEE, 2009. 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	
	<p>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</p>		9-13

	<p>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.</p> <p>Keywords: cold rolling, plastic deformation, design methodologies, housing, rolls, Split end, central burst</p> <p>References:</p> <ol style="list-style-type: none">1. Dixit U.S., Robi P.S., D.K. Sarma, 2002, 'A systematic procedure for the design of cold rolling mill', Journal of material processing Technology 121, (2002), Pages 69-76.2. Antonsson E.K., Otto K.N., 1995, 'Imprecision in engineering design', ASME J. Mech. Des. B 117, 1995, 25-32.3. Roberts W.L.1978 , 'Cold Rolling of Steel', Marcel Dekker, New York, 1978.4. Avitzur B., Van Tyne C.J., Tureczyn S. 1988 , 'The prevention of central bursts during rolling', ASME J. Eng. Ind. 110 (1988), 173-178.5. Zhu Y.D., Avitzur B.,1988 , 'Criteria for prevention of split ends', ASME J. ENG. Ind. 110 (1988) 162-178.6. SDRC report project number 17140, June1990, 'Final Report on ARMCO Mill StandEvaluation', June1990.7. Steven,G. P., 2002, 'Multicriteria optimization that minimizes maximum stress and maximizes stiffness', Computers & Structures Volume 80, Issues 27-30 , November 2002, Pages 2433-24488. Rong J. H.,2001, 'An improved method for evolutionary structural optimization against buckling' Computers & Structures ,Volume 79, Issue 3 , January 2001, Pages 253-263.9. Kurt Maute, 2004, 'An interactive method for the selection of design criteria and the formulation of optimization problems in computer aided optimal design', Computers Volume 82, Issue 1 , January 2004, Pages 71-7910. Theodore G. ToRidis,1971, 'Computer analysis of rigid frames, Computers', Volume 1, Issues 1-2 , August 1971, Pages 193-221.11. William Prager ,1972, 'Conditions for structural optimality', Computers & Structures', Volume 2, Issues 5-6 , 1972, Pages 833-84012. Rafael Febres, 2003, 'Modeling of local buckling in tubular steel frames subjected to cyclic loading' , Computers & Structures ,Volume 81, Issues 22-23 ,September 2003.13. Mahmoud K. G.1997,1987, 'An efficient approach to structural optimization ' Computers & Structures Volume 64, Issues 1-4 , July-August 1997, Pages 97-112 Computational Structures Technology14. Braibant V.1987, 'Optimization techniques: Synthesis of design and analysis' , Finite Elements in Analysis and Design Volume 3, Issue 1 , April 1987, Pages 57-7815. Yunliang Ding,1989, 'Multilevel optimization of frames with beams including buckling constraints' , Computers Volume, 1989, Pages 249-26116. El-Sayed M. E. M.,1990, 'Structural optimization with fatigue life constraints' , Engineering Fracture Mechanics Volume 37, Issue 6 , 1990, Pages 1149-115617. Haririan M.1987, 'Use of ADINA for design optimization of nonlinear structures' ,Computers & Structures Volume 26, Issues 1-2 , 1987, Pages 123-13318. Michael A. Vehmeier,1990, 'A new method for simultaneous structural/control optimization' Mathematical and Computer Modeling Volume 14 , 1990, Pages 248-25319. Tselikov,1962., A.I., Theory of calculation of forces in Rolling Mills 1962.20. SAE Bearings manual.					
	<table><tr><td>Authors:</td><td>Md.Minhaj Ahmed</td></tr><tr><td>Paper Title:</td><td>Innovative Technologies and Organizations in Global Energy Systems</td></tr></table>	Authors:	Md.Minhaj Ahmed	Paper Title:	Innovative Technologies and Organizations in Global Energy Systems	
Authors:	Md.Minhaj Ahmed					
Paper Title:	Innovative Technologies and Organizations in Global Energy Systems					
	<p>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.</p> <p>Keywords: global energy systems, electricity generation, electricity end user, transportation and infrastructure, deploy technologies, innovative organizations.</p> <p>References:</p> <ol style="list-style-type: none">1. R.E.H.M. Smits, Innovation studies in the 21st century, Technological Forecasting and Social Change 69 (2002) 861-883.2. B. Carlsson, R. Stankiewicz, On the Nature, Function, and Composition of Technological systems, Journal of Evolutionary Economics 1 (1991) 93-118.3. S. Jacobsson, A. Johnson, The Diffusion of Renewable Energy Technology: An Analytical Framework and Key Issues for Research, Energy Policy 28 (2000) 625-640.4. C. Freeman, The 'National System of Innovation' in historical perspective, Cambridge Journal of Economics 19 (1995) 5-24.5. B.-Å. Lundvall, Innovation as an interactive process: from user-producer interaction to the national system of innovation, in: G. Dosi, C. Freeman, R. Nelson, G. Silverberg, and L. Soete (Eds.), Technical Change and Economic Theory Innovation as an interactive process: from user-producer interaction to the national system of innovation, Pinter, London, 1988.6. M.P. Hekkert, R.A.A. Suurs, S.O. Negro, S. Kuhlmann, R.E.H.M. Smits, Functions of Innovation systems: A new approach for analyzing technological change, Technological Forecasting & Social Change 74 (2007) 413-432.7. R.A.A. Suurs, Motors of sustainable innovation. Towards a theory on the dynamics of technological innovation systems (Thesis), Utrecht University, Utrecht, 2009.8. B. Carlsson, R. Stankiewicz, On the Nature, Function, and Composition of Technological systems, Journal of Evolutionary Economics 1 (1991) 93-118; page 111.9. C. Edquist, B. Johnson, Institutions and organizations in systems of innovation, in: C. Edquist (Eds.), Systems of Innovation - Technologies, Institutions and Organizations Institutions and organizations in systems of innovation, Pinter, London, 1997.10. D.C. North, Institutions, Institutional Change and Economic Performance, Cambridge University Press, New York, 1990.11. W.R. Scott, Institutions and Organizations, Sage Publications, London, UK, 2001.12. H. Van Lente, Promising Technology - Dynamics of Expectations in Technological Developments (Thesis), Twente University, Enschede, 1993.	14-22				

	<p>13. H. Van Lente, A. Rip, Expectations in Technological Developments: An Example of Prospective Structures to be Filled in by Agency, in: C. Disco and B. van der Meulen (Eds.), Getting New Technologies Together Expectations in Technological Developments: An Example of Prospective Structures to be Filled in by Agency, Walter de Gruyter, Berlin - New York, 1998.</p> <p>14. R.A.A. Suurs, Motors of sustainable innovation. Towards a theory on the dynamics of technological innovation systems (Thesis), Utrecht University, Utrecht, 2009 p. 45-46.</p> <p>15. A. Bergek, Shaping and Exploiting Technological Opportunities: The Case of Renewable Energy Technology in Sweden (Thesis), Chalmers University of Technology, Göteborg, Sweden, 2002.</p> <p>16. A. Bergek, S. Jacobsson, B. Carlsson, S. Lindmark, A. Rickne, Analyzing the functional dynamics of technological innovation systems: A scheme of analysis, Research Policy 37 (2008) 407-429.</p> <p>17. M.P. Hekkert, R.A.A. Suurs, S.O. Negro, S. Kuhlmann, R.E.H.M. Smits, Functions of Innovation systems: A new approach for analyzing technological change, Technological Forecasting & Social Change 74 (2007) 413-432</p>	
5.	<p>Authors: Valeria A. Gonzalez, Benjamin Varela, Joseph Voelkel</p> <p>Paper Title: Factors Affecting the Setting Time and Compressive Strength of Alkali Activated Ground Granulated Blast Furnace Slag Reinforced with Wollastonite</p> <p>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 largest 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.</p> <p>Keywords: Geopolymers, Alkali Activation, Ground Granulated Blast Furnace Slag, Non-Traditional Cements, Wollastonite, Design of Experiments.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Fernandez-Jimenez A., Palomo J.G., Puertas F., 1999, Cem. Concr. Res. 29, 1313 2. Harditjo D., Rangan B.V., 2005, Development and properties of low calcium fly ash based geopolymer concrete, Curtin University of Technology 3. Nyco Minerals, 2012, Wollastonite, one mineral, a world of applications 4. Puertas F., 1995, Mater. Construcc., 239, 53 5. Purdon A.O., 1940, JSCI, 59, 191 6. Shi C.P., Krivenko P.V., Della R., 2006, Alkali-Activated cements and Concretes, Taylor & Francis 7. Silva F.J., Thaumaturgo C., 2002, Fatigue Fract. Eng. Mater. Struct., 26, 167 8. Tailing B., Brandstettr J., 1989, Proc., 3rd Int. Conf. Fly Ash Silica Fume, Slag, Natural Pozzolans in Concrete., Trondheim, p. 1519 9. U.S. Environmental Protection Agency., 2009, Using Recycled Industrial Materials in 10. Roadways. http://www.epa.gov/wastes/conservation/imr/pdfs/roadways.pdf. Accessed: 12/16/2013 11. Van Oss H.G., 2012, Cement, Minerals Commodity Summaries, United States Geological Survey 12. Wang S.D., Pu X.X., Scrivener P.L., 1995, Adv. Cem. Res., 7, 93 	23-28
6.	<p>Authors: R. Sampath, A. Saradha</p> <p>Paper Title: Analysis of Brain Images to Detect the Alzheimer's Disease Using Segmentation Approach</p> <p>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.</p> <p>Keywords: Alzheimer's disease, MRI, Segmentation, Hippocampus.</p> <p>References:</p> <ol style="list-style-type: none"> 1. S. Matoug, A. Abdel-Dayem, K. Passi, W. Gross and M. Alqarni, "Predicting Alzheimer's disease by classifying 3D-Brain MRI images using SVM and other well-defined classifiers", IOP journal publication, 2011 2. B. Al-Naami, N. Gharaibeh, and A. AlRazzaq Kheshman, "Automated Detection of Alzheimer Disease Using Region Growing technique and Artificial Neural Network", ELSEVIER journal publication, 2013 3. Ceyhun Burak Akgul, Devrim Unay, Ahmet Ekin "Automated Diagnosis of Alzheimer's Disease using Image Similarity and User Feedback", 2006 4. Luiz K. Ferreira a,*, Breno S. Diniz b, Orestes V. Forlenza b, Geraldo F. Busatto a, Marcus V. Zanetti a, "Neurostructural predictors of Alzheimer's disease: A meta-analysis of VBM studies", 2009 	29-32
7.	<p>Authors: Aishvarya Bansal</p> <p>Paper Title: Computerised Human Resource Information System– An Emerging Trend for Managing Human Resources</p> <p>Abstract: A Computerised Human Resource Information System makes use of computer software to manage data</p>	33-35

	<p>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.</p> <p>Keywords: Human Resource Information System (HRIS), Multi-Nationals (MNCs), Strategic Human resource management System (SHRM), Computerization, Globalisation, Human resources, Human resource analysts</p> <p>References:</p> <ol style="list-style-type: none"> 1. Modern Human Resource Management by Dr. C.B. Gupta. Sultan Chand & sons. First Edition: 2013 ISBN: 978-81-8054-95-0 2. Fundamentals of Human Resource Management by T.N. Chhabra. Sun India Publications. Second revised edition 2014. ISBN: 978-93-80674-59-9 3. Byars, Lloyd L. & Rue, Leslie W. (2004). Human Resource Management, 7e. The McGraw-Hill Companies. 4. http://www.whatishumanresource.com/human-resource-information-systems 5. http://www.comparehris.com/Human-Resource-Information-Systems/ 6. http://smallbusiness.chron.com/advantages-human-resource-information-system 1160.html 7. http://www.issbs.si/press/ISBN/978-961-6813-10-5/papers/ML12_029.pdf 8. http://humanresources.about.com/ 	
	<p>Authors: Velvizhi.J, D.Padma Subramanian</p> <p>Paper Title: Performance Enhancement of PV Based Water Pumping System</p>	
8.	<p>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.</p> <p>Keywords: Photovoltaic panel, Maximum power point tracking, Two inductor boost converter</p> <p>References:</p> <ol style="list-style-type: none"> 1. Aseem Sayal, "MPPT Techniques for Photovoltaic System under Uniform Insolation and Partial Shading Conditions", IEEE , 2012 2. Hyun-Lark Do , ' Soft Switching DC/DC Converter With High Voltage Gain', IEEE Transactions on Power Electronics, vol. 25, no. 5 , pp.1193-1200, 2010. 3. Huan-Liang Tsai , 'Development of Generalized Photovoltaic Model Using MATLAB/SIMULINK' Proceedings of the World Congress on Engineering and Computer Science 2008, WCECS , October 22 - 24, San Francisco, USA. 4. Joao Victor , Mapurunga Caracas 'Implementation of a high efficiency, high lifetime and low cost converter for an autonomous photovoltaic water pumping system', IEEE proceedings 2013. 5. Kwon.M.J and Kwon B.H. ' High step up active clamp converter with input- current doubler and output voltage doubler for fuel cell power system' IEEE Transactions on Power Electronics, vol. 24, no.1, pp 108-115, 2009. 6. Marcelo Gradella Villalva, Jonas Rafael Gazoli, and Ernesto Ruppert Filho , 'Comprehensive Approach to Modeling and simulation of Photovoltaic Systems', IEEE Transaction on Power Electronics , vol. 24, no. 5, 2009. 7. Moacyr Aureliano Gomes de Brito, Luigi Galotto, Jr., Leonardo Poltronieri Sampaio, Guilherme de Azevedoe Melo, and Carlos Alberto Canesin, 'Evaluation of the Main MPPT Techniques for Photovoltaic Applications', IEEE Transactions on Industrial Electronics vol. 60, no. 3, March 2013. 8. Tat Luat Nguyen and Kay-Soon Low, 'A Global Maximum Power Point Tracking Scheme Employing DIRECT Search Algorithm for photovoltaic Systems', IEEE Transactions on Industrial Electronics, vol. 57, no. 10, 2012. 9. Yie -Tone Chen ,Shin-Ming Shiu , and Ruey - Hsun Liang, "Analysis and Design of a Zero-Voltage-Switching and Zero-Current-Switching Interleaved Boost Converter", IEEE Transactions on Power Electronics , vol. 27, no. 1, January 2012. 10. Yungtaek Jang and Milan M. Jovanovic , "New Two-Inductor Boost Converter With Auxiliary Transformer", IEEE Transactions on Power Electronics, vol. 19, no. 1, January 2004. 11. Velvizhi.J "Performance Enhancement of PV based water pumping systems", December 2013; M.E thesis submitted to Anna University. 	36-40
	<p>Authors: Pavithra Mani, Deebitha.S</p> <p>Paper Title: Analysis of Agile Software Development Utilising Cloud Computing Capabilities</p>	
9.	<p>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.</p> <p>Keywords: Cloud computing, Agile software development</p> <p>References:</p> <ol style="list-style-type: none"> 1. Kalem, S., Donko, D., & Boskovic, D., "Agile Methods for Cloud Computing". Proceedings of 36th International Convention on Information & Communication Technology Electronics & Microelectronics (MIPRO) , IEEE , 2013. 2. Huth, Alexa, and James Cebula. "The Basics of Cloud Computing." United States Computer (2011). 3. Bramhane, Rahul S., Vishakha R. Mote, and Yogita S. Pagar. "Cloud computing, risks and rewards." World Journal of Science and Technology 2.3 (2012). 4. Kramer, Frederik. "MUSINGS ON THE CLOUD-A CUSTOMER ORIENTED CONCEPT FORMATION ON CLOUD COMPUTING 	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.	
11.	References: <ol style="list-style-type: none"> Constantine A. Balanis "Antenna Theory: Analysis and Design" Wiley Publications Raied A. R. Ibrahim, Mustapha C.E. Yagoub, Riadh W. Y. Habash, "Microstrip Patch Antenna for RFID Applications" School of Information Technology and Engineering, University of Ottawa, Ottawa, Ontario. Canada. Er Nitin Agarwal, Dr.D.C.Dhubkary, Er Rinkesh Mittal "Designing & Testing of Rectangular Micro strip antenna operating at 2.0 GHz using IE3D" Global Journal of Researches in Engineering Volume 11 Issue 1 Version 1.0, February 2011 V.Harsha Ram Keerthi, Dr.Habibullah Khan, Dr.P.Srinivasulu, "Design of C-Band Microstrip Patch Antenna for Radar Applications Using IE3D" IOSR Journal of Electronics and Communication Engineering (IOSR-JECE) e-ISSN: 2278-2834,p- ISSN: 2278-8735. Volume 5, Issue 3 (Mar. - Apr. 2013), PP 49-58 www.iosrjournals.org Vinod K. Singh, Zakir Ali, Dr Shahanaz Ayub, "Design of Compact Rectangular Slot Micro strip Antenna for Mobile Communication" Global Journal of Researches in Engineering, Vol. 10 Issue 7 (Ver 1.0), December 2010 Chandan, B.S.Rai, R.K.Prasad "Improve Bandwidth by S Shaped Microstrip Patch antenna" International Journal of Emerging Trends in Engineering and Development Issue 3, Vol.1, January 2013 	44-47
	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.	
12.	References: <ol style="list-style-type: none"> Vaishali A. Zilpe, Dr. Mohammad Atique, 2011. "Neural Network Approach for Web Usage Mining" National Conference on Emerging Trends in Computer Science and Information Technology (ETCSIT). N Tyagi, A. Solanki and S. Tyagi, 2010. "An algorithmic Approach to Data Pre-processing in Web Usage Mining", Int. Journal of Information Technology and Knowledge Management, Volume 2, No. 2, pp. 279-283. Shyam M. Guthikonda, 2005. "Kohonen Self-Organizing Maps", shyamguth ATgmail.com Wittenberg University Melody Y. Kiang, 2001, "Extending the Kohonen Self-Organizing Map Networks for Clustering Analysis" Computational Statistics & Data Analysis 38, pp 161-180. Rajashree Y.Patil, Dr. R.V.Kulkarni, 2012. "A Review of Data Cleaning Algorithms for Data Warehouse Systems", International Journal of Computer Science and Information Technologies, Vol. 3(5), 5212 – 5214. Anshuman Sharma, 2011. "Web Usage Mining Using Neural Network", International Journal of Reviews in Computing 10th April 2012. Vol. 9. http://www.w3.org/Daemon/user/config/logging.html common - log – file -format. HUILIN YE, BRUCE W.N. LO, 2000. "Feature Competitive Algorithm for Dimension Reduction of the Self-Organizing Map Input Space", Kluwer Academic Publishers, Manufactured in the Netherlands, Applied Intelligence 13, 215-230. 	Paper Title: Waveform Analysis of New Diode Clamped and Cascaded H-Bridge Multilevel Inverters with PWM Technique
	Authors: N. Mohan Teja, R S Ravi Sankar, Talath Anjum, P.Sanjay	
	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	

	<p>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.</p> <p>Keywords: Clamping Diodes, cascaded H-bridge inverter, Multi Level Inverter, Pulse Width Modulation</p> <p>References:</p> <ol style="list-style-type: none"> 1. Jih-Sheng Lai, Fang Zheng Peng, "Multilevel converters- A New Breed Of Power Converters," IEEE Transactions on Industry Applications, VOL. 32, NO. 3, MAY, JUNE 1996. 2. Soern Baekhoej Kjaer member of IEEE, John k. Pedersen senior member of IEEE, And Frede Blaabjerg fellow of IEEE "A Review Of Single-Phase Grid-Connected Inverters For Photovoltaic Modules," IEEE Transactions on Industry Applications, VOL. 41, NO. 5, PP1292-1306. SEP/OCT. 2005. 3. Xiaoming Yuan, Ivo Barbi, "Fundamentals of a New Diode Clamping Multilevel Inverter," IEEE TRANSACTIONS ON POWER ELECTRONICS, VOL. 15, NO. 4, JULY 2000 4. J.S.Lai and F.Z.Peng, "Multilevel converters—A new breed of power converters," IEEE Trans. Ind. Applicat., vol. 32, May/June 1996. 5. A. Rufer, "An aid in the teaching of multilevel inverters for high power applications," in Proc. Rec. IEEE PESC'95, 1995, pp. 347–352. 6. C. Newton and M. Sumner, "Multilevel converters: A real solution to medium high voltage drives?," Inst. Electron. Eng.—Power Eng. J., pp. 21–26, Feb. 1998. 7. F.Z. PENG and J.S. Lai, "A Static VAR Generator Using A Staircase Waveform Multilevel Voltage - Source Converter," IN PROC. PCIM/POWER QUALITY, 1994, PP. 58-66. "Power Converter Options For Power System Compatible Mass Transit Systems," 1994, PP. 285-294. 	
13.	<p>Authors: Mala Dutta, Kamal K Sethi, Ajay Khatri</p> <p>Paper Title: Web Based Integrated Development Environment</p> <p>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.</p> <p>Keywords: Integrated Development Environment, Web, Compiler, programs.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Remote Application Platform Available: http://www.eclipse.org/rap/ 2. Coderun Studio Available: http://coderun.com 3. Koding Available: https://koding.com/ 4. CodeMirror Available: http://codemirror.net/ 5. Cloud IDE Available: https://codenvy.com/ 6. D. Yoo, E. Schanzer, S. Krishnamurthi, and K. Fisler, "We-Scheme: the browser is your programming environment." 7. Python Fiddle http://pythonfiddle.com/ 8. The Eclipse Foundation. Voidspace python online Available: http://www.voidspace.org.uk/ironpython/silverlight/index.shtml. 9. Cloud9 IDE. https://c9.io 10. M. Labs. Mozilla labs: Skywriter. 11. Problets by Amruth N. Kumar http://problets.org/ 12. Suryawanshi Harshal, Rokade Chakrapani Ambhore Ajay, Rathod Sharad, "Compiler as Service over Cloud", International Journal of Computer Applications (0975 – 8887) Volume 70– No.1, May 2013 13. Ansari Mohd. Arshad, Khan Arshiya, Shaikh Sana, Mirza Zainab, "Compilers on Cloud", International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Vol. 2 Issue 9, September - 2013 14. M. Pabitha, T. Selvakumar, S. Punitha Devi "An Effective C, C++, PHP, Perl, Ruby, Python Compiler using Cloud Computing", International Journal of Computer Applications (0975 – 8887) Volume 69– No.7. 15. Mayank Patel "Online Java Compiler Using Cloud Computing", International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-2, Issue-2. 16. A. Rabiyaathul and Basariya k. Tamil Selvi, "Centralized C# Compiler Using Cloud Computing", IJCE Volume 06– No.6, Issue:02, March 2012. 17. Compile Online IDE Available: http://www.compileonline.com 18. Online Compiler Available: http://www.Compilelr.com 19. Lennart C. L. Kats, Richard Vogelij, Karl Trygve Kalleberg, Eelco Visser "Software Development Environments on the Web: A Research Agenda" 20. Codeanywhere Available: https://codeanywhere.net/ 	56-60
	<p>Authors: Shilpa G. Nikam, S.K. Waghlikar, G.R. Patil</p> <p>Paper Title: Seismic Energy Dissipation of a Building Using Friction Damper</p> <p>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</p>	61-64

	<p>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.</p> <p>Keywords: Friction damper, slip load, Hysteresis, Energy Dissipation</p> <p>References:</p> <ol style="list-style-type: none"> 1. Pall, A.S., and Marsh, C. (1979), "Seismic Response of Large Panel Structures using Limited Slip Bolted Joints"Proceedings, Third Canadian Conference on. Earthquake Engineering, Montreal, pp 899-916. 2. Bhaskararao, A. V. and Jangid, R. S. (2006). "Seismic analysis of structures connected with friction dampers." Engineering Structures, 28(5), pp. 690~703. 3. Pall, A. S. and Marsh, C. (1982). "Seismic response of Friction damped braced frames." Journal of Structural Division, ASCE, 108, pp. 1313-1323. 4. Zhou, X. and Peng, L. (2010). "A new type of damper with friction variable characteristics." Earthquake Engineering and Engineering Vibration, 8(4), pp. 507~520. 5. Aiken, I.D.; Kelly, J.M.; Pall, A.S.; "Seismic Response of a Nine-Story Steel Frame with Friction Damped Cross-Bracing", Report No. UCB/EERC -88/17, EERC, Univ. of California Berkeley, 1988 	
15.	<p>Authors: Chintu Someswara Rao, Bhadri Raju MSVS</p> <p>Paper Title: Privacy Measure for Publishing the Data- A Case Study</p> <p>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.</p> <p>Keywords: WWW, Privacy preserving, K-Anonymity; L-Diversity; T-Closeness; JS-Reduce.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Hafner K. And if you liked the movie, a Netflix contest may reward you handsomely [Report] , New York Times, 2006. 2. Fung, Benjamin, Ke Wang, Rui Chen, and Philip S. Yu. , "Privacy-preserving data publishing: A survey of recent developments", ACM Computing Surveys (CSUR) 42, 2010. 3. Samarati, Pierangela. , "Protecting respondents identities in microdata release", IEEE Transactions on Knowledge and Data Engineering, pp.1010-1027,2001. 4. Narayanan, Arvind, and Vitaly Shmatikov. "Robust de-anonymization of large sparse datasets", IEEE Symposium on Security and Privacy, pp. 111-125,2008. IEEE, 2008. 5. Verykios, Vassilios S., Elisa Bertino, Igor Nai Fovino, Loredana Parasiliti Provenza, Yucel Saygin, and Yannis Theodoridis. , "State-of-the-art in privacy preserving data mining", ACM Sigmod Record 33, pp. 50-57, 2004. 6. Aggarwal, Charu C., and S. Yu Philip. A general survey of privacy-preserving data mining models and algorithms. Springer US, 2008. 7. Sweeney, Latanya. , "K-anonymity: A model for protecting privacy", International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems 10, pp. 557-570, 2002. 8. Ciriani, S. De Capitani di Vimercati, S. Foresti, and P. Samarati, "K-Anonymity", Springer US, Advances in Information Security, 2007. 9. Machanavajjhala, Ashwin, Daniel Kifer, Johannes Gehrke, and Muthuramakrishnan Venkatasubramanian. "l-diversity: Privacy beyond k-anonymity", ACM Transactions on Knowledge Discovery from Data (TKDD), 2007. 10. Ninghui Li, Tiancheng Li; Venkatasubramanian, S, "T-Closeness: Privacy Beyond k-Anonymity and l-Diversity", IEEE 23rd International Conference on Data Engineering , pp.106-115, 2007. 11. Riboni, D, Pareschi, L, Bettini, C, "JS-Reduce: Defending Your Data from Sequential Background Knowledge Attacks", IEEE Transactions on dependable and Secure Computing, pp.387-400, 2012. 	65-67
16.	<p>Authors: V. Narayani, S.Raj Kumar</p> <p>Paper Title: Replenish Approach in Non Homogeneous Structured Dataset Using Interpolation Techniques</p> <p>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 scenario 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 lerp 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.</p> <p>Keywords: Data mining, DDBMS, Interpolation, Replenish, Replication.</p> <p>References:</p> <ol style="list-style-type: none"> 1. G. W. Leibniz, C. I. Gerhardt, "Historia et origo calculi differentialis", Mathematische Schriften, vol. 5, pp.392 -410 1971 :Georg Olms 	68-71

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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
	<p>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.</p> <p>Keywords: Facial, BPNN, LBP, GLCM</p> <p>References:</p> <ol style="list-style-type: none"> Morris, C.G and Maisto, A.A. (2002). Psychology: An Introduction. New Jersey: Prentice Hall. Ming-Hsuan Yang; Kriegman, D.J.; Ahuja, N. (2002) "Detecting Faces in Images: A Survey," Pattern Analysis and Machine Intelligence, IEEE Transactions on, vol.24, no.1, pp.34-58. Siraj,F., Aziz, A.A., Sainin, M.S., and Hassin, M. H.M. (2004). The Design of Emotion Detection System to Regulate Human-Agent Interaction. Leon, E., Clarke, G., Sepulveda, F., and Callaghan, V. (2004). Optimised Attribute Selection for Emotion Classification using Physiological Signals. Journal of IEE. Paul Viola and Michael J. Jones, (2004) Robust Real-Time Face Detection, International Journal of Computer Vision 57(2). Mahesh, K.V, (2011). Facial Expression Detection using Principal Component Analysis. Msc Thesis. Ganesh, K.V, Shishir, B, (2008). Recognition of Facial Expression using Gabor Wavelets and Learning Vector Quantization . Shiqing, Z., Xiaoming, Z., and Bicheng, L., (2011) Facial Expression Recognition using Local Fisher Discriminant Analysis. T. Ojala, M. Pietikäinen, D. Harwood, (1996) .A Comparative Study of Texture Measures with Classification Based on Featured Distribution, Pattern Recognition 29 (1) 51–59. Shan, C., Gong, S., and Peter, W.M., (2008). Facial Expression Recognition Based on Local Binary Patterns: A Comprehensive Study. University of London. JAFFE database URL: http://www.kasrl.org/jaffe.html. Accessed date: 4 January 2012 OpenCV. URL: http://opencv.willowgarage.com/wiki/. Accessed date: 8 March 2012. Klimis, S., (2000), Hand Gesture Recognition Using Neural Network , Thesis, School of Electronic and Electrical Engineering, Centre for Vision, Speech and Signal Processing, Surrey University. Sivanandam, S.N., Sumathi, S. and Deepa, S. N., (2011) Introduction to Neural Networks using Matlab 6.0. Mc-Graw Hill Bishop, C.(1995). Neural Networks for Pattern Recognition, Oxford: University Press. Haykin, S. (1999) Neural Networks: A Comprehensive Foundation, 2nd Edition, New Jersey: Prentice Hall. Keally, R. (1999). Artificial Neural Network : An introductory Course. URL:http://www.maths.uwa.edu.au/~rkeally/ann_all/ Accessed date: 18 February 2012. 	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
	<p>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.</p>	78-83

	<p>Keywords: aft wall angle, supersonic combustion, single cavity, turbulence kinetic energy</p> <p>References:</p> <ol style="list-style-type: none">Adela Ben-Yakar and Ronald K. Hanson, "Cavity Flame-Holders for Ignition and Flame Stabilization in Scramjets: An Overview", Journal of Propulsion And Power, Vol. 17, No. 4, Aug 2001.J.Sandeep, K.Bhardwajan, Dr.M.Y.Ali, Dr.P.V.Raman Murti and T.Tirupathi, "Investigation of Supersonic Combustion with cavity based injection in a Scramjet Combustor", IJREAS, Volume 2, Issue 2 (February 2012), ISSN: 2249-3905.K. M. Pandey, P Kalita , K Barman, A. Rajkhowa and S.N.Saikia, "CFD Analysis of Wall Injection with Large Sized Cavity Based Scramjet Combustion at Mach 2", IACSIT International Journal of Engineering and Technology, Vol.3, No.2, April 2011.Oveepsa Chakraborty, Deepak Sharma, K. Obula Reddy and K. M Pandey, "CFD Analysis of CavityBased Combustion of Hydrogen at Mach Number 1.4", Current Trends in Technology and Sciences, ISSN: 2279-0535, Volume:1, Issue: 3, (Nov. 2012).F. Xing, M.M. Zhao and S. Zhang, "Simulations of a Cavity Based Two-Dimensional Scramjet Model", In 18th Australasian Fluid Mechanics Conference Launceston, Australia. 3-7 December 2012.R. Mohamed Arif and S. Sangeetha, "Effect of Ramp-Cavity Injector in Supersonic Combustion", International Journal of Scientific & Engineering Research, Volume 4, Issue 5, May-2013, ISSN 2229-5518.K.M.Pandey and S.K.Reddy K.K., "Numerical Simulation of Wall Injection with Cavity in Supersonic Flows of Scramjet Combustion", International Journal of Soft Computing and Engineering (IJSCE), ISSN: 2231-2307, Volume-2, Issue-1, March 2012.Kyung Moo Kim, Seung Wook Baekand Cho Young Han,"Numerical study on supersonic combustion with cavity-based fuel injection" International Journal of Heat and Mass Transfer, 47 (2004) 271–286.Tarun Mathur, Mark Gruber, Kevin Jackson, Jeff Donbar, Wayne Donaldson, Thomas Jackson and Fred Billig "Supersonic Combustion Experiments with a Cavity-Based Fuel Injector", Journal Of Propulsion And Power, Vol. 17, No. 6, November-December 2001.Dingwu Zhanga and Qiang Wang, "Numerical Simulation of Supersonic Combustor with Innovative Cavity", In International Conference on Advances in Computational Modeling and Simulation. Procedia Engineering 708 – 712.					
	<table><tr><td>Authors:</td><td>Prasanth C, Saavan Ravindranath, A.Samraj, T.Manikandan</td></tr><tr><td>Paper Title:</td><td>Mode-I Fracture Analysis of Thermally Aged of Glass and Glass-Carbon Hybrid Composites</td></tr></table>	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	
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					
	<p>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.</p> <p>Keywords: Glass-epoxy and Glass-Carbon hybrid composites, Mode-I interlaminar fracture toughness, Energy release rate, Thermal aging.</p> <p>References:</p> <ol style="list-style-type: none">Shivakumar S, Dr.Shivarudraiah : "Effect of Temperature on the Hygrothermal and Mechanical Behaviour of Glass-Epoxy laminates" International Journal of Advanced Engineering Technology (2010) 225-231.Han Xiaoping, Han Shenliang, Yu Liang : "A Study on Dynamic Fracture Toughness of Composite Laminates at Different Temperature" composite science and technology 63 (2003) 155-159.Ray BC. Temperature effect during humid ageing on interfaces of glass an d carbon fibers reinforced epoxy composites. J Colloid Interf Sci 2006;298(1):111–7.Jana RN, Bhunia H. Hygrothermal degradation of the composite laminates from woven carbon/SC-15 epoxy resin and woven glass/SC-15 epoxy resin. Polym Compos 2008;29(6):664–9.Haque , M.K. Hossain : "Effect of moisture and temperature on high strain rate behaviour of S2-glass-vinyl Ester Woven Composites", journal of composite materials, sage publications (2003).Dionysis E. Mouzakis ,*, Helen Zoga , Costas Galiotis. "Accelerated environmental ageing study of polyester/glass fiber reinforced composites (GFRPCs)", Composites: Part B 39 (2008) 467–475.R.D. Adams, M.M. Singh : "Low temperature transition in fiber reinforced polymers ", Elsevier science ltd., composites part A 32 (2001) 797-814.Mary J. Mathews, Stephen R. Swanson, "characterization of the interlaminar fracture toughness of a laminated carbon/epoxy composite", Composites Science and Technology 67 (2007) 1489–1498.Velmurugan, Solaimurugan. "Improvements in Mode I interlaminar fracture toughness and in-plane mechanical properties of stitched glass polyester composite" Composites Science and Technology 67 (2007) 61–69.P. Hutapea, F.G. Yuan : "The effect of thermal aging on the Mode-I interlaminar fracture behaviour of a high-temperature IM7/LaRC-RP46 composite" , Elsevier science ltd., composites science and technology 59 (1999) 1271-1286.ASTM D 5528-01 "Standard Test Method for Mode I Interlaminar Fracture Toughness of Unidirectional Fiber-Reinforced Polymer Matrix Composites".M.S. Sham Prasad, C.S. Venkatesha, T. Jayaraju : "Experimental Methods of determining Fracture Toughness of Fiber Reinforced Polymer Composites under Various Loading Conditions", Journal of Minerals & Materials Characterization & Engineering, Vol. 10, No.13, pp.1263-1275, 2011Springer GS. "Environmental effects on composite materials", vol. 1. Lancaster (PA): Technomic Pubnishing Company; 1981.Springer GS."Enivromental effects on composite materials", vol. 2. Lancaster (PA): Technomic Pubnishing Company; 1984.Springer GS." Enivromental effects on composite materials", vol. 3. Lancaster (PA): Technomic Pubnishing Company; 1987.A J Brunner, B R K Blackman and P Davies. "A status report on delamination resistance testing of polymer–matrix composites". Engineering Fracture Mechanics.75: 2779–2794 (2008).Earl JS, Sheno RA. "Hygrothermal ageing effects on FRP laminate and structural foam materials". Composites Part A – Appl S					

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21.	V. Arumugam • S. Sajith • A. Joseph Stanley “Acoustic Emission Characterization of Failure Modes in GFRPLaminates Under Mode I Delamination”, Nondestruct Eval (2011) -0109-5.	