

It's a great pleasure to present our newsletter for the April 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.

❖ **Inauguration of Supervisory Development Program at Mahindra and Mahindra Ltd., Igatpuri**

K. K. Wagh Institute has organized a 'Supervisory Development Program' for Mahindra and Mahindra employees during April 2022 to November 2022. The inauguration ceremony of this program was held on 22<sup>nd</sup> April 2022. Dr. P. J. Pawar, Prof. P. K. Kavale of K. K. Wagh IEER and senior managers of Mahindra and Mahindra Ltd., Igatpuri, Shri. Gaurav Dandekar, Shri. Sandip Gijare and others were present for this inauguration function. About 40 employees of Mahindra and Mahindra Ltd. will be participating in this program.





## ❖ Robotics Awareness Workshop

Robotics is one of the emerging technologies and Robotic science has a tremendous scope as a career option. Hence, to create awareness among students about Robotics and its applications, Department of Robotics and Automation conducted four awareness programs in the month of April 2022 (16<sup>th</sup>, 20<sup>th</sup>, 25<sup>th</sup> & 26<sup>th</sup> April 2022) for 11<sup>th</sup> & 12<sup>th</sup> students of K. K. Wagh Jr. College. So far this program is attended by around 200 students. These programs cover a theory session on Robotics followed by practical demonstrations on industrial robots and kits.





## ❖ Staff Activities

### Expert lectures delivered:

Prof. M.Y. Khalkar & Prof. V.S. Gaikwad delivered theory & practical session for Faculty Development Program at AICTE IDEA LAB K.K.Wagh Institute of Engineering Education Institute & Research Nashik, on "Industry 4.0" on 27<sup>th</sup> April to 2<sup>nd</sup> may2022

### Faculty Publication:

Material Flow Optimisation in a Manufacturing Plant by Real-Coded Genetic Algorithm (RCGA)

Published in Book: Studies in Quantitative Decision Making, Springer

Author: Prof. P. J. Pawar

## Abstract:

In agriculture, supply chain management and transportation, it is necessary to deliver and pick up the required material in time. For this delivery and pickup of materials, vehicles are used with certain capacity. The problem is solved as capacitated vehicle routing problem (CVRP). The objectives are considered as capacity of the vehicle and the time required for delivery and pickup. Various heuristics and meta-heuristics are developed to solve the CVRP effectively. In this work, two different case studies based on CVRP by Alvarado-Iniesta et al.(Expert Syst Appl 40 (12): 4785– 4790, 2013) and Venkatesan et al.(Int J Eng Sci Technol 3: 7469–7477, 2011) are considered. To solve these problems, real-coded genetic algorithm (RCGA) is employed to optimise the material flow. The results obtained by RCGA are dominating to previously used algorithms by solution quality.

### ❖ **Online Webinar attended by the faculty**

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

**Dr. P.J. Pawar**  
**Head of the Department**