

■ HR Summit 2014

Training and Placement Cell of Institute has conducted an HR summit on 24th February 2014. The theme of this HR summit was “Industry-Institute Interaction for Bridging the Skill Gap”. This meet was inaugurated by Shri. Kishor Patil (CEO and MD) of KPIT Technologies Pune and attended by HR managers from various companies. Around 55 academic members and 40 industry representatives and all the directors of K. K. Wagh Education Society have participated in the HR summit. Principal Dr. K. N. Nandurkar delivered welcome speech and Hon. Shri. Balasaheb Wagh, President K. K. Wagh Education Society felicitated chief guest Shri. Kishor Patil and Mr. Pramod Shahabdkar, TPO of the Institute proposed vote of thanks.



Felicitation of Chief Guest Shri. Kishor Patil (CEO and MD), KPIT Technologies Pune



Key note address by Shri. Kishor Patil-CEO and MD-KPIT Technologies, Pune

During this summit the Mr. Bharat Mewada (HR Manager-Mahindra and Mahindra-Nashik), Mr. Joji George Varghese (Senior Manager - Campus Recruitment Strategic Resourcing Group-L&T InfoTech), Principal Dr. K. N. Nandurkar, Mr. Harshvardhan Gune (CEO-Nashik Engineering Cluster) and Mr. Uday Oak of FIN IQ, Pune shared their views and thoughts in the First session with a theme of “Building Collaborative Programs for Reducing the Skill Gap”.

Mr. Kaustubh Bahadbahde (Sr. Manager, HR-Persistent Systems Pvt., Ltd., Pune), Ms. Kalpana Medbalm (Sr. Manager, Corporate Acquisition Group, Qunnox), Mr. Ankur Sinha (Human Resources, Talent Acquisition Group - Campus Team- Tata Consultancy Services) participated in panel discussion in the second session and its theme was “Innovative Model for Bridging the Skill Gap”.



HR Summit-2014: Speakers of Session I

■ MOU between KPIT Technologies and KKWIEER

During the HR summit on 24-2-2014 an MOU was signed between KPIT Technologies Pune and KKWIEER with a primary goal to develop and foster strategic linkages between the institute and the technical departments at KPIT and also to understand the needs and expectations of both the institute and the organization and to execute relevant identified activity required to meet the needs and expectations therein. As a part of this

MOU, KPIT shall extend: the state of the art and technology for students training, KPIT will participate in knowledge sharing and technical events at K. K. Wagh, KPIT will give the Projects and Internships to students for Undergraduates /MCA and PG students, Nurturing Exchange programs and placement support to students of K. K. Wagh.



Signing of MOU

AUTOBOTIX

Department of Electrical Engineering organized two day workshop on "AUTOBOTIX" during 22-23 February 2014. The workshop is intended for the postgraduate, undergraduate Engineering students and researchers and professionals from industries. Total fifty seven participants participated in this event. The objective of this workshop was to train participants on Robotics Engineering its manufacturing, software programming and model designing to enhance the knowledge of robot. Objective of this workshop is to motivate our students in the direction of "INDIA AS ROBOTICS HUB". Mr. Sakyasing Mahapatra, Director of Sac Robotics introduced various aspects in Robot Design, Manufacturing Assembly, sensors used and various thought process required. Miss. Suchita Mohanty introduced programming, flow chart and execution of program. In this workshop students got robot kit for hands on practice. Students various institutes designed their robots and enjoyed the event.

Visit by Dignitaries



Visit by Prof. Dr. R. B. Mankar, Vice Chancellor, Dr. Babsaheb Technological University, Lonere.



Visit by Prof. Pramod Naik, Director, MSBTE.

ASCEND 2014

Department of MCA and MBA organized a state level technical symposium ASCEND-2014 on 15th February 2014. Various competitions such as Technical Quiz, Java Debugging, Blind Coding, AD MAD Show, Color your idea & Debate Competition were organized. Around 600 students from various colleges of Maharashtra participated in ASCEND-2014. MCA department has organized following events. Technical Quiz consisted of 3 rounds Aptitude Test, Technical Test, Buzzer Round Java Debugging also had 3 rounds Java Test, Syntax error removing, Critical error Removing. Blind Coding consisted of Programming Test, Blind Programming, Output drawing. From every competition, 3 winners were selected. Each winner was awarded with Antivirus CD, Cash Prize, Trophy and Certificate.



ASCEND 2014, State Level Technical symposium was organized by department of MCA and MBA of our Institute on 15th Feb. 2014

Master Student Programme

The Master Student Program is organized every year in K. K. Wagh Institute of Engineering Education and Research by ISTE student's chapter since 2003 and this year it marked its 11th year of success. This program is inspired by a book called "Master Student" prepared by ISTE. The theme usually revolves around the development of technical and non technical skills that an engineering student needs to inculcate in

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his life. The theme of this year's Master Students Program was 'Aspects of becoming a Successful Engineer'. This program focused on different stages of engineering studies. This theme is broadly classified into fourteen subtopics which were presented by fourteen selected student speakers. These speakers are from second year engineering and were mentored by a group of seven students from third year for a period of over three weeks. The speakers delivered a short presentation, each concentrating on the various facets of the given theme. Prof. Dr. K. N. Nandurkar (Principal, K.K.W.I.E.E.R.) and Mr. D. S. Shinde (Trustee, K. K. Wagh Society) graced the event with their presence. The program was conducted for the entire day and it provided an entire spectrum of topics, right from 'What is engineering?' to 'Training and Placement Advice'. It was specially aimed at helping the first year engineering students develop their technical and non technical skills and pursue the right path in their four year journey of engineering.



Prize Distribution

Expert Lecture/Seminar/Courses/Worshop Organized:

- Computer engineering department organized a NIIT Aptitude Exam for the students of SE Computer students on 15th February 2014. Same department, 42 students received certificate from Spoken Tutorial IIT Bombay for PHP/MYSQL Course. Same department organized Microsoft Windows 8.0 Demonstration for SE, TE and BE students and staff on 18th February 2014.
- Electronics & Telecommunication engineering department organized an expert lecture by Mr. Prathamesh Karamalkar, Research Associate, Intelligent System, UK on 'Learning in Artificial Life' on 1st February 2014, an expert lecture of Mr. Archan Oke, Entrepreneur of Wave Systems & Mr. Kartik Mudliyar on 'Organizational structure and key functions' on 5 February 2014, an expert lecture of Shri. Vishal Jategaonkar, Centre Director PT education on 'GD & PI overview' during 6 to 7 February 2014, an expert lecture

of Prof. J. P. Shah, Assistant Professor, KKWIEER on 'Fortune 500 companies' on 7th February 2014, an expert lecture of Prof. P.S. Vispute & Prof. Shilpa Mene, Assistant Professor, KKWIEER on 'Programming in C++' during 6 to 14 February 2014, an expert lecture of Mr. Arpit Ninawane, ELITE academy on Mind Power on 14 February 2014, an expert talk of Dr. V. D. Barve Ex. Principal, KKWIEER on GeoGebra on 14 February 2014. Same department also organized an expert lecture of Ms. Nandita Ray from Ray Academy on 'Orientation Program on soft skills and Personality development' on 14 February 2014, an expert lecture of Shri. Suyog Bhandekar, an expert lecture of Shri. Akshay Kulkarni (Nuclear Power Corp. of India Ltd. Purchase Group) on 'General Industry Awareness' on 21 February 2014, an expert lecture of Prof. Sunil Kute (Professor, Civil Dept., KKWIEER) on 'Rights and responsibilities regarding Intellectual Property' on 24 February 2014 & an expert lecture of Shri. Kunal Dani (Alumni) on 'Preparation for different Examinations and Universities for pursuing MBA' on 28 February 2014.

- Civil Engineering department organized an expert lecture of Mr. Milind Tare on 4th Feb. 2014, expert lecture by Mr. Sameer Alone on 5th Feb. 2014, expert lecture by Mr. S. Wadadekar and an expert lecture by Shrihari Gangal on 25th Feb. 2014.
- Mechanical engineering department organized an expert lecture on the topic "Recent Development in IC Engines" for SE Students by Mr. Tushar Karnik on 15 February 2014. Same department organized an expert Talk on "Career Opportunities in Management Field" by Mr. Sagar Nikam & Mrs. Madhura Shelar on 14 February 2014. Same department also organized a Paper Presentation contest by IET on 25th February 2014. Same department organized an online test for spoken tutorial project on "Scilab" for T.E. & B. E. Mechanical Students during 27 to 28 February 14.
- Electrical engineering department organized an expert lecture of Dr. R. Venkatesh on "Reactive power management" on 6 February 2014 & an expert lecture of Mr. A. S. Jain & Mr. A. D. Jain on "Challenges Ahead" on 14 February 2014. Electrical engineering department (Second Shift) organized an expert lecture of Prof. S. G. Petkar on Transient Simulation of DC Machine" on 4th February 2014, an expert lecture of Mr. Himanshu Joshi on 'SF6 Circuit Breaker' on 11th February 2014

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and an expert lecture of Mr. Ghanasham Patil on "Circuit Breaker Operation" on 18 February 2014. Same department also organized an IET PATW-2014 (Paper Presentation) during 24 to 28 February 2014 & also organized a National Science Day' In association with IET Mumbai Local Network (Technical essay & GD Conducted) on 28 February 2014.

- Chemical Engineering department organized an expert talk of Mr. Sam Bastine, Access CAD on 'Carrier opportunities in growing field of Engg and R & D' on 4 February 2014, an expert talk by Sadhana Jadhav & Keki Kashyap on 'Scope of specialization for MBA Education' on 18 February 2014, an expert talk by Mr. Arjun Gujar on 'Process Simulation and an expert talk by Mr. Arpit Nanaware on 'Soft Skill & Personality development' on 20 February 2014.
- The Department of Information Technology had organized ACM Webinar on 'Computing Professionalism' by Dr. Keith Miller, University of Missouri on 1st Feb., 2014. Same dept. had organized an event "Click it if you smile" on 15th Feb., 2014. 70 students of TE IT had participated in this event. Same I.T. Dept. had organized a workshop on "Oracle Forms and Reports" by Mr. Abhinandan Chivate, Global Talent Track, Pune for 58 students (from IT, Computer and MCA) on 7th and 15th Feb., 2014. Oracle concepts of exception handling, Cursors and Report building were discussed. Individual hands-on sessions were also conducted.
- MBA Department organized an expert talk of Dr. Mrs. Medha Saykhedkar on 'Guidance for Public Sector Jobs' on 8 February 2014 and an expert talk of Mr. Hussan Sayyed on 'Career Prospectus Marketing' on 22 February 2014.
- MCA department organized an expert lecture on 'Web Portal' on 7 February 2014 by an expert Mr. Abhyuday Bagade from Abhyuday Infotech Services, Nashik.
- T&P cell has organized an awareness program about "Cambridge English Certification Courses" by Mr. Hari, Director People Care on 04/02/2014. Mr. Joji George of L&T Info Tech, Mumbai delivered an awareness talk on "L&T selection process and its skill expectation from the students". Mr. Suyog Bhandekar of TCS visited campus and delivered an Expert Talk "Campus Commune-Portal and its various competitions" on 14th Feb 2014. T&P cell also organized "An INNOWAYS" contest by KPIT in our institute on 28/02/2014. The objective of this contest was to enable every student to

think innovatively and come up with ideas that would change the future of technology. This competition helped the participants to showcase their technology skills and bring out hidden creativity.

■ Seminars / Workshop / Training Attended By Staff:

- Computer Engineering departmental staff Mr. Khalid Alfatmi attended Workshop on GPA-2014 at IIT Bombay, during 25 - 26th February 2014.
- Electronics & Telecommunication Engineering department Head, Prof. D. M. Chandwadkar attended Faculty Development Program on "Virtual Labs" at Govt. College of Engg, Pune during 20 to 21st February 2014. Same departmental staff Prof. S. S. Morade attended International conference 'IACC2014' at Gurgaon, India during 21st to 22th February 2014. Same departmental staff Mrs. M. S. Patil attended workshop on "PCB designing and fabrication" at MET's COE, Nashik during 21st to 22th February 2014.
- Mechanical Engineering department staff Prof. Kale S. S. & Prof. R. V. Bhaskar attended training on 'Power generation from biogas' at VNIT Nagpur during 27 to 28 February 2014.
- Information Technology Department staff Prof. Rupali Bora and Prof. Poonam Mahale attended a workshop on 'Oracle Forms and Reports' organized by Department of Information Technology on 7th and 15th Feb., 2014.

■ Student Achievements:

In month of February 2014, 39 Students of our Institute participated in various paper presentations, Poster Presentation, Project Exhibition/working model contests, Programming Contest, Quiz Contest, Robotics and other competitions. Out of which

- Computer engineering departmental student Sahil Sakhala secured first prize in the paper entitled "Cloud Based Security Solution" organized by G. H. Raison Institute of Engineering and Management on 17th February 2014. Same departmental student Vivek Deshmukh secured first prize in the paper entitled "Biometrics and OTP as an authentication for ATMs" organized by Vishvatek 2014 at Vishwabharati COE, Ahmadnagar on 21st February 2014.

- Chemical Engineering student Gagdish Dhumal received second prize for paper presentation competition at G. H. Rasoni Engineering College Pune during 21-22 Feb 2014. Govind Dhone of B. E. Chemical secured first prize in quiz competition at K. B. T's COE, Nashik and same student secured third prize at SVIT Chincholi during 24-26 Feb 2014. Saurabh Patle of B. E. Chemical secured 3rd Prize in Quiz competition at L.V. H. College Nashik. Batul Sadikot of T. E. Chemical secured first prize in essay competition organized by Electrical Dept. of our Institute in association with IET Mumbai. Sumedh Pawar of same class secured 3rd Prize in poster competition in same. Nilesh Pagare of T. E. Chemical secured second prize in model making competition organized by G. H. Rasoni Engineering College Pune. Pushkar Patil and Vijay Vaishampayan of S. E. Chemical secured second prize at Pimpri Chinchwad College of Engineering during 25-26 February 2014.
- Information technology student Anuja Lalwani presented paper titled "Real time AI solution in gaming" and secured 2nd prize at National level event 'Technique 2K14' at Amrutvahini College of Engineering, Sangamner. Same departmental student Vinita Mulchandani and Harit Chaynika presented paper titled "Scalability - A measure with Apache Hadoop in Big Data" and secured 2nd prize at National Technical Symposium "MVP – KSHITIJ 2014" at KBGT COE, Nashik on 21st Feb 2014.

Industrial Visits Organized For Students:

Date	Class	Name of Company
05/02/2014	TE Electrical	POH Ltd, Bhusawal
6to8/2/2014	SE Electrical	Gas Power Plant, Uran
06/02/2014	SE Elec. (1 st Shift)	Gas Power Plant, Uran
08/02/2014	TE Computer	Persistent, Pune
08/02/2014	TE IT	Persistent, Pune
12/02/2014 to 14/02/2014	TE Electrical	Schneider Electric India Ltd., Vadodara & Enercon India Ltd., Daman
13/02/2014	BE Chemical	United Heat Transfer, Nashik
13/02/2014	TE Elec. (1 st Shift)	Wind world India Ltd., Daman
14/02/2014	TE Elec. (1 st Shift)	Schneider Electric India Ltd., Baroda
14/02/2014	SE Chemical	Sula Wine, Nashik
16/02/14 & 20/02/14	TE Mechanical (A,B,C)	Vazara Hydroelectric Power Plant, Shahapur, Dist.-Thane
17/02/2014	SE Chemical	Abelin Polymers, Nashik
18/02/14	BE Mechanical(A)	Nasik Thermal Power Station, Eklahare, Nasik
20/02/14	BE Mechanical(B)	Nasik Thermal Power Station, Eklahare, Nasik
26/02/2014	TE Chemical	Sewage Treatment Plant, Tapovan, Nashik
25 to 1/3/14	BE (Electronics)	Diebold system Pvt., Ltd., Goa
28/02/14	BE Mechanical (A)	Nasik Thermal Power Station, Eklahare, Nasik
28/02/14	TE Mechanical (B)	Bara Bangala Filtration (pumping) Station, Nashik

Training & Placement :

Name of the Dept.	Name of Company	No.of students selected
Computer Engg.	Eternus Solutions Pvt., Ltd., Pune	06
Electronics & Telecomm.	L & T Info Tech., Mumbai	08
Electronics	Eternus Solutions Pvt., Ltd., Pune	02
Information Technology	L & T Info Tech., Mumbai	02
	Eternus Solutions Pvt., Ltd., Pune	01
MBA	IIFL	03
	Gold of Jalgoakar	04
MCA	L & T Info Tech., Mumbai	01

Other Achievements

- Prof. Dr. K. N. Nandurkar was invited as Chief Guest for Inauguration of two days workshop on Networking and Security by K. K. Wagh Polytechnic.
- Prof. Dr. K. N. Nandurkar was invited as Chief Guest for the Science Day function and exhibition organized by K. K. Wagh Women's Polytechnic, Nashik.
- Computer Engineering departmental staff Prof. S. S. Banait was invited as Judge for National Level Conference at L. G. N. Sapkal COE, Nashik on 8th February 2014. He also invited to Judge at Conference at K. B. T's COE, Nashik on 21st February 2014.
- Electrical Engineering department Head Prof. Dr. B. E. Kushare offered Electrical consultancy services to Bosch Ltd., Ashoka Business School, Urjayant Engineering, CATAPHAMA, Mahindra Sona Ltd., Times of India Hyderabad, Times of India Ahmadabad, Bosch Nashik, Mahindra & Mahindra Nashik and MMDC. He also delivered expert lecture in two days training for times of India corporate officers on Energy planning, targeting & benchmarking. Same departmental staff Prof. Mrs. T. N. Date delivered an expert lecture on 'Personality Development' at K. K. Wagh Polytechnic, Nashik on 8th February 2014.
- Information Technology departmental staff Prof. P. S. Vispute delivered expert talk on 'Data mining algorithms' organized by Department of Computer Engineering on 27th Feb, 2014 & worked as a Judge for Project Competition for Kshitij event at K. B. T's COE, Nashik on 21st Feb 2014. Same departmental staff Prof. U. K. Gaikwad and Prof. N. P. Rane worked as judge for presentation contest 'IET-Present around the World' organized by Department of Electrical Engineering on 25th Feb 2014.

■ **Abstracts of papers presented during February 2014:**

■ **Blood Hound: Kinship through Imaging**

Prof. C. R. Patil

(Presented in Vishvotek 2014 organized by Vishwabharati COE, Ahmadnagar on 21st February 2014 and secured First Prize)

Abstract: There are many social networking web sites used by people and every day numbers of photos are uploaded by them on it. But from a photo we cannot predict the relationship among the people in photo. So there is a need for automatically identifying and predicting relationship, specifically kinship from photo. Proposed system comes under Computer Vision and is based on Face recognition, Feature extraction and knowledge transfer learning. System first detects all the faces from given photo then extracts the features from the faces using Gabor wavelet transform. A UB KinFace ver 2.0 database is used to train the system giving extracted features as a matrix that is compared with extracted features from photo, which ultimately results to the classification of whether kinship or not.

■ **Secure Multimodal Authentication using Watermarking**

Prof. A. V. Kolapkar

(Presented in Vishvotek 2014 organized by Vishwabharati COE, Ahmadnagar on 21st February 2014 and secured Second Prize)

Abstract: As malicious attacks greatly threaten the security and reliability of biometric systems, Authentication of biometric data is very important. In this paper Two-stage authentication based on watermarking is proposed to address this problem. The facial features of an individual embed into a fingerprint image which works as data credibility token and secondary authentication source. At the first stage of authentication, the credibility token of input data is established by checking the validness of extracting patterns. Due to the specific characteristics of face watermarks, the face detection based classification schemes are applied for reliable watermark verification instead of conventional correlation based watermark detection. If token authentication is successful, the face patterns can further serve as supplemental identity information to facilitate sub sequential biometric authentication. In this framework, one critical issue is to guarantee the robustness and capacity of watermark while

preserving the discriminating features of host fingerprints. Hence a wavelet quantization based watermarking and LSB watermarking approach is proposed to adaptively distribute watermark energy on significant DWT coefficients of fingerprint images.

■ **Boundary Extraction using Poincare map method**

Prof. R. V. Indulkar

(Presented in Vishvotek 2014 organized by Vishwabharati COE, Ahmadnagar on 21st February 2014 and secured Second Prize)

Abstract:- Now a day's active contours or snakes are used in many image processing applications, especially for locating the object boundaries and edge detection. But the problems of these models are initialization and poor convergence to deep concavities of the boundary and particularly equilibrium issues in the vector field.

In the proposed method first the ISAF field is generated which is composed of swirling and attracting component (DETF & DEPF respectively). Then with the help of dynamical system limits cycles are set / located by Newton-Raphson algorithm in the Poincare section. And integral equations are used to connect these boundaries.

■ **Advancement in Tribology on "Performance of Misaligned Hydrodynamic Journal Bearing in Turbulent Regime"**

Prof. Ramesh V. Bhandare & Prof. Mohansing R. Pardeshi

(Presented at NIT Calicut, Kerala during 19-21 February 2014)

Abstract:- The present paper aims to evaluate the performance of hydrodynamic journal bearing considering combined influence of misalignment and turbulence. Constantinescu turbulence lubrication model have been used for the turbulence consideration. The modified Reynolds equation is solved by Finite Element method using Galerkin's technique. The results of the study indicate that the value of minimum fluid film thickness increases with an increase in the Reynolds number i.e., speed. Further, it is observed that journal misaligned have marginal effect on load carrying capacity when bearing operate in laminar regime but the journal misalignment in turbulent regime significantly reduces the bearing performance.

Key Words: Hydrodynamic journal bearing, Misalignment, Turbulence.

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■ Data driven approach to forecast pan evaporation

Prof. N. D. Chaudhari

(Presented paper in CWRDM (Centre for Water Resources Development and Management), Kozhikode, Calicut, Kerala during 19-21 February 2014)

Abstract:- Accurate forecasting of pan evaporation is essential for the efficient operation of water resources systems. The evaporation process is complex and highly nonlinear. Therefore, researchers try to devise alternative techniques to forecast pan evaporation with relative ease and reasonable accuracy, although traditional deterministic and conceptual models are available. The present work uses two data-driven techniques, namely genetic programming (GP) and model trees (MT) to forecast pan evaporation one day in advance at Bhatsanagar climatic station in the Thane district of Maharashtra, India, and the results are compared. Both the models performed reasonably well as far as accuracy of prediction is concerned. It was found that the MT techniques performed well, but GP (Genetic programming) performed better than MT (Model tree), although only marginally in terms of prediction accuracy. These models can be of great use for hydrologist and irrigation farm water managers.

■ Performance of LMMSE receivers in broadband communication systems

Prof. M. D. Kokate

(Published paper in International Journal of Communications and Networking Technologies, ICCCNT during February 2014)

Abstract:- DS-CDMA featuring asynchronous multiple access, robustness to frequency selective fading and multipath combining is chosen as air interface standard in WCDMA. WCDMA works with 5MHz and chip rate of 3.84Mcps. As it supports variable spreading factor to achieve flexible data rate, during high transmission rate uses short spreading code. But users with these smaller spreading codes may experience inter-path interference (IPI) as it exhibits poor correlation. Even today, to exploit receive diversity, RAKE receiver is used as a front end in CDMA systems. The interference becomes a limiting factor for the performance of conventional RAKE receivers. In this paper LMMSE estimator and MSE of error covariance matrix is derived with different optimization criterion is discussed.

■ Formation and Characterization of Non Uniform Long and Ultralong Period Reversible Optical Fiber Gratings

Prof. S. P. Ugale

(Published paper in International Journal Optik International Journal for Light and Electron Optics during February 2014)

Abstract:- We report here for the first time to our knowledge the formation and characterization of non uniform long and ultra-long period reversible optical fiber gratings. Study of the spectral response of LPPFGs with periods exceeding one millimeter is scarce. The Non uniform LPPFG with periods exceeding one millimeter is practically induced in communication grade single mode fiber, and then apodization and chirping effects are experimentally characterized. The spectral response is then compared with spectral response of uniform grating.

Keywords: ULPPFG, Reversible gratings, Non uniform grating, Apodization

■ Manufacturing of Vanillin from Lignin via photo catalytic degradation

Prof. G. N. Patil & Prof. Dr. V. S. Mane

(Presented paper in International conference organized by department of Chemical Sciences, North Maharashtra University Jalgaon, during 6 to 8 February 2014 & secured Best Poster award).

Abstract:- The production of vanillin is mainly through direct extraction from vanilla beans. However, to satisfy constantly increasing markets, new chemicals routes were developed. One possible path to produce vanillin based on biomass is through degradation of lignin. There are number of attempts has been made for degradation of lignin to produce vanillin. The Lignin used is from the paper and pulp industry. The vanillin obtained is from pulp lignin is approximately 10 percent. An attempt has been made to increase the concentration of vanillin separated from lignin. The Lignin material obtained from eucalyptus wood is used for better yield as compare to pulp lignin. The lignin is separated from eucalyptus powder by 72% H₂SO₄ process. The separated lignin is then undergone through the photocatalytic oxidation in the presence of TiO₂ photocatalyst. The degradation of lignin was favorable at pH 12. Optimum values of lignin concentration (100 mg), Time of photocatalysis (6 hr), TiO₂ Concentration (5 gm), oxidant concentration (4ml) was found. The results of the HPLC analysis shows the

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degradation products contained in the lignin sample. The percentage of vanillin of 23% which is higher than the concentration obtained from the pulp lignin.

■ **A Comparative Analysis of Motion - Blur Magnitude Parameter Estimation Techniques**

Prof. Rupali M. Bora, Smita N. Chaudhari & Prajakta S. Vispute

(Published in International Journal of Engineering Research & Technology (IJERT) during February 2014)

Abstract: Motion blur in a digital image is caused due to motion of an object while capturing it. This motion blur may cause significant problems for image processing algorithms. So, it may be required to remove it from the image or identify inconsistency of it in an image for tempering detection. The magnitude and direction are two parameters of motion blur used to distinguish it from rest of the image. Here, three algorithms are discussed for estimation of this magnitude parameter. They are viz. a. Radon transform based b. Cepstral Method c. PBM (Perceptual Blur Metric) Based. The results are compared for accuracy and execution time required. PBM based method gives optimum results considering both parameters.

Keywords: Image gradient, image forgery detection, motion blur estimation, Blur Estimate Measure, Perceptual Blur Metric, K-means algorithm.

■ **Use of Biometrics and OTP as an authentication for ATM**

Prof. K. N. Somwanshi and Shyam Singh

(Presented in National Level technical symposium "VISHWOTECH-2014" organized by Vishwabharati Academy's College of Engineering during 21st and 22nd February 2014)

Abstract: A combined authentication scheme i.e. OTP and biometrics is proposed in our paper for banking transactions. Currently, debit card users withdraw their money from their bank account through Automated Teller Machines (ATMs) with 2-way user authentication method wherein they enter the 4-digit PIN and can perform transactions. To overcome this, this

proposed system shows how the one time password (OTP) can be sent to user's mobile after user gets authenticated as the genuine user through biometrics. This paper describes an algorithm which is used to generate Time-synchronized OTP values, based on SHA-1 based Hash Message Authentication Code (HMAC) and AES algorithm for encrypting and decrypting the fingerprint. These enhance the confidentiality and security of the transactions performed.

Keywords: authentication, OTP, SHA, HMAC, transaction, confidentiality, security, ATM, PIN

■ **Survey about existence of Glass Ceiling for women employees and changes that can be implemented by companies to help women combat the glass ceiling**

Prof. Bhakti Joshi

(Presented in National conference organized by MET BKC, Nashik during 21 to 22 Feb 2014)

Abstract:- A "glass ceiling" refers to that invisible barrier beyond which minorities, in particular women in middle level management, never rise. Silent, yet unbreachable, this barrier is one of the root causes why the percentage of women occupying top-level management is much lesser than men. There are a handful of women who have breached this barrier like Indra Nooyi, Simone Tata and Kiran Mazumdar-Shaw. The survey finds out whether there is a glass ceiling for women in organization and changes that can help to combat this glass ceiling in the organization. The survey is conducted for 50 women employees working in manufacturing industry, banks and retail industry. The survey inferred that 62% women employees opined that there is an existence of a glass ceiling for women employees and glass ceiling can be broken by support of family members, support of organization to deal with family responsibilities like crèche and old age care services, stringent HR policies for fair treatment of women employees and security to women during night shifts and out duty travel can break the ceiling

Prof. Dr. K. N. Nandurkar
PRINCIPAL

