K. K. Wagh Institute of Engineering Education and Research

Department of Production Engineering

Technical News Letter

February 2022 of AY 2021-22

It's a great pleasure to present our newsletter for the February 2022 of AY 2021-22. Department of Production Engineering has been consistently endeavoring to upgrade the skills and performance of students and staff members through various ventures.

❖ Expert lectures attended by staff

03 expert lectures attended by the teaching and non- Teaching staff.

Sr. No.	Title of lecture	Name of Speaker	Name of Industry	Date	No. of Student Present
1	Machine Learning and Robotics	Mr. Tushar B. Kute	MITU Skillologies, Pune	3-2-2022	71
2	AI-Powered Robotics from Research to Betterment of Humanity	Dr. Ravi P. Joshi	Tech Magic, Japan	4-2-2022	114
3	Career Opportunities in CAD/CAM/CAE	Mr. Amit Joshi	Tyson online Ltd; Nashik	9-2-2022	51

❖ Online Webinar attended by the faculty

In the month of the February 2022 teaching and non- Teaching staff member attended various webinar on online platform to explore the new advancement in the technology.

❖ Student Achievement

05 students of 2021-2022 Batch were selected in (Capgemini-04, Wipro-01) company with package of 3.5 lacs. to 4lacs. Felicitation Program for these placed students was organized by Production Engineering Department on 3rd Feb. 2022. 33 students along with staff attended this program

❖ Staff Activities

Paper presentation

Dr. P. J. Pawar published paper titled 'Flexible Job Shop Scheduling for Press Working Industries with Operation Precedence Constraint' in an International Journal 'Process Integration and Optimization Systems' by Springer.

Title of the paper

Flexible Job Shop Scheduling for Press Working Industries with Operation Precedence Constraint

Abstract: To remain sustainable, the press working industries must be energy efficient, should ensure minimum material waste and should employ solutions for Industry 4.0 using artificial intelligent techniques. In this work, an attempt is therefore made to solve the real-life problem of press working industry which is related to flexible job shop scheduling problem considering sustainability aspect. This is done by minimizing the number of hours required to operate the system for a given lot size and thus making the overall system energy efficient. A mathematical model is developed considering waiting time on machines along with production time and setup time. To solve this model, discrete version of a one of the well-known meta-heuristics namely artificial bee colony algorithm has been employed. The results show that there is a significant saving in total time of 10.71% over that by existing practice of the particular industry. It also means that production machines will run 10.71% less for the given lot size resulting into saving of same amount of energy. Also due to material flow optimization, the energy consumed by material handling devices is also less.

Dr. P.J. Pawar
Head of the Department