



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

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TECHNICAL NEWS LETTER

■ **Visit by Hon. Shri. Sharad Pawar
(Central Agricultural Minister)**

Hon. Shri. Sharad Pawar, Agricultural Minister, Government of India visited our Institute on 14th June 2013. He was felicitated by Shri. Balasaheb Wagh, Chairman of K. K. Wagh Education Society. He appreciated the overall development of K. K. Wagh Education Society in his speech. He emphasized that the quality of the research should be improved in Engineering and Agriculture Institutes in India. He further added that lot of changes taking place in agriculture sector and encouraging results are seen. If good research is carried out by Colleges, funding will be made available. Principal Dr. K. N. Nandurkar gave the presentation of K. K. Wagh Education Society on this occasion. For this function Hon. Shri. Chhagan Bhujbal, Public Work Minister, Govt. of Maharashtra, Vanadhipati Shri. Vinayakdada Patil and Sarchitnis of NDMVP Smt. Nilimatai Pawar were present. Vice chairman Shri. Kashinath dada Tarle, Trustee Shri. Changdev dada Holkar, Shri. Ashok Bhai Merchant, Shri. D. S. Shinde, Secretary Prof. K. S. Bandi, all Principals and staff of various Colleges of K. K. Wagh Education Society were present on the occasion.



Felicitation of Hon. Shri. Sharad Pawar, Agricultural Minister, Government of India

■ **Visit by Padmavibhushan Dr. Anil Kakodkar**

Padmavibhushan Dr. Anil Kakodkar visited our Institute on 29th June 2013. He was felicitated by Chairman of K. K. Wagh Education Society Shri. Balasaheb Wagh. He addressed the staff of various colleges of K. K. Wagh Education Society. He emphasized that the research should be useful for the society. Also there is a need to change the education system in the country. He explained the background of his report on higher education reforms submitted to the State Government. In his speech he appreciated the overall development of K. K. Wagh Education Society. On this occasion Vice Chairman Shri. Kashinathdada Tarle, Trustee Shri. Changdevdada Holkar, Secretary Prof. K. S. Bandi, Er. Avinash Shirode, Principal Dr. K. N. Nandurkar and all staff were present.



Felicitation of Padmavibhushan Dr. Anil Kakodkar

■ **Visit By Dr. C. D. Mayee**

On 28th June 2013, Dr C. D. Mayee, Chairman of Accreditation Committee of Agricultural and Agricultural allied Colleges and Ex. Vice Chancellor, Marathwada Agricultural University Parbhani visited our Institute. Hon. Shri. Balasaheb Wagh, Chairman of K. K. Wagh Education Society felicitated the Chief Guest. Dr C. D. Mayee told the importance of the accreditation and guided for the development

during his speech. For this function Vice Chairman Shri. Kashinathdada Tarle, Trustee Shri. Changdevdada Holkar, Secretary Prof. K. S. Bandi, Principal Dr. K. N. Nandurkar, Principals of Agricultural Colleges of K. K. Wagh Education Society and staff were present.



Meeting with Dr. C. D. Mayee in the Institute on 26th June 2013.

■ Two Week ISTE Workshop on Analog Electronics under the National Mission on Education through ICT (MHRD, Govt. Of India)

An important initiative has been taken by IIT Bombay and IIT Kharagpur to work with Engineering Colleges in the country to enhance the teaching skills of our faculty colleagues in core Engineering and Science subjects. This is the second phase of program. In this regard, two-week ISTE workshop on "Analog Electronics" subject was conducted from the 4th to 14th June 2013 at department of E & TC of KKWIEER, Nashik. Total 27 participating teachers of various Colleges from Nashik region attended live lectures delivered by IIT faculty at this center. They also attended tutorial and lab sessions conducted in the same center. The lecture transmission and live interaction took place in distance mode using the A-VIEW technology through internet. This initiative is part of the 'National Mission on Education through ICT', which is supported by MHRD. Prof. Atul Patil and Prof. R. R. Khinde were appointed as coordinators at KKWIEER remote centre to handle the technology infrastructure and other operational logistics. Additionally, Prof. R. V. Chothe and Prof. V. R. Takate were Faculty Coordinators for subject, who helped in the conduction of labs and tutorials at this center.



Principal Dr. K. N. Nandurkar, Prof. D. M. Chandwadkar (Head, E & TC), Prof. Atul Patil and Prof. R. R. Khinde along with the participants of the workshop

■ Faculty Development Programme

Considering the training needs of the newly recruited faculty members, a two days Faculty Development Programme was organized in association with Tech Rel Pune. Mrs. Anu Sukheja, VP, Soft skill Division & Ms Kolsha Wagh conducted the session on Effective Teaching Learning Processes. Total 50 staff members from various departments attended the programme.

■ Clean Air Drive With Bosch

Clean Air - Clean Nashik Drive was carried out in association with BOSCH Nashik on 26th June 2013 at the institute. During this drive 950 vehicles including two wheelers and four wheelers were checked and issued PUC certificates free of cost.

■ Seminars / Workshop / Training Attended By Staff:

- Prof. P. B. Surwade of Department of Mechanical Engineering attended Syllabus detailing workshop for Fluid Mechanics at University of Pune on 29th June 2013. Same departmental staff Prof. C. S. Mhasade attended Syllabus detailing workshop for CAMD at MIT Pune on 28th June 2013.
- Prof. S. K Shinde, Prof. S. K Kale, Prof. P. P. Shinde, Prof. P. A. Birari, Prof. A.M Shewale, Prof. S. G Petkar, Prof. R. R. Patil of department of Electrical Engineering attended Faculty Development Program jointly organized by Techrel Technology Pvt., Ltd., in our Institute during 19th to 20th June 2013. Same departmental staff Prof. N. N. Jangle, Prof. P. P. Shinde and Prof. S. G Petkar attended S. E. Electrical Revised 2012 Syllabus refresher course at PVG COE Pune on 20th June 2013.
- Prof. R. R. Khinde, Prof. V. R. Lele, Prof. R. V. Chothe, Prof. V. R. Takate, Prof. S. V. Shelke, Prof. S. D. Patil, Prof. Kirti Shinde, Prof. S. A. Ansari &

Prof. S. R. Zambre of Department of Electronics & Telecommunication Engineering attended one week faculty orientation workshop on SE (E & TC/Eltx) revised syllabus conducted at Pune during 17 to 22nd June 2013.

- Prof. S. N. Kadlag & Prof. Dr. S. S. Naik of Applied Science & Maths Department attended one day workshop on Engineering Mathematics -III, 2013 Course at Sinhgad College of Engineering, Pune on 21st June 2013

■ Training & Placement :

Name of the Dept.	Name of Company	No. of students selected
Mechanical Engg.	Art Group Industries, Valsad, Gujrat	04

- Around 158 students of S. E. and T. E. Chemical completed Inplant Training in various industries in Nashik, Maharashtra and outside Maharashtra.

■ CONGRATULATIONS



Prof. V. S. Mane, Head of Chemical Engineering department completed Ph. D in Chemical Engineering from Dr. Babasaheb Ambedkar Technological University Lonere (Raigad) under the guidance of Dr. P. V. Vijay Babu (Professor and Head, Chemical Engg., Dept., Dr. BATU Lonere). The topic of his Ph. D. was "Study of decolorization of brilliant green and congo red dye bearing water by adsorption, coagulation, electrocoagulation and electrochemical techniques".

■ CONGRATULATIONS



Shri. P. S. Bodke (Librarian) completed Ph. D in Library & Information Science from Yashwantrao Chavan Maharashtra Open University, Nashik under the guidance of Dr. Rajendra Kumbhar (Professor, Dept. of Library & Information Science,

Pune University). The topic of his Ph. D was "Engineering College Libraries in Maharashtra: A survey".

■ Other Achievements

- Dr. K. N. Nandurkar, Principal, KKWIEER was invited as Chief Guest for inauguration of two week Induction Programme for Polytechnic teachers organized by Shri. Guru Govind Singh Polytechnic, Nashik on 3rd June 2013. He was also invited to deliver a lecture on 'Writing effective Research Proposals' during one week programme on 'Research Methodology' organized by Matoshri College of Engineering, Nashik on 18th June 2013.
- Prof. Dr. B. E. Kushare, Head of Electrical Engineering offered Electrical consultancy services to Times of India, Kandivali, Times of India, Airoli, Radio Mirchi, Nashik, Bosch Ltd., Nashik and Mahindra & Mahindra, Nashik. He also delivered an expert talk on 'Condition monitoring of substation equipment' to Times of India, Airoli.

■ Abstracts of Papers Presented during June 2013:

Selecting Proper Features and Classifiers for Accurate Identification of Musical Instruments

Prof. D. M. Chandwadkar

(Paper published in International journal IJMLC 2013, Vol. 3, No. 2, 2013)

Abstract:- Selection of effective feature set and proper classifier is a challenging task in problems where machine learning techniques are used. In automatic identification of musical instruments also it is very crucial to find the right set of features and accurate classifier. In this paper, the role of various features with different classifiers on automatic identification of musical instruments is discussed. Piano, acoustic guitar, xylophone and violin are identified using various features and classifiers. Spectral features like spectral centroid, spectral slope, spectral spread, spectral kurtosis, spectral skewness and spectral roll-off are used along with autocorrelation coefficients and Mel Frequency Cepstral Coefficients (MFCC) for this purpose. The dependence of instrument identification accuracy on these features is studied for different classifiers. Decision trees, k nearest neighbor classifier, multilayer perceptron, Sequential Minimal Optimization Algorithm (SMO) and multi class classifier (metaclassifier) are used. It is observed that accuracy can be improved by proper selection of these features and classifier.

Index Terms — Feature extraction, classification, musical instrument identification.

■ **Automatic Lip Tracking and Extraction of Lip Geometric Features for Lip Reading**

Prof. Sunil S. Morade

(Paper published in International journal IJMLC 2013, Vol 3, 168-171, 2013)

Abstract:- Lip tracking is very crucial for visual lip reading recognition system. This paper presents a novel active contour guided geometrical feature extraction approach for lip reading. Three active contour methods are studied, namely snake, region scalable fitting energy method and localised active contour model. These methods are adopted for salient geometrical feature calculation. A joint feature model, obtained by combining inner area, height and width has been proposed. Results of experimentations on digit utterances are given to show the improvement achieved by visual speech recognition system.

■ **Tunable optical filter based on mechanically induced cascaded long period optical fiber grating**

Prof. Sunita P. Ugale

(Paper published in International journal, Journal of Photonics, Hindawi Publishing Corporation, Volume 2013, doi:10.1155/2013/415059)

Abstract:- We have proposed and demonstrated experimentally a novel and simple tunable optical filter based on mechanically induced and cascaded long period optical fiber gratings. In this filter variable FWHM and center wavelength is provided by cascading long period and ultra long period optical fiber gratings with different periods in a novel fiber structure. We report here for the first time to our knowledge the characterization of mechanically induced long period fiber gratings with periods up to several millimeters in novel multimode-single-mode-multimode fiber structure. We have obtained maximum loss peak of around 20 dB.

■ **Development & Assessment of several High-Resolution Schemes for Compressible Euler Equation**

Prof. M. P. Ray

(Paper published in International Journal of Computational Methods on 28 June 2013)

Abstract:- High-resolution extensions to six Riemann solvers and three flux vector splitting schemes are developed within the framework of a reconstruction-evolution approach. Third-order spatial accuracy is achieved using two different piecewise parabolic reconstructions and a weighted essentially nonoscillatory scheme. A three-stage TVD Runge – Kutta time stepping is employed for temporal

integration. The modular development of solvers provides an ease in selecting a reconstruction scheme and/or a Riemann solver/flux vector splitting scheme. The performances of these high-resolution solvers are compared for several one- and two-dimensional test cases. Based on a comprehensive assessment of the solutions obtained with all solvers, it is found that the use of the weighted essentially nonoscillatory reconstruction with the van Leer flux vector splitting scheme provides solutions for a variety of problems with acceptable accuracy.

Keywords: High-resolution scheme; reconstruction-evolution; Riemann solvers; flux vector splitting schemes; piecewise parabolic reconstruction; WENO

■ **Coated Wall Reactors: The State - of - the - Art in Intensified Chemical Process Reactor**

Prof. Derle S. N.

(Paper published in Journal entitled Chemical Industry Digest, Vol XXVI.6, Page 78-84, 2013)

Abstract:- Coated-wall reactor (CWR) forms an example of process intensification. It is a device in which the catalyst is deposited in the form of a thin layer attached to the reactor wall. In most applications, the fluid, gas or liquid, flows along this catalytic wall in which required reactions take place. CWR can be classified as structured catalyst carrier, e.g., monolith, wire mesh and metal foam CWRs and catalytic wall reactor e.g. catalytic plate reactor, catalytic tubular reactor and micro-channel reactor. The coated wall reactor has many advantages over conventional, packed- and fluidized bed reactors. There are many methods available for coating of thin catalytic layer on the surface of the reactor wall, such as suspension, sol- gel, impregnation, dip coating, physical vapour deposition, chemical vapour deposition, gas displacement methods, etc. Selection of a suitable method depends on the properties of the surface and the catalyst to be deposited. There are some pre-treatment methods that allow coating to enhance adherence, mechanical and thermal stability of the catalytic layer. Thickness of the catalytic coating should be properly designed. Optimum thickness of the coating can be found by using an effectiveness factor. In this communication, an attempt has been made to bring out advantages offered by the CWR, methods of catalyst deposition and typical applications in the commercial production of various chemicals.

Prof. Dr. K. N. Nandurkar
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