



**K.K. Wagh Education Society's
K.K. Wagh Institute of Engineering
Education and Research, Nashik.**

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TECHNICAL NEWS LETTER

Demo on Project X



Prof. Dr. Preeti Bhamre (Head, IT Dept.) felicitating Mr. Arun Kadekodi, Cofounder and CEO of Soft Corner Pune.

Department of Computer along with MCA and IT Department organized a Demo on Project-X which is an ecosystem that connects Students, Academia and Industry on 8th February 2013. Students of TE Computer, TE IT and SY MCA attended the same. Mr. Arun Kadekodi, Co-founder and CEO of Soft Corner, a software development firm in Pune along with his Project-X team members gave a demo on Project-X. Project-X team is a heterogeneous bunch of technocrats coming from different walks of life. They understand exactly the problems faced by students in doing their projects. Project-X is not only a vast repository of projects but is also a facilitator, helping students gain as much exposure as possible to the latest technologies. On the other side, Project-X connects institutions to a pool of industry experts and enables them to share their research work and promotes collaboration amongst them. Prof. Dhananjay Kanade, Prof. Soni Bhambar from Computer Department, Prof. Dr. Preeti Bhamre (Head, IT Dept.), and Prof. Rupali Bora from IT Department coordinated the event.

National Robotics Championship 2013



First National Workshop on 'National Robotics Championship 2013 organized by department of Electrical Engg.

First National Workshop on "National Robotics Championship 2013" is organized by Department of Electrical Engineering during February 18 -19, 2013 where 72 participants attend the event. Workshop was inaugurated by Mr. Himanshu

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Pande, ARK solutions Mumbai, who gave idea about Building a Robot, Programming and execution of models. Objective of the workshop is to generate the awareness about Robotics for Indian Engineers and to provide guidance on Robot Building and Programming. Event was concluded with a message by Prof. Dr. B. E. Kushare. Five Students Prasad Vadnere, Abhishek Salekar, Swapnil Pagare, Prasad Zope, Suresh Bhumre are winners from KKWIEER zonal centre. These students will now compete with other zonal winners in IIT Powai.

A day with Mumbai Dabbawala



An expert talk by Mr. Raghunath Medge, President Mumbai Dabbawale Association

Mr. Raghunath Medge President Mumbai Dabbawale visited our Institute on 27-2-2013 and shared his experience of managing their chain of dabba distribution and six sigma certification with our staff and students. Training and Placement of

KKWIEER has organized a unique programme titled "A day with Mumbai's Dabbawale-A success Story". The objective of the programme was to make the staff and students aware about coding system adopted by Mumbai's Dabbawale to achieve six-sigma performance while delivering right Tiffin to a right person in right time. Around 200 students and 50 staff members from various departments have taken the benefit of this training programme.

NIMA Power 2013

Our Institute participated in NIMA Power 2013 exhibition organized by Nashik Industrial Manufacturers Association (NIMA), Nashik during Feb. 21-24, 2013. Three projects were exhibited by students of Electrical and Information Technology branches. The project titled "Amorphous thin Film Based Intelligent Inverter" was awarded first prize at the hands of Mr. Dhananjay Bele, NIMA President and Mr. Daljeet Singh, General Manager, HAL-Ozar.



Valedictory ceremony of NIMA power-2013

Guidance on Fire & Safety



Demonstration by Mr. Wankhede

The Department of Management Studies and Training & Placement Cell at K. K. Wagh Institute of Engineering Education & Research jointly organized a programme on 25th

Feb. 2013. To guide the students of the institute on fire & Safety. The programme included guidance and practical training by Mr. Devidas Wankhede, Dy. General Manager of Mahindra & Mahindra Ltd., Satpur and his colleagues. In the first part of the programme he informed the students regarding methods of protecting lives and property from fire, first aid to be provided in cases of fire and safety measures which can be taken to avoid occurrence of fire. Live demonstration and practical training was also arranged for the students on the playground of the institute.

Expert Lecture/Seminar/Courses/Worshop Organized:

- Department of Computer Engineering organized an expert lecture by Dr. S. A. Kelkar, Adjunct Professor of IIT Bombay on the topic 'Software Engineering' on 12th Feb. 2013 & 'Finance and Management Information Systems' on 13th Feb. 2013. NIIT Aptitude Exam for the students of SE and TE Computer students on 15th Feb. 2013 & SEED IT IDOL Test for the students of TE & BE Computer on 18th Feb. 2013 by Computer Engineering Department.
- Department of Electronics & Telecommunication Engineering organized an expert lecture by Mr. Hemant Kamalaskar on the topic 'Circuit Design and PCB layout' on 21st Feb. & Expert lecture by Mr. Vishal Integaonkar, PT Education, Nashik on the topic 'Career opportunities after Engineering' on 28th Feb. 2013. Same department also organized the Programme on 'Official inauguration of Telekinesis 2013 website and poster' by Principal Dr. K. N. Nandurkar, & Mr. Sunil Joshi, Manager, Veer Enterprises on 27th February 2013.

- Department of Electrical Engineering organized an expert lecture by Mr. Prince Jain on the topic 'CT construction & Working' on 15th Feb. 2013. Same department organized an expert lecture by Prof. Ashfaq Ahmed on the topic 'Career Guidance' on 22nd Feb. 2013.
- The Dept. of Information Technology organized a Poster Competition on the topic "Celebrating Youth" on 11th Feb. 2013. 95 students from same Department had participated in the "IT Idol 2013" contest conducted by Seed InfoTech, Nashik on 18th Feb. 2013. Out of which 43 students were selected for the second round.

Seminars / Workshop / Training Attended By Staff:

- Prof. Dr. Shirish S. Sane, Head of Computer Engineering and Prof. Anand Kolapkar, Prof. S. S. Banait, Prof. Mayur Sonar and Prof. Wasudev Pingle attended NextGen Computing: Conference by CSI Nashik Chapter held in Sandip Foundation, Mahirawni Nashik on 8th and 9th Feb. 2013. Prof. Anand Kolapkar and Prof. Dhananjay Kanade attended the "IT 2020" CSI Conference organized by IIT Bombay on 1st Feb. 2013.
- Prof. D. M. Chandwadkar, Head of E & TC dept, Prof. S. S. Morade, Prof. Smt. S. S. Bhabad & Prof. Ms. S. C. Shinde attended three day workshop on "Speech signal processing" organized by Dept. of Electronics and Telecommunication Engineering of R. S. C. O. E., Pune under ISTE chapter during 28th Feb. to 2nd March 2013.
- Prof. N. D. Chaudhari of Civil Engineering dept. attended curriculum revision workshop for S. E. Civil for Academic year 2013-14 at D. Y. Patil (Lohgaon) College, Pune on 23rd February 2013.
- Two Days workshop on 'Research Methodology' organized by Mechanical Engineering department in association with IIT Bombay on 2nd & 9th Feb. 2013 following staff members of various departments are attended:

Sr.No.	Name of Staff Members	Name of Department
1	Prof. Sharad S. Dhamal	Electrical Engineering
2	Prof. Mrs. Nidhi Sharma	Chemical Engineering
3	Prof. Ms. Aarati Jakhad	Chemical Engineering
4	Prof. Ms. Shilpa Mene	Information Technology
5	Prof. Umesh Gaikwad	Information Technology
6	Prof. Mrs. Smita Pachpande	Information Technology
7	Prof. Darshan Medhane	Information Technology
8	Prof. Ms. Snehal Bhadane	Information Technology
9	Prof. Mrs. Snehal S. Joshi	Science
10	Prof. Tanmay Paranjpe	Science
11	Prof. Ms. Saroj Wankhede	Science

- Prof. V. S. Mane, Head of Chemical Engineering department, Prof. S. N. Jain attended one day workshop on syllabus revision of SE & ME (Chemical) at MIT, Pune on 26th Feb. 2013.

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- Prof. V. S. Mane, Head of Chemical Engineering department, Prof. S. N. Jain attended one day workshop on syllabus revision of SE & ME (Chemical) at MIT, Pune on 26th Feb. 2013.
- Prof. Kiran Somwanshi of Department of Information Technology attended a state level workshop on "Database Administration Using Oracle 11g" organized by SNJB'S Engineering College, Chandwad on 4th & 5th February 2013.
- Mrs. Shraddha S. Shinde of IT department attended one day workshop on "Genetic Algorithm: an Introduction" organized by MCERC, Nashik on 2nd Feb. 2013, Prof. Shital Deshmukh, Prof. Sagar Badjate attended two days CSI regional conference on "NextGen Computing" at Sandeep Foundation, Nashik on 8th & 9th February 2013.
- Shri. Raju Mogal, Clerk in Student Section attended Professional Development Course at University of Pune, Pune during Feb. 11-16, 2013.
- Prof. Dr. Keshav N. Nandurkar and Prof. P. K. Shahabadkar attended CII-Employability subcommittee meeting at Hotel Taj Mahal, Mumbai on 22nd Feb. 2013.

Industrial Visits Organized by Department For Students:

Date	Class	Name of Company
07/02/2013	S.E. Civil	Aaryavart (Paranjpe), Rane Nagar, Nashik
07/02/2013	T.E. Electrical	Enercon India Ltd., Daman
08/02/2013	T.E. Electrical	Voltamp Transformer Ltd., Baroda
16/02/2013	B.E. Civil	Ashoka Buildcon Ltd., Nashik
22/02/2013	B.E. Electrical	Enercon Substation, Pachapata, Gholi
24/02/2013	S.E. Mech. (Div. A)	Nitesh Udyog, Ambad, Nashik., Forchuna Engg. Works, Ambad, Nashik
25/02/2013	T.E. Civil	Metrozone
25-27/02/13	S.E. Mech.	Divisional S. T. Workshop, Peth Road, Nashik
27/02/2013	B.E. Electrical	Sanjivani Sah.Sakhar Karkhana Ltd., Kopargaon

Training & Placement :

Name of the Dept.	Name of Company	No. of students selected
Computer	Rishabh Industries, Nasik & Zenser Technologies Ltd., Pune	05
E & TC	Rishabh Instruments Pvt. Ltd., Nsk	01
MCA	Zenser Technologies Ltd., Pune	01
Electrical	Kirloskar Brothers, Pune	02
Mechanical	Kirloskar Brothers, Pune	01
MBA	India Infoline, Nashik	02

Other Achievements

- Prof. Dr. S. S. Sane's name has been included in the "DPE Databank" of persons who can be considered for appointment as non-official Directors on the Boards of CPSEs.
- Prof. S. S. Banait of Department of Computer Engineering was invited as a Jury member in National level Paper Presentation Competition on 2nd February 2013 at Sapkal College of Engg., Nashik and he was also invited as a Resource person for Software Testing and Quality Assurance at KKW Polytechnic Nasik on 7th February 2013.
- Prof. Dr. P. S. Kalos of Department of Production Engineering worked as member of selection committee for the best project made by third year K. K. Wagh Polytechnic students (I & II shift) on 21/2/2013. These projects are nominated for participation in state level competition organized by Board of Technical Education, Mumbai. Prof.

Dr. P. J. Pawar, worked as judge for MSBTE sponsored state level contest held at Govt. Polytechnic, Ahmednagar on 26/2/2013. Prof. N. B. Gurule worked as judge for Logic Cube event in Mechazza Competition organized by Mechanical Engineering Department, MVP's College of Engineering, Nashik on 27/2/2013.

- Prof. Dr. Pradip D. Jadhav, Head of department of Civil Engineering worked as Reviewer & Session Chair in international conference of Engineering & Technology (ICRTET 2013) held at SNJB COE, Chandwad during 22 - 24th February 2013.
- Prof. Dr. B. E. Kushare, Head of Electrical Engg. Dept. offered Electrical consultancy services to Times of India, Airoli, Crompton Greaves Ltd., Nashik and Bosch Ltd., Nashik. He also delivered expert talk on 'Energy Management & Smart Grid' for two days training programme at Times of India, Airoli.
- Prof. Dr. Preeti D. Bhamre, Head of IT Department nominated on the "Learning Resource selection Committee" of Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik & also she is Member of Committee for Design of Curriculum of Computer Courses, YCMOU, Nashik.

Abstracts Of Papers Presented during February 2013:

A survey on Content Based IMA Retrieval using Vector Quantization

Prof. Ms. Prerana P. Karnik and Prof. N. M. Shahane (Computer Department)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Image retrieval and image compression is active field of research. But rare advances have been made to consider these both problems simultaneously. In this paper we present a survey on content based image retrieval based on vector quantization. Vector Quantization (VQ) is a technique usually used for data compression. But VQ is used as a feature descriptor for retrieving images. By harnessing the characteristics of VQ the retrieval technique can capture the spatial relationship among pixels. We discuss here several ways in which VQ has been used for content based image retrieval in the past.

A Survey on Textured Based CBIR Techniques

Prof. Mrs. Suruchi M. Malao and Prof. N. M. Shahane (Computer Department)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Content based image retrieval (CBIR) is a method of retrieving images from large image resource, this has been found to be very effective. To represent images in terms of their features, CBIR involves the use of low-level image features like, colour, texture, shape, and spatial location, etc. To improve existing CBIR performance, it is very important to find effective and efficient feature extraction mechanisms. Texture effectively describes

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the distinguishing characteristics between images. It is one of the most important and prominent properties of an image. A variety of techniques have been developed for extracting texture features, broadly classified into the spatial and spectral methods. Though many works on texture classification and representation have already been done, it is still an open issue. Vector Quantization (VQ) is an efficient and simple approach for data compression. Therefore, the computational cost of CBIR system can be reduced by using vector quantization. In this paper we have provided the overview of different methods for textured based CBIR system and also discussed how its performance can be improved by vector quantization.

■ Embedded Touchpad for Desktop Users

Prof. S. S. Morade & Prof. Parag Monde (Electronics & Telecommunication)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Few industries have changed so much in such a short time as the computer industry, and the pace of change shows no sign of slowing. The computer now has a role in almost every aspect of modern life, and it has radically affected the way people organize their lives. Desktop users have to push a mouse around their desktop while laptop users can just point a finger on touchpad. Touchpad is a type of computer input device which uses a touch sensitive surface to allow users to control the movement of a cursor, thus replacing a mouse, pointing stick or trackball. Instead of requiring a user to grasp a mouse and pivot at the wrist to click and track on the desktop, touch pads require less motion and allow users to situate their hands and arms in a variety of positions which results in less stress on wrists. Another major advantage of touch pads is that they take up less space than a traditional mouse so it is ideal where space is at premium. Therefore, many users and computer makers see touch pads as a viable, long-term alternative to other pointing devices. Therefore to benefit desktop users, the low cost embedded touchpad is proposed. It uses 4 wires resistive touch screen to sense the position of a finger. The other hardware includes touch screen controller circuit, AT89S52 microcontroller, MCP3208 ADC and MAX232 voltage converter. The software is written in Microsoft Visual Basic to operate cursor on the screen.

Key Words: Desktop users, embedded touchpad, pointing devices, 4 wires resistive touch screen

■ Comparing accuracy of Musical Instrument identification for different features with k-NN and SVM Classifiers

Prof. D. M. Chandwadkar & Prof. Amrit Kaur (Electronics & Telecommunication)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Music signal is different from speech signal, therefore for recognizing musical instrument there is a need of designing a different system. Here we have

designed an instrument identification system. In this paper we have discussed the role of various features for classifying musical instruments with k-NN and SVM classifiers. We have tried to identify musical instruments using monophonic signals. Five musical instruments: Flute, Piano, Trumpet, Guitar and Xylophone are considered. From each signal of the database we have extracted different features and these features are used for training the classifiers. The trained classifiers are then tested to identify musical instruments using unseen signals. It is observed that the identification accuracy depends on the features used as well as the classifier. This analysis helps to select the desired classifier with all features and a desired feature with a classifier to design the musical instrument identifier system.

Key Words: Signal framing, Feature extraction, Feature selection, Classifier

■ Removal of Baseline Wander from ECG Signal

Prof. K. S. Holkar & Prof. V. R. Lele (Electronics & Telecommunication)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Electrocardiogram (ECG) has considerable diagnostic significance, and is one of the oldest and most enduring tools used by cardiologists. For diagnostic quality of ECG recordings, signal acquisition must be noise free. The signal acquisition is susceptible to the interference from other biological and environmental sources. Baseline wandering can mask some important features of the Electrocardiogram (ECG) signal hence it is desirable to remove the noise for proper analysis and display of the ECG signal. An accurate method for removing the baseline wander (BW) in ECG on the basis of Empirical Mode Decomposition (EMD) is proposed in this paper. We briefly described the principles and characteristics of the EMD in this paper. To validate the proposed method, the recording from MIT/BIH database is used. In this paper, the median filter is applied to remove BW in ECG for comparison with our EMD method. Our simulated results show that the performance of EMD method is better in SNR and PSD for removing BW in ECG.

Keywords: BW (Baseline Wander), ECG, EMD, IMF, SNR, PSD

■ Higher order Diffraction Characteristics of Fiber Bragg Grating

Prof. Mrs. Sunita P. Ugale (Electronics & Telecomm.)

(Published in International Journal of Electronics Communication and Computer Engineering Volume 4, Issue 1 during February 2013)

Abstract:- The effect of grating saturation on higher order diffraction characteristic of FBG is investigated by using Coupled mode theory. Grating saturation effects were considered in the index distribution model showing the significant influence on the coupling process and hence on the reflectivity characteristics of

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FBG. Maximum reflectivity curves for first and higher order diffraction of FBG are plotted for different values of saturation coefficient. The effect of change in length and change in refractive index are studied. The behavior of grating for higher order of diffraction is totally different than first order of diffraction. In saturated gratings, the higher order diffraction can be utilized for multiparameter sensing.

Keywords: FBG, Diffraction, Reflectivity, Saturation Coefficient, Higher Order Diffraction.

■ **Ultra long period reversible fiber gratings as a pressure sensor**

Prof. Mrs. Sunita P. Ugale (Electronics & Telecomm.)

(Published in proceedings of International Conference ICAC3 2013, CCIS 361, pp. 439-443, 2013 © Springer-Verlag Berlin Heidelberg 2013 during February 2013)

Abstract:- We report here for the first time the fabrication and characterization of mechanically induced ultra long period fiber gratings (MULPFG) with period size up to several millimeters. In these gratings the coupling of the fundamental guided core mode takes place with cladding modes of high diffraction orders. The transmission characteristics of gratings with different external applied pressure have been experimentally verified.

■ **Determination of durability of Metakaolin Blend High Grade Concrete by using Water Permeability Test.**

Dr. Pradip D. Jadhao, Ajay P. Shelorkar (Civil Dept.)

(Published in IOSR Journal of Mechanical and Civil Engineering (IOSR -JMCE), Volume 5, Issue 2 (Jan -Feb. 2013), pp 35-39)

Abstract:- The main objective of the study was to investigate the properties of binary blends metakaolin. A suitable mix design of High Grade Concrete (HGC) has been developed using artificial sand (VSI Sand). The engineering properties of both fresh and hardened HGC were studied. The properties investigated include water penetration and compressive strength. Permeability of concrete affects the durability of concrete. The permeability of concrete is mainly affected by pore structure system of concrete. The penetration of water was studied using the water permeability test method, in accordance with the procedure. The effect of the amount of pozzolanic content on the observed trends was studied. It was established that binary mixtures could differ significantly in both their fresh and hardened properties. Significantly, the binary blends incorporating metakaoline were found to have greater improvement in strength and water penetrability.

■ **Modeling of Road Traffic Noise in selected areas of Nashik city**

Prof. Vilas K. Patil (Civil Department)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Most of the cities in India are facing serious noise pollution problems due to the concentration of motor vehicles and human population within the limited urban areas. The increase in noise pollution with increase in vehicular population is obvious. The study presents the status of noise pollution in selected areas of Nashik due to road traffic.

The study was conducted using sound level meter at selected period of time and at selected locations. The study indicated that the noise levels in commercial areas, out of the study area under consideration, exceeded permissible levels. The results can be used for traffic management, land use planning and pollution control

■ **Reactive power Improvement in Wind Farm System Using FAC**

Prof. D. P. Kadam (Electrical Department)

(Presented at P. S. N. A. College of Engg. & Tech., Kothandaraman Nagar, Dindigul, Tamilnadu during 6 - 8, February 2013)

Abstract:- Large number of wind turbines are being installed and connected to power systems. In some of the countries the penetration of wind power is significant high so as to affect the power quality, system operation and control and power system stability.

In this paper an attempt is made to predict the reactive power burden of the wind farm based on conventional fixed speed induction generator during wind variation and fault condition. PSCAD/EMTDC based large scale wind farm model is developed where STATCOM is introduced as an active voltage and reactive power supporter to increase the power system stability. STATCOM unit injects reactive power to mitigate power quality problems and to get stable grid operation.

Keywords:- Squirrel Cage Induction Generator (SCIG), PSCAD, Wind Turbine Generator (WTG), STATCOM

■ **An Algorithm to detect Point on wave initiation by fundamental equation**

Prof. Mrs. N. N. Jangle, Prof. A. M. Jain. and Prof. B. E. Kushare (Electrical Department)

(Published in ACEEE International Journal on Signal & Image during February 2013)

Abstract:- This paper presents an algorithm for detection and characterization of voltage sag on transmission and distribution lines. A Discrete Wavelet Transform is utilized to extract voltage sag disturbances from fundamental 50 Hz, which detects magnitude, duration, and Point on Wave initiation of voltage sag. This algorithm is simulated in MATLAB and the results are presented at various magnitudes and Point on Wave initiations.

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■ **Effect of voltage Sag on Ageing of Front End rectifier diodes of ASD**

Prof. Atul M. Shewale, Prof. Mrs. T. N. Date and Prof. Dr. B. E. Kushare (Electrical Department)

(Presented at P. S. N. A. College of Engg. & Tech. Kothandaraman Nagar, Dindigul, Tamilnadu during 6 – 8, February 2013.)

Abstract:- Adjustable-speed drives are the type of equipment most sensitive to voltage sags. This paper analyzes the behavior of front end rectifier of three-phase ac adjustable-speed drives during balanced and unbalanced sags. Emphasis is placed on the i_{2t} rating of diode assuming that the drive will not trip. By using a previously introduced classification of three-phase balanced and unbalanced sags, i_{2t} curves for various capacitor values and different sag conditions are obtained for ac adjustable-speed drive. The conclusion from the analysis is that voltage sags due to three-phase faults are a serious problem for adjustable-speed drives. However, single-phase and phase-to-phase faults, causing the majority of voltage sags, can be tolerated up to 80% of voltage sag for type C & F sag. While higher value capacitor is selected for enhancing voltage sag ride through, at the same time the bridge rectifier diode I_{2t} value should also be selected such that it should not cross the diode I_{2t} limit during sag and sag recovery duration.

Keywords:- Voltage sag, ac drive, front end rectifier, dc-bus, i_{2t} rating.

■ **Comparison of FACT Devices for Transient stability**

Prof. J. P. Shah, Prof. Mrs. T. N. Date (Electrical Dept.)

(Presented at International Conference organized by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad during 22 - 24th February 2013)

Abstract:- Recent development of power electronics introduces the use of FACTS devices in power systems. FACTS devices are capable of controlling the network condition in a very fast manner by reactive power management and this unique feature of FACTS devices can be exploited to improve the transient stability of a system. Transient stability control plays a significant role in ensuring the stable operation of power systems in the event of large disturbances and faults. The improvement of transient stability of a two-area power system, using UPFC (Unified Power Flow Controller) which is an effective FACTS (Flexible AC Transmission System) device capable of controlling the active and reactive power flows in a transmission line by controlling appropriately its series and shunt parameters, also combined with Distributed Generation (DG) connected in the DC link to mitigate power quality disturbances. A collection of measured performance characteristics is presented to illustrate the unique capabilities of UPFC. The performance of UPFC is compared with other FACTS devices such as Static Synchronous Series Compensator (SSSC), Thyristor Controlled Series Capacitor (TCSC), and Static VAR Compensator (SVC) respectively.

Keywords:- SVC, STATCOM, SSSC, Transient Stability, UPFC.

■ **A Novel Technique for Generating Face Templates using Binary discriminating Analysis (BDA)**

Mrs. Shraddha S. Shinde (Information Technology) & Prof. Anagha P. Khedkar

(Presented at National Symposium in 'Research Trends in Information Technology', MIT COE, Alandi, Maharashtra, during 8- 9th Feb. 2013)

Abstract:- Biometric recognition offers a reliable solution to the problem of user authentication in identity management system. In this, biometric template protection is one of the most important issues in deploying a practical biometric system with better security. In order to maintain the template security many algorithms, that do not store the template in its original form, have been reported in recent years. As no single template protection method is capable of satisfying the diversity, revocability, security and performance requirements, a novel technique for face template generation and protection is proposed. The proposed novel approach is for providing security and accuracy in new user enrollment process as well as authentication process. This novel technique takes advantage of both the hybrid approach and the binary discriminant analysis algorithm. This algorithm is designed based on random projection, binary discriminant analysis and fuzzy commitment scheme. The proposed algorithm is expected to provide good security and increase the recognition accuracy using the BDA. The proposed novel technique will ensure the robustness of the biometric technology.

■ **Structural Properties of Single Step Electrochemically Deposited ZnS Nanofibers**

Prof. Anuradha B. Pawar (Science).

(Presented at International Conference on 'Recent Trends in Applied Physics & Material Science' (RAM) organized by Government College of Engineering, Bikaner, Rajasthan during 1-2 Feb.2013)

Abstract:- ZnS thin films are prepared by electro deposition technique over stainless steel substrates in potentiostatic mode from an aqueous acidic bath containing $ZnSO_4$ and $Na_2S_2O_3$. The growth kinetics of the film was studied and the deposition parameters such as electrolyte bath concentration, deposition time, deposition potential and pH of electrolyte bath are optimized. The X-ray diffraction (XRD) analysis of the deposited film showed presence of polycrystalline nature with hexagonal wurzite structure with crystallite size comparable to 1nm. The surface morphology studied by scanning electron microscope (SEM) shows fibrous morphology with well adherence and uniform distribution of nanosized fibers over the surface of substrate.

Prof. Dr. K. N. Nandurkar
PRINCIPAL

