



BVVS
BAGALKOTE

InPro Efficiency



I&PE, BEC, Bagalkote

Shaping Excellence In Industrial & Production Engineering Since 1984



COLLEGE

Vision

- To be an institution of excellence in education, research and innovation for sustainable future

Mission

- Develop globally competent professionals for future talent requirements
- Nurture a culture of research, Innovation and entrepreneurship
- Promote collaborations, extension and outreach programs for addressing industrial and societal needs

DEPARTMENT

Vision

To achieve excellence in education and research in Industrial and Production Engineering for a sustainable future

Mission

- Develop globally competent professionals in Industrial and Production Engineering by imparting quality education
- Nurture a culture of research, innovation, and entrepreneurship through collaboration with institutes and industries

Editorial Board

Dr. C. M. Javalagi
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Shri. S. B. Hirekumbi

Freshers Day

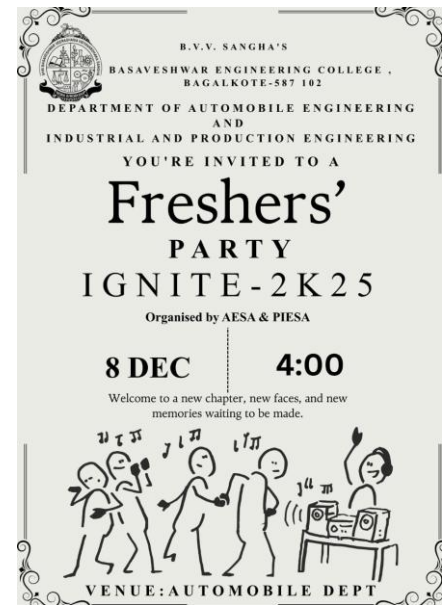
Freshers Party "IGNITE – 2K25"

The Departments of **Industrial & Production Engineering (IPE)** and **Automobile Engineering**, Basaveshwar Engineering College, Bagalkote, jointly organized the Freshers Party "IGNITE – 2K25" on 8th December 2025 to welcome first-year students and help them integrate into the departmental fraternity.

The event was **presided over by Dr. C. M. Javalagi**, HOD, IPE, and **Dr. V. G. Akkimardi**, HOD, Automobile Engineering. In their addresses, both Heads welcomed the newcomers and highlighted academic expectations, departmental opportunities, and the importance of discipline, innovation, and active participation throughout their engineering journey. The program was attended by all faculty members and students of both departments. It included cultural performances, fun games, talent showcases, and interaction sessions that created an energetic and friendly atmosphere. Senior students took the lead in organizing and coordinating the event, ensuring active involvement of the freshers. Through their guidance, the Heads emphasized career prospects in IPE and Automobile Engineering, encouraging students to make the best use of labs, internships, industrial visits, and skill development programs to build strong professional competencies. The event concluded with a vote of thanks by the student committee, followed by refreshments and informal interaction, strengthening the bond between faculty and students.

Overall, "IGNITE – 2K25" proved to be an engaging and inspiring start for the first-year students, achieving its aim of welcoming them, boosting their confidence, and motivating them to begin their engineering journey with enthusiasm.

The event also witnessed the inauguration of Production and Industrial Engineering Students Association (PIESA) activities.



Establishment Year: 2007–08

1. Introduction

The Research Centre of the Department of Industrial and Production Engineering (I&PE) at **Basaveshwar Engineering College, Bagalkote** was established in the academic year **2007–08** with the vision to foster cutting-edge research, innovation, and knowledge dissemination in the core and allied areas of Industrial and Production Engineering. Over the years, the centre has evolved into a vibrant hub for scholarly excellence, offering research guidance, advanced laboratory facilities, and a collaborative environment for both faculty and research scholars.

2. Research Domains and Expertise

The Research Centre possesses rich expertise in diverse domains, reflecting the multidisciplinary nature of Industrial and Production Engineering. The major areas of research include:

- **Management** – Operations Management, Decision Sciences, Lean and Agile Practices, Industrial Systems Optimization.
- **Material Science** – Advanced Materials, Composites, Metallurgical Studies, Surface Engineering.
- **Production Engineering** – Machining Processes, Manufacturing Systems, Automation, Additive Manufacturing.
- **Supply Chain Management** – Network Optimization, Logistics, Inventory Control, Green and Sustainable Supply Chains.

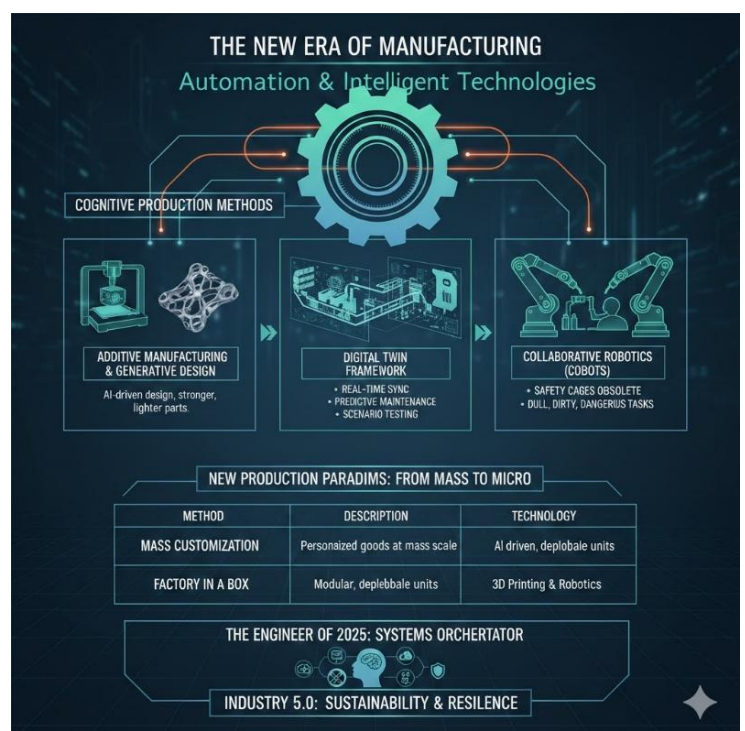
Pursuing PhD

Sl.	Name of the Research Scholar	Name of the Guide	Title
1	H. R. Patil	Dr. C. M. Javalagi	Modelling and analyses of green supply chain management (GSCM) issues and practices in process industries.
2	Bhuvaneshwari Alias Sunita Kulkarni	Dr. V. S. Puranik	Investigating the status of lean manufacturing practices in SMEs and development of a conceptual implementation model for production performance evaluation.
3	Parasuram Madar	Dr. S. T. Dundur	An investigation into the use age of Argo based trash as the alternative fuel for all season co-generation of electricity in sugar industries.
4	S S Davanageri	Dr. S. T. Dundur	Finite element analysis of machining of work material synthesized from metal matrix composites from micro photographs
5	Mallik Bhagawan	Dr. S. T. Dundur	An investigation on the characteristics associated with cryogenic machining of elastomers
6	Rajat Acharya	Dr. C. M. Javalagi	Lean Supply Chain key performance indicator Analysis in Small and Medium Scale Industries
7	Taware Shree Dnyanoba	Dr. D. G. Mallapur	Aluminium Die Casting Simulation Modeling for Cost benefit Analysis
8	G.H.Rathod	Dr. V. S. Puranik	A new comprehensive methodology for enabling Environmentally conscious design and assessment of sustainability in an Indian Manufacturing organization

Wait for the article: The new Era of Manufacturing- Automation & Intelligent Technologies in the next Issue of

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1. Title of the Programme: *Pathways to Serve the Nation: Engineering Careers in the Indian Army*

This seminar aims to inform engineering graduates about the diverse career opportunities in the Indian Army, focusing on the importance of engineering skills in military operations, the various entry schemes, roles, career growth prospects, and the preparation process, with the goal of motivating students to consider serving the nation.

2. Title of the Program: *Business Plan Presentation Contest (BPPC)*

The Business Plan Presentation Contest (BPPC) seeks to inspire students to develop innovative business ideas and refine their skills in creating and presenting business plans, while providing networking opportunities with industry experts and potential investors to foster entrepreneurial spirit and innovation.

By-Dr. C. M. Javalagi

Industrial Engineering (IE) stands at a transformative crossroads today. As industries across the globe embrace automation, artificial intelligence (AI), robotics, and data-driven decision-making, the traditional boundaries of IE are rapidly expanding. What once focused primarily on optimizing processes, reducing waste, and improving productivity has now evolved into a discipline that integrates human intelligence with machine capability to build smarter, more resilient, and more sustainable systems.

In this changed scenario of industrial growth, the importance of IE has never been greater. Industrial Engineers are uniquely positioned to understand the *complete system*—people, processes, technology, materials, information, and environment. As factories transition into smart factories and supply chains become digital ecosystems, IE professionals are now orchestrators of technological transformation.

AI and Automation: Enhancing Decision-Making and Productivity

Artificial Intelligence and automation systems are revolutionizing how industries operate. AI-driven analytics allow Industrial Engineers to predict failures, optimize inventory, and ensure smoother workflows. Automation, including sensors and cyber-physical systems, helps eliminate repetitive tasks, reduce errors, and improve throughput.

A contemporary example is **Amazon's fulfillment centers**, where robotic systems such as Kiva robots work alongside humans to reduce picking time, streamline inventory management, and enhance order accuracy. Industrial Engineers play a crucial role in designing these human-robot collaborative systems, ensuring both efficiency and safety.

Robotics and Flexible Manufacturing

Robotics has shifted from being a luxury to a necessity in modern industrial environments. Collaborative robots (cobots) are now essential in automotive, electronics, and pharmaceutical industries. These robots support flexible manufacturing by adapting to changing product designs and dynamic customer demands.

A relevant example is the **use of cobots in the Indian automotive sector**, where companies like Tata Motors and Mahindra have deployed robotic arms for welding, painting, and precision assembly. Industrial Engineers help integrate these technologies into existing workflows, redesign layouts for automation, and train the workforce to operate and maintain robotic cells.

Technological Approaches Reinforcing IE

Today's IE relies heavily on emerging technological tools:

- **Digital Twins** help simulate and optimize factory operations before implementation.
- **Industry 4.0 frameworks** connect machines, sensors, and data platforms for real-time control.
- **Lean and Six Sigma**, supported by AI analytics, enable faster root-cause identification.
- **Sustainable engineering tools** support green manufacturing and circular economy models.

IE professionals now blend traditional engineering skills with data science, simulation, ergonomics, and automation technologies to design systems that are not only efficient, but also intelligent and future-ready.

The Way Forward

In this evolving industrial era, the role of Industrial Engineers is shifting from process optimizers to strategic innovators. They are problem-solvers who apply technology responsibly, ensuring that automation enhances human potential rather than replacing it. With industries seeking higher productivity, quality, and sustainability, IE will continue to be a driving force behind industrial transformation.

As we embrace the second edition of *InPro Efficiency*, let this reflection remind our students and readers that Industrial Engineering is not just relevant—it is essential. The future belongs to those who can blend engineering insight with digital intelligence, and Industrial Engineers are at the forefront of this exciting journey.