Teacher’s Day Celebration

An ISTE Chapter of the Institute celebrated teacher’s day on 5th September 2013. Shri. Shankarrao Gowarikar, Ex Scientist, BARC was a chief guest on this occasion. He is a man of values and known for his sincere and dedicated efforts. On this occasion one senior most staff member from teaching, non teaching and teaching supporting was felicitated and also the staff members for securing 100% result in their respective subjects were felicitated. Dr. Omprakash Kulkarni gave the introduction of the Chief Guest. Shri. Shankarrao Gowarikar shared his experiences when he worked with Dr. Homi Bhabha with all staff present. He was felicitated by Hon. Shri. Balasaheb Wagh, President of K. K. Wagh Education Society. Trustee Shri. Changdevada Holkar, Shri. D. S. Shinde, Principal Dr. K. N. Nandurkar, Principal of various Institutes and heads of various departments of Institute and all the staff members of the Institute were present for the function.

Meeting of Deans, Principals and their representatives (All Universities) from Maharashtra

Meeting of Deans, Principals and their representatives (All Universities) from Maharashtra for the formation of Association of Engineering College Teachers (Maharashtra) was conducted in our Institute on 22nd Sept. 2013. Hon. Shri. Balasaheb Wagh, President of K. K. Wagh Education Society presided over this meeting. The aim of this meeting was to enhance the quality of the technical teachers in Maharashtra and solve the various problems faced by Engineering Colleges teachers. It was also decided to form the Association of Engineering College Teachers (Maharashtra), and complete the registration formalities as earliest.

Engineer’s Day Celebration

The ‘Engineer’s Day’ was celebrated by the Institute in the presence of Dr. Vijay Pandharipande, Vice Chancellor, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. On this occasion, the staff members who completed 20/10 years of service with the institute were felicitated. Also the staff member who obtained Ph.D. degree during the academic year and published papers in various National/International Journals and Conferences were felicitated. Dr. Pandharipande expressed his concern about no Indian University featuring in the list of top 200 universities in the World. He insisted on promoting interdisciplinary research in the field of engineering. On this occasion, Hon. Shri. Balasaheb Wagh, Hon. Shri. K. B. Tarle, Prof. Dr. K. N. Nandurkar, all Heads of Departments and staff members were present.

Speech by Dr. Vijay Pandharipande
Air Force Show – Competitions

A one day programme titled “Guardian of the Sky” Student Interaction Drive by Air Force Head Quarter, Vayu Bhawan, New Delhi was conducted successfully in our institute on 23rd September 2013. The interactive session was attended by around 200 students and 15 staff members of our institute. Principal Dr. K. N. Nandurkar delivered the welcome speech and welcomed Wing Commander Kateo, Wing Commander Y. K. Singh, Squader Leader Shruti Yadav, Squader Leader V. Agnihotri, Squader Leader Anshuman, Flight Lieutenant Manish. Mr. Pramod Shahabadkar, Training and Placement Officer, of our institute briefed the audience about various competition conducted on the occasion of Student Interaction Drive. Squader Leader Shruti Yadav presented the information and career opportunities in the Indian Air Force. Wing Commander Kateo answered the various questions of the students. As a part of this Student Interaction Drive we conducted the ESSAY COMPETITION, POSTER COMPETITION, AEROMODELING CONTEST with different themes like: Role of Indian Air Force for Disaster Management, Advanced trends in Defense Technology for Aviation sector, Role of Technology for Indian Air Force & its History, Historical references of Aircraft Technology from Ancient Literature, Dream aircrafts of the future. On this occasion winners of the contest were given the prizes jointly by institute and Indian Air force. Indian Air force allowed the winners of these contests to visit their OZAR AIR Base.

Vijigisha

“Vijigisha” is a state level elocution competition organized by K. K. Wagh Institute of Engineering Education & Research, ISTE Students’ Chapter in association with ‘Gavkar’, the local newspaper on 20th September 2013. The elocution competition was conducted in both English and Marathi. Around 90 students participated in the competition. Participants from all over Maharashtra right from Aurangabad, Jalgaon, Pune and Nashik travelled the distance to be a part of “Vijigisha 2013-14”. The participants performed in the presence of highly esteemed judges: Mr. Swandan Bedarkar, Mr. Shankar Borhade, (Marathi Elocution section) Mrs. Rohini Sahastrabuddhe, Mr. Uddhav Asturkar (English Elocution section). Prizes are given in Marathi and English category separately. For prize distribution function Mr. Vinayakdada Patil (Vanadhipati), Ex. Minister, Govt. of Maharashtra (Chief Guest), Mr. Shailendra Tanpure (Chief Editor Gavkar), Hon. Mr. Balasaheb Wagh (President of K. K. Wagh Education Society), Hon. Mr. Kashinath Tarle, Vice President, Principal Dr. K. N. Nandurkar, Prof. Dr. S. S. Sane and Prof. Dr. V. M. Sewlikar were present. The basic objective of this competition is to provide a platform for students to participate and flaunt their talent. Students and staff members from the entire college attended this event in huge numbers.

Lecture by Mr. Veerendra Jaitley on ‘We Can, We Can’

Institute has organized an expert session titled “We can We can” by Mr. Virendra Jaitley (Alumni of IIT Kharagpur & ex member of Pan IIT Alumni board) on 13th September 2013 for students of MCA and MBA. Principal Dr. K.N. Nandurkar welcomed the Mr. Virendra Jaitley. He guided the students and staff about how to convert dreams into reality and shared the success mantra with the students.
Students Council election were held in the Institute on 20th September 2013 and Mr. Chandore Amol P. (B.E.Prodn.) was unanimously elected as General Secretary by all members of Student Council for A.Y. 2013-14. Srushti Shah & Vaishali Ananthsubramanin was elected as Ladies representative for the formation of students’ council for the academic year 2013-2014.

■ Eye Checkup Camp
On 16th and 17th September 2013, NSS unit of our Institute had arranged free Eye Check-up Camp for staff and students of the institute in association with Eye Square Optics and contacts Lens Clinic, Nashik. Total 250 students and 160 staff were benefited by this camp.

■ Blood Donation
On 17th September 2013, NSS had organized Blood Donation Camp in association with civil Hospital and MVP Hospital Blood Bank. In this camp 250 donors donated blood and this was successful event.

Blood donation Camp on 17th September 2013

■ Anant Chaturdashi
On 18th September 2013, NSS volunteers actively participated in Ganesh Visarjan activity at Ganga Ghat, Panchavati. With an appeal of NSS volunteers, Nashik citizens donated 651 Ganesh Idols and one trolley Nirmalya to minimizing pollutions.

Donation of Ganesh Idols

■ Formation of New Alumni Association Committee
A meeting of nominees of executive committee members of alumni association was conducted at conference hall of K. K. Wagh Institute of Engineering Education and Research, on 21st September 2013. Principal Dr. K. N. Nandurkar chaired this meeting. He delivered the welcome speech and provided guidelines about plan of activity to be carried out by alumni association. A brief presentation about election procedure of executive committee members and working of alumni association was made by Dr. P. J. Pawar. It has been decided that meeting of governing body will be held once in two months. The members of various posts were elected unanimously.

■ Lecture by Dr. Raj Nagarkar on ‘Prevention of Cancer’
On 25th September 2013, an expert lecture by Dr. Raj Nagarkar (leading Oncologist) was arranged on ‘Prevention of Cancer’ by Department of Chemical Engineering and NSS Unit of our Institute. The NSS Unit, and an NGO, Cause to Serve arranged campaign on “Cancer” in the Institute.

Felicitation of Dr. Raj Nagarkar

■ No Vehicle Day On 24th September 2013
On 24th September 2013, NSS Day was celebrated as No Vehicle Day in association with Divya Marathi. In this event staff and student had given active co-operation. The message regarding pollution control and save earth was communicated to the society by NSS volunteers. The number of vehicles brought by students and staff was significantly low on that day.

■ Crisil Research Training
Demo lecture was conducted at MBA department on 27th September 2013 regarding “how to access CRISIL website?”. The CRISIL reports will enable to track the performance and outlook of 20 industries by giving real time access to data, research and analysis. Demo was imparted by Mr. Hemant Singh Adikari. Associate business development executive CRISIL research. It was attended by Principal, HODs and representative faculties from other departments.
Sport Activities

On 5th September 2013, the intercollegiate cricket tournament was inaugurated by the hands of Chief Guest Shri. Shekhar Gavali (Ranji Player). Principal Dr. K. N. Nandurkar felicitated the guest on this occasion. For this function the Principal of Pancharavati College was also present. On 28th September 2013, the intercollegiate Table Tennis (Boys and Girls) was arranged in our Institute by Gymkhana Department. Principal Dr. K. N. Nandurkar inaugurated the tournament.

Two Days Workshop on “Emerging Trends in IT Security”

Dept. of Information Technology had organized a University of Pune sponsored two days State level Workshop on “Emerging Trends in IT Security” on 13-14th September 2013. Total 147 students from various colleges participated in this workshop. Resource persons for the workshop were Mr. Mangesh Pisolkar, MEC Netcomm, Nashik, Prof. N. L. Bhave, MCOERC, Nashik, Mr. Rohit Sadgune, Information Security Consultant, Pune and Adv. N. M. Gorwadkar. Different topics covered in the workshop were Security Fundamentals, Cryptography, Key Management, Network Security, Security from need to essentiality, Security Management and Applications, Cyber Crimes and Laws and Various tools which can be used to protect system from hacking, real time examples related to Cyber Crimes.

Two Days Workshop on “Industrial Approach for Electronics”

Department of Electronics & Telecommunication Engineering organized a two day workshop on ‘Industrial Approach for Electronics’ during 2-3rd September 2013. The resource person was Mr. Sanjay Chaudhari, Director, Electronics Study Center, Jalgaon.

Tech Rel’s Gems Module Soft Skills Training

Soft skill training of Tech Rel’s GEMS module was conducted at MBA department from 19-30th September 2013. Training was imparted on Quantitative Aptitude, Soft skills, logical reasoning, verbal aptitude, mock session on GD and personal Interview. Vice president of Tech Rel Mrs. Anu Sukheja visited campus to impart demo session.

Following trainers conducted training as per their topic:
Mr. Kartik on Quantitative Aptitude, logical reasoning, Mr. Anup Suvarna on logical reasoning, verbal aptitude, mock session on GD and personal Interview & Mrs. Mrigakshi Sharma on logical reasoning, verbal aptitude, mock session on GD and personal Interview.

Expert Lecture/Seminar/Courses/Worshop Organized:

- Department of Civil Engineering organized an expert talk of Prof. P. T. Kadave (Principal, K K Wagh Polytechnic) on 11th September 2013. Same department also organized an expert talk of Mr. Aditya Sathe & Mr. Amol Morwal on 26th September 2013.

continued on page 5
- Department of Electrical Engineering (Second shift) organized an expert talk of Dr. R. Vankatesh on Innovation on 13th September 2013. Same department also organized a workshop on “Maintenance & Troubleshooting & Testing of domestic appliances” on 21st September 2013. Department of Electrical Engineering (First Shift) organized an expert talk of Mr. V. L. Sonawane on 2nd September 2013. Same department also organized an expert talk of Mr. Nitin Jha on “Lighting Arresters” on 22nd September 2013.

- Department of Mechanical Engineering organized an expert seminar of Prof. Shivani Talwar on “Proficiency in English Language” for all staff members of Mechanical department on 25th September 2013. Same department also organized an expert seminar of Mr. Samson Joseph on “Driving Safety” for their students on 7th September 2013.

- Department of Electronics & Telecommunication Engineering organized an Expert lecture of Mr. Pradeep Patil, Sr. Manager, HAL, Ozar on “Role of Electronics in Aviation technology, Aerospace sector & Basic Aircraft” on 27th September 2013.

- Dept. of Information Technology organized a “Mock Technical Interview Session” for final year students on 30th September 2013 conducted by Mr. Bhushan Bachhav, Senior Software Consultant, Datamatics Global Services Ltd., Nashik and Mr. Shreyas Mandavane, Software Developer, Synchrotron Technologies Pvt., Ltd., Pune, an alumnus of 2008 batch.

### Industrial Visits Organized For Students:

<table>
<thead>
<tr>
<th>Date</th>
<th>Class</th>
<th>Name of Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/09/2013</td>
<td>B. E. Civil</td>
<td>Sewage Treatment Plant, Panchak, Nashik</td>
</tr>
<tr>
<td>13/09/2013</td>
<td>T.E. Electrical (2nd Shift)</td>
<td>H.V.D. C Padhge</td>
</tr>
<tr>
<td>14/09/2013</td>
<td>T.E. Electrical (1st Shift)</td>
<td>H.V.D. C Padhge</td>
</tr>
<tr>
<td>16-17/09/2013</td>
<td>T.E. Civil</td>
<td>Mumbai Port Trust</td>
</tr>
<tr>
<td>20/09/2013</td>
<td>T.E. Civil</td>
<td>Nashik Road Railway Station</td>
</tr>
</tbody>
</table>

### Training & Placement:

<table>
<thead>
<tr>
<th>Name of the Dept.</th>
<th>Name of Company</th>
<th>No of students selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCA</td>
<td>Cloud Vision System, Pune</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td>Petkar Software Solutions Ltd.</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td>TICT Group, Aurangabad</td>
<td>05</td>
</tr>
<tr>
<td>Mechanical Engg.</td>
<td>Mahendra &amp; Mahendra Ltd., Igatpuri, Nashik</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td>Atlas Copco</td>
<td>01</td>
</tr>
</tbody>
</table>

### Other Achievements:

- Prof. V. K. Patil of Civil Engineering Department is selected as Arca Co-ordinator of NSS for some Colleges of Nashik City by Pune University NSS Office.

- Prof. Dr. E. K. Kushare Offered Training services to Mahendra & Mahendra Ltd, Nashik, Times of India Lucknow, Times of India Airoli, Times of India Delhi, Trambak Rubbers Sinner, Bosch Ltd. Nashik and Times of India Kandivali.

- Prof. S. R. Gangurde Production Engineering Department delivered an Expert Lecture on “Material Selection using Multi-Attribute Decision Making Approach” at One-day Workshop on “Computer Aided Design & Manufacturing of Plastic Mould” at Amravati College of Engg., Sangamner on 20th September 2013. Same departmental staff Prof. Dr. P. J. Pawar also delivered an expert lecture at same workshop. Prof. Dr. P. J. Pawar also delivered an expert lectures in One-week STTP on “Advanced Engineering continued on page 6
Optimization through Intelligent Techniques, at SVNIT, Surat, during 23 to 27th September 2013.

- Prof. S. N. Jain of Chemical Engineering department, Prof. Rupali Bora and Prof. S. K. Badjate of IT department were felicitated by “Jain Social Group” at Hotel Grape City Nashik for their contribution in the field of teaching in Higher Education on 13th September 2013.

**Abstracts of Papers Presented by Staff during September 2013:**

**Spatial Control of Advanced Heavy Water Reactor by Fast Output Sampling Technique**
Prof. R. K. Munje
(Presented at IEEE Multi-conference on Systems and Control at Hyderabad on 30th August 2013)

**Abstract:** In this paper, a spatial control strategy based on Fast Output Sampling (FOS) technique is proposed for advanced Heavy Water Reactor (AHWR). The non-linear model of AHWR, represented by 90 first order differential equations having 5 inputs and 18 outputs, is linearized to obtain standard state-space representation. Using similarity transformation, the original higher order, ill-conditioned discrete system of AHWR is first decomposed into two comparatively lower order subsystems, namely, ‘slow’ and ‘fast’ subsystem of orders 73 and 17 respectively. Now, state feedback controls are designed separately for slow and fast subsystem and then a composite controller is obtained using these individual state feedback controls, which is then realized using FOS feedback gain. Thus, the states of the system are not required for feedback. The efficacy of the controller has been demonstrated by simulation of transient behavior of non-linear model of AHWR. Performance of the controller is found to be satisfactory.

**Performance of RAKE-LMMSE Receivers in Wideband Communication System**
Prof. M. D. Kokate
(Published in Springer International Journal, Special issue on wireless communication, during August 2013)

**Abstract:** The last decay witnessed for 2G cellular wireless communication’s transformation which had been taken from voice service to variety of high speed multimedia services. The demand for 3G/4G services is increasing day by day. WCDMA air interface of UMTS has the bandwidth of 5MHz and chip rate of 3.84Mcpps. This small symbol and chip time creates the difficulty in system performance as delay spread crosses coherence time limit thereby channel is exhibiting as a frequency selective channel. WCDMA supports connections of dynamic data rate ranging from 15kbps to 1Mpps with spreading factors 256 and 4 respectively. In this multirate communication environment, inter path interference (IPI) becomes the limiting factor for the performance of the conventional RAKE receiver.

This paper investigates RAKE receiver characteristics and does the analysis of zero forcing and LMMSE equalizer for MIMO channels.

**Keywords** - WCDMA, RAKE, LMMSE, Diversity, MRC

**Direct Torque Control of Three Phase Induction Motor Using Fuzzy Logic**
Prof. S. S. Dhamal
(Presented paper at Institute of Business Management & Research, Chakan-Pune on 16th September 2013)

**Abstract:** The induction motor developed in the last century is mostly used in ac converters. However the induction motor control system is much more complex and expensive. The most common scalar control technique was the constant volts per Hertz strategy, so called because it the stator voltage magnitude proportionally to the operating frequency to keep the induction motor stator fluxes approximately constant. This is the simple control technique, but it was limited and not accurate speed range, particularly at low speeds and has poor torque response. The introduction of the vector control technique solves the induction motor control problem. In the 1970’s F. Blaschke developed the field oriented control (FOC). In this scheme, the torque and the flux of an induction motor are controlled independently by decoupling the stator current into orthogonal components. The FOC method was achieved a quick torque response. In FOC, the exact identification of parameters is required. In the 1980’s new induction motor control techniques are developed. Takahasi & Noguchi presented Direct Torque Control (DTC). It is the most control for medium and low power applications. In the DTC scheme, the inverter bridge control switch connections are directly selected using qualitative behavior rule set in order to control the stator flux and torque. The DTC scheme provides a fast torque response while keeping the induction motor flux and torque decoupled. With this scheme the torque and flux presents a high ripple. The main advantages of DTC are the absence of the coordinate transformation and current regulator, absence of separate voltage modulation block. The disadvantages are high ripple in torque, low response to the step change torque during start up.

Prof. Dr. K. N. Nandurkar
PRINCIPAL