



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

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TECHNICAL NEWS LETTER

■ **1st Anniversary lecture in memory of Late Shri. Balasaheb Wagh (Bhau)**



Felicitation of Hon. Shri. VishwasPatil



Chief Guest Shri. Vishwas Patil delivering the lecture

1st Anniversary Lecture in memory of beloved Late Shri. Balasaheb Wagh (Bhau) was organized by our institute on 31st January 2023 at Raosaheb Thorat Hall Nashik. For the Lecture the Chief Guest was Shri Vishwas Patil (Ex IAS officer). Hon. Shri. Vishwas Patil was felicitated at the hands of Hon. Chairman Shri. Sameer Wagh. Shri. Vishwas Patil spoke on History of Maratha: Mahapita Shahaji and Mahasamrat Shivaji. Talk of Vishwas Patil was very impressive and he elaborated with various examples about the contribution of Mahapita Shahaji for shaping career of Mahasamrat Shivaji. Dr. Rahul Ranalkar (Editor, Dainik Sakal) was president of the

program. On this occasion Hon Sameer Wagh, Trustee Changdevdada Holkar, Secretary Prof. K. S. Bandi, Mr Ajinkya Wagh, Principal Dr. K. N. Nandurkar, all Principals, Heads of department and staff of various institutes of K. K. Wagh Education Society were present.

■ **Varshashradha of Late Shri. Balasaheb Wagh (Bhau)**



Varshashradha program of Hon Late Balasaheb Wagh (Bhau)

Varshashradha program of Late Shri. Balasaheb Wagh (Bhau) was organized on 26th January 2023 at Engineering College ground. Hon. Chairman Shri. Sameer Wagh and Wagh Family had invited all the staff and Guest from Nashik as well as from all over Maharashtra to attend the program. All staff and invited guests paid the tribute to late Balasaheb Wagh on this occasion. Various dignitaries from Nashik and from Maharashtra including MLAs, MPs, Ex MLAs, Ex MPs, Trustee Smt. Shakuntalatai Wagh, Trustee Ashok Merchant, Trustee Shri Changdevdada Holkar, Mr Ajinkya Wagh, Secretary Prof. K. S. Bandi, Principal Dr. K. N. Nandurkar, all Principals, Heads of department and staff of various institutes of K. K. Wagh Education Society were present.

■ Visit of Hon. Dr. Balasaheb Raskar



Felicitation of Hon. Dr. Balasaheb Raskar



Felicitation of Principal Dr. K. N. Nandurkar

Hon. Dr Balasaheb Raskar, Joint Secretary of Agriculture Department, Govt. of Maharashtra visited our institute on 29th January 2023. He was felicitated at the hands of Hon Chairman Shri Sameer Wagh. Dr Balasaheb Raskar appreciated the development of K. K. Wagh Education Society. Principal Dr. K. N. Nandurkar bagged the prestigious “Best Principal Award” from SPPU. Principal Dr. K. N. Nandurkar was felicitated at

the hands of Hon Dr Balasaheb Raskar and Hon. Chairman Shri. Sameer Wagh. For the program Secretary Prof. K. S. Bandi, Principal Dr. K. N. Nandurkar, other Principals, Heads of department of Engineering College and Agriculture Colleges of K. K. Wagh Education Society were present.

■ Visit of Hon. Ajeet Singh



Felicitation of Hon. Ajeet Singh

Hon. Ajeet Singh, Regional Officer and Assistant Director, All India Council for Technical Education (AICTE) visited our institute on 23rd January 2023. He was felicitated at the hands of Principal Dr. K. N. Nandurkar. Hon Ajeet Singh appreciated the development of K. K. Wagh Education Society. On this occasion Hon Ajeet Singh guided all Deans and HODs regarding APH 2023-24.

■ ETT meeting with Hon. Shri. Vivek Sawant

The Educational Transformation Team (ETT) Meeting with Hon Vivek Sawant was organized on 14th January 2023. The review of the SE Syllabus design under Autonomy pattern was carried out in the said meeting. Hon Vivek Sawant gave the important suggestions during the meeting for the syllabus design.

■ FDP on “Electronic System Design”



Group photo of FDP on “Electronics System Design”

The Six days Faculty Development Program on “Electronics System Design” was organized during 9th to 14th January 2023 by the Department of Mechanical Engineering & Electronics Engineering in association with KKWIEER IDEA

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Lab. A total 21 faculties from various engineering and diploma colleges actively participated in the FDP. The FDP is intended to provide participants with hands on practice on embedded product design. The FDP was inaugurated in presence of Director Dr. K. N. Nandurkar.

■ **Skilling program on “Modern Manufacturing Processes”**



Participants of Skilling Program

Department of Mechanical Engineering in association with the KKWIEER-IDEA lab has completed a twelve days “Skilling Program on Modern Manufacturing Processes” from 09th to 21st January 2023. Total 18 students of Government ITI Satpur, Nashik, participated in the program. Program was intended to provide participants with hands on practice on embedded product design. Also, it provides opportunity to participants to work in team, build integrity and work in multidisciplinary fields. This Skilling Program throws light on successful implementation of various new technologies to prepare prototype and enhances technical skills. A poster competition was conducted in this program to represent how IDEA Lab facility will help them to complete their mini projects.

■ **Door-to-Door “Quality Connect Campaign”**



Door-To-Door “Quality Connect Campaign” Flag off ceremony

Establishment Day of the Bureau of Indian Standards was observed on 06th January 2023. To Commemorate the 76th Foundation Day, a Door-To-Door “Quality Connect Campaign” by our college students for creation of awareness to common consumers was commenced. The Flag off ceremony was done by Principal Dr. K. N.

Nandurkar in presence of Mr. Sameer Kumar (BIS Office Bearer), Dr. S. Y. Kute (Dean, Academics) and Dr. N. B. Gurule (Mentor, BIS Standards Club). Mr. Sameer Kumar briefed about various issues such as: role of youth volunteer as a “Manak Mitra” of Door-to-Door campaign, importance standards in our daily life, process of setting new standards, hallmark, ISI mark & BIS care mobile App. After this inauguration program 104 Manak Mitras engaged comprehensively with around 1500 the households and shared the information about BIS activities to Common Consumers.

■ **E-Yantran: Waste collection Campaign: Republic Day 26 January 2023**



“E-Yantran”, E-waste collection campaign

“E-Yantran”, e-waste collection campaign was implemented through the joint efforts of Computer Society of India (CSI) Nashik Chapter, Purnam Ecovision Pune and Environment Protection Group, Nashik. The campaign was launched on 12 January 2023, at the hands of Hon. Commissioner of Nashik Municipal Corporation Mr Chandrakant Pulkundwar. Even though this kind of activity was organized for the first time in Nashik, the campaign got a good response from Nashik as well as Sinnar area. K. K. Wagh institute of Engg. Education and Research, Nashik had registered as collection center and more than 50 students had registered as volunteers. During the period 23 to 25 Jan 2023, the students attended the related orientation program and volunteered in the

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campus, in various institutes and departments to make awareness about the drive. They appealed the students, staff members to donate the e-waste at their home, offices and working premises at the center located at department of Computer Engineering. Their efforts counted and total 27 boxes of e-waste (approx. 300+kg) was donated on 25th January 2023 to Poornam Ecovision, Pune.

■ **Governing Body Meeting**

Governing Body meeting (Affiliated system) was organized in the institute on 13th January 2023. For the meeting Trustee Shri Ashokbhai Merchant, Jt Director DTE Nashik Prof. D. P. Nathe, Principal Dr. K. N. Nandurkar and other members were present.

■ **Celebration of birth Anniversary of Late Savitribai Phule**



Celebration of birth anniversary of Late Savitribai Phule

Kusumagraj central library of our institute celebrated birth anniversary of Hon Late Savitribai Phule on 3rd January 2023. On this occasion Principal Dr. K. N. Nandurkar, Librarian Dr. Shri P. S. Bodke, all other staff and students were present.

■ **Celebration of Republic day**



Republic Day was celebrated on 26th January 2023 with full honor. On this occasion the Flag hoisting was done the hands of Mr. Kapadia (Landon). For the program Trustee Shri Ashokbhai Merchant, Mrs. Sushmaben Ashok

Merchant and their other family members were present. Principal Dr. K. N. Nandurkar, other Principals of this campus and staff were present for the Flag hoisting.



Guests paid homage to Late Hirabai Haridas

After the Flag hoisting, all guests paid homage to Late Hirabai Haridas by offering garland and flowers to her statue. Hon. Shri. Ashok Merchant recalled her contribution towards women empowerment and promoting education for masses.

■ **Visit of NBA Expert Committee**



Exit Meeting

NBA Expert Committee of AICTE New Delhi visited our institute during 27- 29th January 2023 for MCA department for getting their accreditation. On 27th and 28th January, the expert committee did the inspection as per the norms of NBA and on 29th January 2023 morning the Exit meeting was held in the institute per the norms of NBA. Experts shared their observations about the institute during the exit meeting.

■ **Celebration of "National Youth Day"**

Kusumagraj central library of our institute celebrated "National Youth Day & Rajmata Jijau Jayanti" on occasion of birth anniversary of "Swami Vivekanand & Rajmata Jijau" on 12th January 2023.

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Celebration of "National Youth Day"

■ **Inauguration of Football Matches**



Guests with participants of Football matches

Football matches were organized on institute ground under Karmaveer Sport Festival during 7th to 14th January 2023. Dr Avinash Dharmadhikari was the Chief guest for said function. Mr. Ajinkya Wagh and Principal Dr K. N. Nandurkar were present for the inauguration along with participants.

■ **An Industry-Academia Interaction Programme**



Industry-Academia Interaction program

K K Wagh IEER in association with Maharashtra Chamber of Commerce, Industry & Agriculture (MACCIA) organized an Industry-Academia Interaction program on the theme: "Developing Entrepreneurial Mindset" on 20th January 2023 at K K Wagh IEER. Programme was attended by Mr. Kantilal Chopda, Chairman, North Maharashtra of MACCIA as Chief guest, Mr. Manish Patil of MACCIA, Mr. Jayakara G Shetty, Sr. GM, HR, Sansera Engineering Ltd. Pune, Prof.

D. P. Nathe, Jt. Director, DTE, Nashik and Mr. Sameer Wagh, Chairman of K. K. Wagh Education Society. Objective of the Programme was to develop the Entrepreneurial Mindset in the educational institutes. Programme was attended by Principals, Directors of various educational institutes and also Presidents and Plant heads of industries. Around 150 participants have attended this program. Programme started with the welcome speech by Principal Dr. K N Nandurkar. Mr. Manish Patil and Mr. Vikram Balajiwale shared the activities of MACCIA in developing the Entrepreneurial Mindset

■ **Special Induction drive by Indian Air Force**



Showcased "Induction Publicity Exhibition Vehicle" (IPEV) developed by IAF Fifteen Indian Air Force (IAF) officers visited K K Wagh on 28-1-2023 and organized a special student interaction road drive for K K Wagh Students. IAF Officials made the students aware about the IAF and they provided guidance on various career opportunities available in the Indian Air Force. Also Showcased "Induction Publicity Exhibition Vehicle" (IPEV) developed by IAF which was an Aircraft Simulator and demonstrated it in a batch of 15 students to give them experience of Fighter Aircraft.

■ **Birth Anniversary of "Netaji Subhash Chandra Bose"**



Celebration of birth anniversary of "Netaji Subhash Chandra Bose" Kusumagraj central library celebrated birth anniversary of "NetajiSubhash Chandra Bose" on 23rd January 2023. Principal Dr. K. N. Nandurkar, Librarian Dr. P. S. Bodke, all other staff and student were present. Members remembered the contribution of NetajiSubhash Chandra Bose in India's freedom struggle.

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■ Congratulations!!



Felicitations of elected members by Hon. Mr. Sameer Wagh, Chairman KKWES

Dr. K. N. Nandurkar (Principal) and Dr V. S. Mane (HOD, Chemical Engg.) elected as BOS Members of Production and Chemical branch respectively at SPPU Pune University. Dr. P. B. Kushare has been elected unopposed as BOS Member for Mechanical branch at SPPU. Dr. S. S. Sane has been nominated as Chairman for Computer Science Application (Adhoc Board). The felicitation of Principal Dr. K. N. Nandurkar and other elected members was done by Hon. Mr. Sameer Wagh, Chairman KKWES and Dr. Shantam Shukla on 10th January 2023.

■ Congratulations!!

Dr. Preeti D. Bhamre (Dean Quality Assurance and Head of IT department) and Prof. Nitin M. Shahane of Computer Engineering won the Best Paper Award in the track "Technology Enhanced Learning" for the paper "SWOT Analysis in Engineering Classes using Audience Response System" presented at the 10th International Conference on Transformations in Engineering Education (ICTIEE 2023) organized by Vidyavardhaka College of Engineering, Mysuru, Karnataka, India and Indo-Universal collaboration for Engineering Education (IUCEE)

■ Expert Lecture/Seminar/Courses/Workshop Conducted:

- Computer engineering department organized session on "Road Safety and Traffic Awareness" by Mr. Abhay Bag during 20th to 21st January 2023.
- Electronics & Telecommunication department organized Expert talk on "Introduction to video editing" by Mr. Tushar T. Gadekar, Professional Video Maker on 06/01/2023 and an Expert talk on "Quantitative Aptitude" by Mr. Sagar Nikam, Founder, Director, ELC on 27/01/2023.
- Civil Engineering Department organized One week FDP on "Applications of Geospatial Technology in Urban Studies with QGIS

Hands-on training" during 17 -21st January 2023. The resource persons were Asfa Siddiqui (Scientist/Engineer –SE, IIRS, Dehradun), Abhay Kulkarni (Head, Projects & Training, Bhugol GIS Pvt. Ltd. Mumbai), Vikrant Nikam (Director &CEO, Albedo Foundation, Nashik) and Er. Aditya Sathe (Director, CDSA, Pune).

■ Expert Lecture/Seminar/Courses/Workshop Attended:

- Computer engineering departmental staff Dr. Satish S. Banait attended one week faculty development program on "AI-based Nature Inspired Optimization Methods" organized by Babasaheb Naik College of Engineering, Pusad, Yawatmal from 9th to 14th January 2023. He also attended One Day Online Faculty Orientation Program on "Data Science" by SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad on 17th January 2023. Prof. J. R. Mankar attended One day online Faculty Orientation Program on "High Performance Computing" by SITS, Narhe on 20th January 2023 and Prof. N. M. Pagare have attended Webinar on Faculty Development Program on "Assembly with PTCCreo" organized by Invensys Cad Solutions on 28th January 2023. Mr. S. V. Nirgude attended FDP on "Cyber Security" organized by MET Nashik on 27th January 2023. Prof. S. V. Nirgude attended Webinar on "Designing Course Outcomes and Outcomes-focused questions" by Inpods on 7th January 2023.
- Electronics & Tele Communication departmental staff Mr. R. R. Khinde attended Udeemy course on 'Business communication skills: Business writing and Grammar', Mrs. R. V. Chothe have attended Udeemy course on "Complete personal development Master Class for success", Mrs. S. V. Shelke have attended Udeemy course on "Introduction to Electromagnetics - Rahsoft RAHAE 101" and Mrs. P.P. Patil have attended Udeemy course on "The complete communication skills Master Class for life".
- Mr. Piyush Joshi has attended six days FDP on "Waste to Energy and Biofuels" organized by GOA College of Engineering, GOA with ATAL Academy from 14/01/2022 to 19/01/2022. Dr. Yennam Rajesh attended Fourteen days FDP (online) on Sanitisation on innovation & cutting Edge Technologies" organized by Vishwakarma Institute, Pune from 14/01/2022 to 29/01/2022. Ms. Priyanka

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Shivde attended FDP of five Days on “Recent advances in chemical Engineering -2022 (RACE)” organized by Dept. of Chemical Engg. at Rajalakshmi Engg. College, Chennai from 08/01/2022 to 12/01/2022.

- Information Technology Department Staff Ms. Pragati Pandit attended five days STTP approved by ISTE on “Emerging Technological Advancements and Practical Applications of Data Science” organized by Department of Information Technology, SKN Sinhgad Institute Technology & Science, Lonavala from 16th to 20th Jan. 2023.

■ Abstracts of papers presented during Dec 2022 Control of a Two-Wheeled Inverted Pendulum using Integral Sliding Mode

Dr. Ravindra K. Munje, Deepak M. Sonje and Deepak P. Kadam

(Published paper in International Journal of Mechanical Engineering)

Abstract: Modeling and control of two-wheeled inverted pendulum (TWIP) are gaining much interest due to the advancements in hardware and computing technologies. TWIP system has many advantages and applications. However, it is still having many challenges to control when faced with tasks of positioning, disturbance rejection, parameter uncertainties, etc. In this paper, a control scheme based on modern control techniques is presented to overcome these issues. In this, a robust integral sliding mode controller (ISMC) is proposed for the nonlinear system of TWIP. First of all, a robust integral sliding mode controller is designed to tackle short-term and long-term constant and time-varying disturbances and issues related to parameter variations. Then, it is applied to the nonlinear model of TWIP and performance is observed under different transient conditions. A comparison with prevalent controllers in the literature is carried out. From this, a significant improvement is seen with the proposed controller for all types of transients. This paper also discusses the software Simulink realization of modelling and control of TWIP, which can be valuable for novices working in this area.

■ Intensified removal of 4-Methylpyridine by ultrasonication in presence of advanced oxidants

Dr. G. B. Daware, Dr. Yennam Rajesh, Mr. Umesh Kayande, Miss. Priyanka shinde, Mr. Mayur

Kolhe & Prof. P. P. Joshi

(Published paper in Journal of the Indian Chemical Society □ (Elsevier) Volume 100, Article ID: 100810)

Abstract: Water contamination is a big issue in every part of the globe. In response to the rising demand for wastewater with lower pollutant levels, a unique enhanced oxidation technique called ultrasound assisted irradiation has been developed. In the current study, advanced oxidising technology is used to accelerate the breakdown of 4-Methylpyridine (4 MP) utilising ultrasound at a rated frequency of 22 ± 2 KHz. In the presence of ultrasound, the effects of advanced oxidising agents as well as the effects of different operational factors like pH, time, and power were evaluated. The kinetics for degradation of 4 MP were evaluated by second order model. The combined strategy of ultrasound assisted degradation in the presence of various advanced oxidising agents like hydrogen peroxide (H_2O_2), peroxymonosulphate (PMS), potassium per sulphate (KPS) and Fenton reagent was investigated at optimal operating conditions, with the starting concentration of 50 mg/L at pH 9, and temperature 45°C. When applying ultrasound at its highest rated power of 120 W while the Fenton reagent was present, the maximum degradation was recorded to be $99 \pm 1\%$. The scavenger effect of OH free radical and ions was evaluated on degradation of 4 MP. The synergetic index for all combination approaches was determined, for US/Fenton maximum synergetic index 10.8 established. The tentative degradation pathway was studied for degradation of 4 MP.

■ Abstracts of papers presented during Jan 2023

Bridging the Gap: Industry and Engineering Institutions through Efficient Collaboration

Dr. R. D. Kulkarni, Prof. Dr. S.S. Sane, D. M. Kanade

(Paper published in in Journal of Engineering Education Transformations)

Abstract: The engineering educational institutes strive to develop the graduating students to possess the skillsets required by the related industries in the market. However the industries, that seek the engineering graduates as their employees assert that they spend lot of time, money and energy in training these graduates.



This fact emphasizes that there exists a gap in the skillsets cultivated in the graduates by the academic institutes and those required at the industries. The main causes behind this have been the differences in their major goals along with the lack of focused collaboration and efforts required to thin the said gap. In this paper we present a model namely 'Tailored Skills Development Model' (TSDM) which proves to be effective in bridging this gap. The model proves to be supportive to the engineering institutions where they are able to cultivate the graduates with advanced skills that are necessitated by the industries in the specific engineering disciplines focused by the institutes. And the model also assists the industries to seek the better manpower with adequate skillsets. The model helps to reduce the training period, related cost and energy involved at the industry levels in search of the anticipated skillsets. The paper discusses the organization and implementation of this model at our institute along with the statistics of its execution.

Keywords: Engineering education, Engineering institutions, Industries, Tailored Skills Development Model.

■ **New Approach for Providing Adaptable Curriculum Enrichment through Teaching-Learning and Evaluation**

Dr. Ravindra Munje, Priya Rakibe, Vikrant Nichit, Anup Dudhekar and Yogita Shewale

(Paper published in Journal of Engineering Education Transformations)

Abstract: Post-pandemic, the perspective -pof the stakeholders of the education industry has changed considering online teaching learning and evaluation. Most of the stakeholders feel that a hybrid learning methodology can be adapted for multiple reasons. However, designing a framework for hybrid teaching-learning and evaluation is not easy. In this paper, an attempt is made to propose one such approach for implementing a hybrid teaching-learning and evaluation mechanism. First of all, a survey of the students was conducted to understand their opinion about the type of teaching-learning process. Then a strategy is suggested where theory sessions will be conducted online and lab sessions will be conducted in an offline (face-to-face) manner. Further, the implementation strategy, teaching-learning tools, feasibility,

applicability, and challenges associated with this are discussed. The successful implantation of the suggested teaching-learning and evaluation method can be a promising solution for accommodating on-campus and off-campus learners.

■ **Factors Influencing the Aspirations of First Year Engineering Students: A Statistical Study**

Ajinkya S. Joshi, Pramod K. Shahabadkar, Keshav N. Nandurkar and Dnyaneshwaree S. Jawale.

(Published in Journal of Engineering Education Transformations)

Abstract: An engineering student passing out from the college has different aspirations such as obtaining a job through campus interview, opting for higher education in India and abroad, becoming an entrepreneur and so on. A study was conducted in the past to understand the aspirations of the undergraduate students. The current study is an attempt to identify the factors that influence the student aspirations. A study in this connection was carried out in an Engineering College located in the western part of India. The objective of this paper is to determine the factors influencing the aspirations of engineering students. Nine factors influencing the student aspirations were identified from the findings of the previous study and additional six factors were identified through a brainstorming session with the faculty members and students. A Google form was created to identify the prominent factors influencing the student aspirations. This form was circulated to 450 students and responses were obtained from 286 students over a period of one month. Multiple Linear Regression analysis was used to identify the most significant factors that influenced the student aspirations. Results indicate that seven factors namely annual family income, peer motivation, chances of fulfillment of aspirations, government policies, current academic marks, opportunities provided by institute and marks in CET exam are the most influential shaping the student aspirations. The outcome of this study will help the educational institutions to channelize their efforts, develop suitable mechanisms and help the students in fulfilling their aspirations.

Keywords: Employability; Engineering Graduates; Enrollment Ratio; Stakeholders; Student Aspirations; Technical Skills.

Prof. Dr. K. N. Nandurkar
PRINCIPAL

