

Education

- Ph.D. **Indian Institute of Technology, Kharagpur, India.** Dissertation: *Studies on Product Development Practices in Indian Manufacturing Industry.*
- M.Tech. **ISM (Now IIT), Dhanbad, India.** Industrial Engineering
- B.E. **REC (Now NIT), Trichy, India.** Mechanical Engineering
- PG Diploma **IGNOU.** PG Diploma in Intellectual Property Rights

Professional Experience

Professor (2020–Present), Maulana Azad National Institute of Technology, Bhopal (Under M.H.R.D, Govt. of India).

Associate Professor (2010–2020), Maulana Azad National Institute of Technology, Bhopal (Under M.H.R.D, Govt. of India).

Assistant Professor (1996–2010), North Eastern Regional Institute of Science and Technology, Itanagar (Under M.H.R.D, Govt. of India) .

Senior Engineer (1990–1992), M/s Escorts Tractors Limited, Faridabad.

Sponsored Research Projects

- MHRD, GOI **Integrated Modelling and Analysis of Machining of Composite Materials on Advanced Machining Machines, MHRD-MANIT funded.** Approved amount: INR 37.00 lakhs; Duration: 2 years; Status: Completed.
- MPCST, DST **Machining and Analysis of various Parameters of Nano Composites prepared from Industrial Wastes, MPCST funded.** Approved amount: INR 4.00 lakhs; Duration: 2 years; Status: Completed.
- TEQIP, NPIU **Design, Development and Fabrication of Silicon Rubber Colonoscope for Maximum Comfort to Patients, TEQIP-III funded.** Approved amount: INR 17.00 lakhs; Duration: 2 years; Status: Completed.

Research Interest

- Development of New Materials
- Product Development
- Optimization (Genetic Algorithms, PSO, Fuzzy, Neuro Fuzzy, Ant Colony Optimization etc.)
- Smart Manufacturing (Retrofitting, IoT, Neural Networks etc.)

List of Publications

Journal Articles

- [1] A. Chourasiya and C. Krishna, "Dry sliding and mechanical characteristics of aerospace grade aluminium composite reinforced with tio2/bn particle," *Materials Chemistry and Physics*, vol. 337, p. 130577, 2025, (SCIE, Q1).
- [2] A. Kumar and C. M. Krishna, "Study and analysis of barriers for implementation of industry 4.0 tech-

- of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, vol. 237, no. 18, pp. 4295–4306, 2023, (SCIE, Q2).
- [7] M. Baghel and C. Krishna, "Microstructural evolution and mechanical properties of multiwalled carbon nanotubes/al6082 nanocomposites through optimized t6 heat treatment process," *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, vol. 237, no. 4, pp. 1145–1157, 2023, (SCI, Q2).
 - [8] M. Baghel and C. Krishna, "Synthesis and characterization of mwcnts/al6082 nanocomposites through ultrasonic assisted stir casting technique," *Particulate Science and Technology*, vol. 41, no. 2, pp. 183–195, 2023, (SCI, Q2).
 - [9] M. Baghel, C. Krishna, A. Namdev, A. Kumar, and Y. K. Yadav, "Optimization of heat treatment parameters using taguchi method to improve compressive strength of mwcnts/al6082 composites," *Materials Today: Proceedings*, vol. 82, pp. 263–269, 2023, (SCIE, Q2).
 - [10] A. Chourasiya and C. Krishna, "A novel approach of rsm-based topsis-jaya algorithm for optimization of ecm process parameters," *Journal of the Chinese Institute of Engineers*, vol. 46, no. 6, pp. 628–637, 2023, (SCIE, Q2).
 - [11] S. Nand, M. K. Singh, and M. K. Chimata, "Expert opinion based optimziation of cnc machining parameters for al-cnt composites using fuzzy topsis method," *Engineering Research Express*, vol. 5, no. 4, p. 045 016, 2023, (ESCI, Q2).
 - [12] M. Baghel, C. Krishna, and S. Suresh, "Development of al-sic composite material from rice husk and its parametric assessment," *Materials Research Express*, vol. 9, no. 1, p. 016 518, 2022, (SCI, Q2).
 - [13] C. M. Krishna, S. Sahu, M. Kisnya, G. Mishra, and S. Jain, "Status of quality improvement initiatives in manufacturing industry of madhya pradesh state in india," *Journal of applied research on industrial engineering*, vol. 9, no. 4, pp. 395–408, 2022, (ESCI, Q3).
 - [14] S. Sharma and C. M. Krishna, "Static and dynamic performances of an offset bearing under a micropolar lubricant," *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology*, vol. 236, no. 1, pp. 59–69, 2022, (SCI, Q2).
 - [15] S. Sharma, C. M. Krishna, and R. Singh, "Analysis of elliptical dam bearing lubricated with micropolar fluid," *Industrial Lubrication and Tribology*, vol. 74, no. 2, pp. 243–250, 2022, (SCI, Q2).
 - [16] S. Sharma and C. M. Krishna, "Dynamic stability of micropolar lubricated hydrodynamic offset-halves journal bearings," *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology*, vol. 235, no. 2, pp. 245–255, 2021, (SCI, Q2).
 - [17] P. K. Singh and K. C. Murali, "Dynamic characteristics of continuum robot for colonoscopy using finite element simulation," *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, vol. 235, no. 22, pp. 6398–6414, 2021, (SCI, Q2).
 - [18] P. K. Singh, P. K. Srivastava, and C. M. Krishna, "Design, simulation and fabrication of silicone rubber colonoscope tip for medical application," *International Journal of Simulation and Process Modelling*, vol. 17, no. 4, pp. 263–272, 2021, (SCOPUS).
 - [19] K. Aharwal, C. Krishna, et al., "Optimization of material removal rate and surface roughness in edm machining of metal matrix composite using genetic algorithm," *Materials Today: Proceedings*, vol. 5, no. 2, pp. 5391–5397, 2018, (SCIE, Q2).
 - [20] V. Pare, G. Agnihotri, and C. Krishna, "Selection of optimum process parameters in high speed cnc end-milling of composite materials using meta heuristic techniques—a comparative study," *Strojniški vestnik-Journal of Mechanical Engineering*, vol. 61, no. 3, pp. 176–186, 2015, (SCIE, Q2).
 - [21] S. Sharma and C. Krishna, "Effect of l/d ratio on the performance of two-lobe pressure dam bearing: Micropolar lubricated," *Advances in Tribology*, vol. 2015, no. 1, p. 182 713, 2015, (SCOPUS).
 - [22] V. Pare, G. Agnihotri, and C. Murali Krishna, "Optimization of cutting conditions in milling process to minimize tool wear using selected soft computing techniques: A comparative study," *Journal of Advanced Manufacturing Systems*, vol. 13, no. 01, pp. 55–72, 2014, (SCOPUS).

- [23] C. M. Krishna and P. K. Ray, "Capabilities of product development process of a firm: An empirical study," *International Journal of Innovation and Technology Management*, vol. 9, no. 04, p. 1 250 030, 2012, (SCOPUS).
- [24] M. Chandrasekaran, M. Muralidhar, C. M. Krishna, and U. Dixit, "Application of soft computing techniques in machining performance prediction and optimization: A literature review," *The International Journal of Advanced Manufacturing Technology*, vol. 46, no. 5, pp. 445–464, 2010, (SCIE, Q1).
- [25] C. M. Krishna and P. K. Ray, "The empirical relationship between product variety, in-house capability and outsourcing capability: The case of a watch manufacturing firm in india," *International Journal of Technology Marketing*, vol. 3, no. 3, pp. 223–257, 2008, (SCOPUS).
- [26] Kampan Mukherjee and C. M. Krishna, "Quality & Productivity: Study on a Public Sector Unit," *Productivity*, vol. 36, no. 3, p. 430, 1995.
- [27] C. Murali Krishna, M. Chandrasekaran, Aveek Das and Rupak Dey, "Single Assembly Line Balancing Problems," *Productivity*, vol. 44, no. 3, p. 396, 2003.
- [28] M. Chandrasekaran, C. Murali Krishna, M. Suhu and A. Peter, "Facility Layout Design in Cellular Manufacturing: An Approach to Minimize Makespan," *National Journal on Manufacturing Science*, 2010.
- [29] Vikas Pare, Geeta Agnihotri and C. M. Krishna, "Optimization of cutting condition in end milling process with the approach of Particle Swarm Optimization," *International Journal of Mechanical and Industrial Engineering (IJMIE)*, vol. 1, no. 2, 2011.
- [30] Vikas Pare, Geeta Agnihotri and C. M. Krishna, "Optimization of machining parameters in high speed end milling of Al–SiC using Gravitational Search Algorithm," *International Journal of Recent Advances in Mechanical Engineering (IJMECH)*, vol. 2, no. 4, 2013.
- [31] Vikas Pare, Geeta Agnihotri and C. M. Krishna, "Application of Firefly Algorithm in optimization of surface roughness in high speed end milling of Al₂SiC composites," *Journal of Mechatronics and Intelligent Manufacturing*, special issue.
- [32] Puneet K. Singh and C. Murali Krishna, "Continuum Arm Robotic Manipulator: A Review," *Universal Journal of Mechanical Engineering*, vol. 2, no. 6, pp. 193–198, 2014.
- [33] A. Rathi, A. Mahor, R. Ranjan, A. Gajbhiye, A. Rehman and C. M. Krishna, "Characterization of chip morphology for aluminum metal matrix composites in end milling machining," *Universal Journal of Mechanical Engineering*, vol. 2, no. 7, pp. 240–247, 2014.
- [34] Puneet K. Singh and C. Murali Krishna, "Simulation of silicone rubber tube for colonoscopy application," *International Journal of Frontiers in Technology*, vol. 2, no. 2, pp. 26–30, 2015.
- [35] Puneet K. Singh and C. Murali Krishna, "Simulation of soft colonoscope having multiple control chamber," *International Journal of Recent Advances in Multidisciplinary Research*, vol. 2, no. 7, pp. 547–551, 2015.
- [36] Sanyam Sharma and C. M. Krishna, "A comparative study of performance of two-lobe pressure dam bearing with plain two-lobe bearing: Micropolar lubricated," *International Journal of Frontiers in Technology*, vol. 1, no. 1, pp. 11–16, 2014.
- [37] Sanyam Sharma and C. M. Krishna, "Effect of dam location on the performance characteristics of two-lobe bearing: Micropolar lubricated," *International Journal of Recent Advances in Mechanical Engineering (IJMECH)*, vol. 4, no. 1, 2015.
- [38] C. M. Krishna, K. Rakesh and C. A. Avinash, "Optimization of process parameters of electric discharge machining using Firefly Algorithm," *Journal of Material Science and Mechanical Engineering*, vol. 2, no. 3, pp. 226–229, 2015.

- [39] R. Purohit, C. M. Krishna, R. S. Rana, V. Kumar and K. K. Patel, "Optimization of electric discharge machining parameters for Al-3 wt% nano SiCp composites using copper electrode," *Indian Journal of Engineering*, 2016, article 105.
- [40] Chimata Murali Krishna, Satyam Sahu, Mayank M. Kisnya, Gunwant M. Mishra and Samyak M. Jain, "Status of quality improvement initiatives in manufacturing industry of Madhya Pradesh state in India," *Journal of Applied Research on Industrial Engineering*, 2022, doi: 10.22105/jarie.2022.314940.1399 (Google Scholar indexed).

Conference Papers

- [1] M. Baghel, C. M. Krishna, A. Namdev, A. Kumar, and A. Chourasiya, "Optimization of machining parameters in drilling of al6082 nanocomposites," in *AIP Conference Proceedings*, (SCOPUS), AIP Publishing LLC, vol. 3263, 2025, p. 180 005.
- [2] M. Baghel, C. Krishna, A. Chourasiya, and A. Namdev, "Effect of t6 heat treatment on compressive strength of al6082 reinforced with multi-walled carbon nanotubes," in *International conference on Advances in Materials and Manufacturing*, (SCOPUS), Springer, 2022, pp. 179–189.
- [3] M. Baghel, C. Krishna, A. Namdev, and A. Kumar, "Parametric optimization for tribological behavior of mwcnts/al6082 composites using taguchi analysis," in *International Conference on Nanotechnology for Sustainable Living and Environment*, (SCOPUS), Springer, 2022, pp. 159–169.
- [4] A. Gupta, P. Soni, and C. Krishna, "Modeling and analysis of cnc milling process parameters on al3030 based composite," in *IOP Conference Series: Materials Science and Engineering*, (SCOPUS), IOP Publishing, vol. 346, 2018, p. 012 073.
- [5] C. M. Krishna, M. Chandrasekaran, and U. S. Dixit, "Notice of retraction: Strategic management of product development process capability using neural network approach," in *2010 IEEE International Conference on Advanced Management Science (ICAMS 2010)*, (SCOPUS), IEEE, vol. 2, 2010, pp. 173–177.
- [6] C. M. Krishna, "Building on Product Development Capabilities in Manufacturing Industry by using Dendrogram Approach," *International Conference on Operations and Management Sciences (ICOMS-11)*, IMT Nagpur, January 28–29, 2011.
- [7] Krishna, C. M. and Ray, P. K., "Application of fuzzy analytic hierarchy technique in development of NPD competences: case study of a construction equipment management firm," *International Conference on Technology and Innovation Marketing*, IMT Ghaziabad, April 18–19, 2008, pp. 329–342.
- [8] Krishna, C. M. and Ray, P. K., "Measurement of product development capabilities: a case study of construction equipment management firm," *International Conference on NPE: Challenges in Meltdown Times*, December 17–19, 2009.
- [9] Krishna, C. M. and Ray, P. K., "NPD capabilities of Indian manufacturing industry: The best vs. the rest," *International Conference on Advances in Industrial Engineering*, Anna University, January 5–6, 2010.
- [10] C. Murali Krishna, M. Chandrasekaran, and U. S. Dixit, "Strategic management of product development capabilities by using neural network approach," *IEEE ICAMS 2010*, Chengdu, China, July 9–11, 2010.
- [11] Seema Lingii, Krishna, C. M., Mondal, A., and Chandrasekaran, M., "A genetic algorithm approach for minimizing makespan in job cell scheduling problems," *International Conference on Advances in Mechanical Engineering*, NIT Surat, August 3–5, 2009.
- [12] Amit K. Singh, M. Chandrasekaran, and C. Murali Krishna, "Optimization of finish-pass milling process with practical constraints using particle swarm intelligence," *AIMTDR Conference*, Andhra University, Visakhapatnam, December 12–13, 2010.

- [13] Vikas Pare, Geeta Agnihotri, and C. M. Krishna, "Optimization of cutting conditions in end milling process with the approach of Particle Swarm Optimization," International Conference on Computer Science and IT Applications, New Delhi, November 6, 2011.
- [14] Vikas Pare, Geeta Agnihotri, and C. M. Krishna, "Optimization of cutting conditions in end milling process: A comparison of three soft computing techniques," C PIE-13, NIT Jalandhar, March 29–31, 2013.
- [15] Vikas Pare, Geeta Agnihotri, and C. M. Krishna, "Prediction and optimization of end milling parameters of aluminum silicon composite with hybrid SA approach," C PIE-13, NIT Jalandhar, March 29–31, 2013.
- [16] Puneet K. Singh and C. M. Krishna, "Comparative study of hyperelastic models for continuum arm," IRAM 2013, IIT Indore, December 16–18, 2013.
- [17] Vikas Pare, Geeta Agnihotri, and C. M. Krishna, "Optimization of machining parameters in high-speed end milling using TLBO," IRAM 2013, IIT Indore, December 16–18, 2013.
- [18] Mahesh K. Dargar and C. M. Krishna, "Minimization of complexity in design of product variety using Shannon entropy measure," International Conference on Advances in Industrial Engineering, Anna University, January 5–7, 2014.
- [19] Puneet Kumar Singh and C. M. Krishna, "Continuum Arm Robotic Manipulator: A Review," ICMEETS 2014, MANIT, Bhopal.
- [20] A. Rath et al., "Characterization of chip morphology and its properties in end milling," ICMEETS 2014, MANIT, Bhopal.
- [21] Rahul Kumar Verma and C. M. Krishna, "FEA analysis of welding of dissimilar metals using laser welding," ICMEETS 2014, MANIT, Bhopal.
- [22] Mukesh Kumar and C. M. Krishna, "Assessment of competitor analysis using Kano model for cell phone," ICMEETS 2014, MANIT, Bhopal.
- [23] Mahesh Kumar Dargar and C. M. Krishna, "Optimization of complexity in product variety and customer satisfaction," ICMEETS 2014, MANIT, Bhopal.
- [24] Vikas Pare, Geeta Agnihotri, and C. M. Krishna, "Optimization of surface roughness in high-speed end milling using Firefly Algorithm," ICMEETS 2014, MANIT, Bhopal.
- [25] Vikas Pare, Geeta Agnihotri, and C. M. Krishna, "Optimization of cutting conditions in milling to minimize tool wear using Genetic Algorithm," ICMEETS 2014, MANIT, Bhopal.
- [26] Mahesh K. Dargar and C. M. Krishna, "Application of Firefly Algorithm for optimization of design cost and features to satisfy voice of customer," Mechanical Engineering Congress, NIT Tiruchirappalli, May 25–27, 2014.
- [27] Sanyam Sharma and C. M. Krishna, "Effect of eccentricity and step location on micropolar lubricated two-lobe bearing," NERIST National Conference, 2014.
- [28] C. M. Krishna, K. Rakesh, and C. A. Avinash, "Optimization of EDM process parameters using Firefly Algorithm," International Conference on Innovative Trends, Bapatla Engineering College, April 1–2, 2015.
- [29] Sanyam Sharma, C. M. Krishna, and Rajiv Verma, "Analysis of whirling parameter...", ICAM 2015, KNIT, U.P., India.
- [30] K. R. Aharwal, Sitaram, and C. M. Krishna, "Optimization of MRR in EDM machining of MMCs using GA," Materials Today Proceedings, GRIE T Hyderabad, March 17–19, 2017.

- [31] Nand, S., Singh, M. K., and Krishna, C. M., "Optimization of machining parameters on vertical milling machine for Al–CNT composites," LNME Conference, 2022.
- [32] Gupta, A., Soni, P. K., and Krishna, C. M., "Modeling and analysis of CNC milling parameters," IOP MSE Conference, 2018.
- [33] KR Aharwal, Sitaram and Krishna, "Optimization of MRR and surface roughness in EDM machining," Materials Today Proceedings, 2018.
- [34] Akshay Kumar and C. M. Krishna, "Parametric optimization on EDM for MWCNT/Al6061 composite," ICATME 2021, NITTTR Bhopal.
- [35] Madhusudan and C. M. Krishna, "Parametric optimization for MWCNT/Al6061 composite on CNC machines," ICATME 2021, NITTTR Bhopal.
- [36] C. M. Krishna, "Role of innovation in improving quality of education," National Seminar on Technical Manpower Development, April 15–16, 2004.
- [37] M. Chandrasekaran and C. M. Krishna, "A comprehensive method for line balancing problems," National Conference on CIDA Manufacturing, Amrita Institute of Technology, 2009.
- [38] M. Chandrasekaran, C. M. Krishna, M. Suhu, and A. Peter, "Facility layout design in cellular manufacturing," AIMTDR, BIT Mesra, 2010.
- [39] Krishna, C. M. and Bijoylakshmi Sarma, "The role of innovation in product development," National Conference on MIT, Galgotia Business School, March 20–21, 2009.
- [40] Krishna, C. M. and Seema Lingii, "Optimization of product variety using entropy," National Conference on MIT, Galgotia Business School, March 12–13, 2010.
- [41] Chandrasekaran, M. and Krishna, C. M., "Heuristic approach for drilling sequence selection," National Conference on Design and Manufacturing, IIITDM Chennai, May 29–30, 2011.
- [42] Mahesh K. Dargar and C. M. Krishna, "Minimization of complexity using Weitzman's measure," FIME National Conference, MANIT Bhopal, 2013.
- [43] Puneet Kumar Singh and C. M. Krishna, "Continuum arm robotic manipulator: A review," National Conference on Frontiers in Mechanical Engineering, MANIT Bhopal, August 29–31, 2013.

Book Chapters

- [1] S. Nand, M. K. Singh, and C. Krishna, "Optimization of machining parameters on vertical milling machine for al-cnt composites using taguchi design of experiments," in *Recent Trends in Design, Materials and Manufacturing: Selected Proceedings of ICRADMM 2020*, (SCOPUS), Springer, 2022, pp. 345–351.
- [2] M. Chandrasekaran, M. Muralidhar, C. M. Krishna, and U. Dixit, "Online machining optimization with continuous learning," in *Computational methods for optimizing manufacturing technology: models and techniques*, (SCOPUS), IGI Global Scientific Publishing, 2012, pp. 85–110.
- [3] Anil Chourasiya and C. M. Krishna, "Enhancing compressive strength of aluminum composite through stir casting technique with TiO₂/BN reinforcement," *Composites: Design, Processing, Manufacturing and Health Monitoring*, IIT Mandi.
- [4] Anil Chourasiya and C. M. Krishna, "Mechanical and microstructure behaviours of Al7050 with TiO₂ reinforcement using stir casting method," *Lecture Notes in Mechanical Engineering*, vol. 2, 2025 (SCOPUS).
- [5] Akshay Kumar and C. M. Krishna, "Assessing key challenges in Industry 4.0 implementation: A Best–Worst Method approach," *Lecture Notes in Mechanical Engineering*, vol. 2, 2025. (SCOPUS)

- [6] Sachida Nand, Nasir Khan and C. M. Krishna, "CNTs reinforced Aluminum 6061 MMCs: machining parameters optimized by design of experiments," *Lecture Notes in Mechanical Engineering*, vol. 2, 2025. (SCOPUS)
- [7] Srinivasulu Vardhini, C. M. Krishna and Ravi K. Mandava, "A multi-objective genetic algorithm based optimal trajectory planning for a 5-DoF robotic arm," *Lecture Notes in Mechanical Engineering*, vol. 2, 2025. (SCOPUS)
- [8] Akshay Kumar, C. M. Krishna and Anil Chourasiya, "Parametric optimization on electric discharge machine for MWCNT/Al6061 composite," *Lecture Notes in Mechanical Engineering*, vol. 2, 2025. (SCOPUS)
- [9] S. Suresh, A. Kumar, A. Shukla, R. Singh and C. M. Krishna, "Bio Fuels and Bio Energy: International Conference – 2017," Springer, 2017, ISBN: 978-3-319-45257-7.
- [10] C. M. Krishna, A. Rehman and M. K. Pradhan, "Proceedings of 1st International Conference on Mechanical Engineering: Emerging Trends for Sustainability," Excellent Publishing House, 2014, ISBN: 978-93-83083-45-9.
- [11] M. Chandrasekaran, M. Muralidhar, C. M. Krishna and Uday Dixit, "Online machining optimization with continuous learning," in **Computational Methods for Optimizing Manufacturing Technology: Models and Techniques**, IGI Global, 2012, ISBN: 978-1466601284.
- [12] S. Nand, M. K. Singh and C. M. Krishna, "Optimization of CNC milling parameters for Al–CNT composites using entropy-based neutrosophic grey relational TOPSIS method," in **Application of Soft Computing Methods in Manufacturing**, CRC Press.

--- Conferences/Courses organized

- 2020 **One week Online STTP on "Smart Manufacturing Technologies"**, during 23–27 December 2020.
- 2020 **Online Workshop on "Smart Manufacturing and Digital Twin"**, held on 26 September 2020.
- 2017 **One week STTP on "Research Oriented Training on CNC Machines"**, during 14–18 December 2017.
- 2017 **Two days International Conference on "Smart Technologies for Green and Sustainable Future"**, during 8–9 December 2017.
- 2016 **One day Workshop on "Start-ups in Engineering: Recent Trends"**, held on 27 August 2016, in collaboration with CII, Bhopal.
- 2016 **Three days International Conference on "Biofuels and Bio-energy: International Conference and Exhibition"**, during 23–25 February 2016, in collaboration with WEEN-TECH, Coventry, U.K., as Organizing Secretary.
- 2015 **One week STTP on "Role of New Product Development and Intellectual Property Rights in Global Competitiveness"**, during 14–18 October 2015, as Coordinator (Self-sponsored).
- 2015 **One week STTP on "Advances in Thermal and Renewable System Design"**, during 30 November–4 December 2015, as Co-coordinator (Self-sponsored).
- 2014 **Three days International Conference on "Mechanical Engineering: Emerging Trends for Sustainability"**, during 29–31 January 2014, as Organizing Secretary.
- 2013 **Two days National Workshop on "Application of Statistical Packages in On-line Quality Control"**, during 28–29 June 2013, in collaboration with CII, Bhopal, as Coordinator.
- 2013 **Two days National Workshop on "Significance of Rapid Prototyping and Rapid Tooling in Indian Industries"**, during 12–13 May 2013, as Co-coordinator.

- 2013 **One week STTP on “Innovation and New Product Development: Strategies for Global Competitiveness”**, during 15–19 February 2013, as Coordinator.
- 2003 **Two weeks STTP on “Translating the Ideas into Products and Patents”**, held during 17–28 February 2003, as Coordinator.

Ph.D. Supervised/Ongoing

- 2016 **Vikas Pare**
Experimental study and analysis of machining conditions using soft computing techniques in CNC end milling of Al–SiC composites
 Co-Supervisor: Prof. Geeta Agnihotri
- 2018 **Puneet K. Singh**
Simulation of self-propelled continuum robot for colonoscopy for medical application
 Co-Supervisor: None
- 2018 **Sanyam Sharma**
Theoretical performance analysis of non-circular and pressure-dam hydrodynamic journal bearings with micropolar lubrication
 Co-Supervisor: None
- 2023 **Madhusudan Baghel**
Development of Al/CNT composites and investigation of their deformation behavior and machining characteristics
 Co-Supervisor: None
- Ongoing **Akshay Kumar**
Modelling and optimization studies on barriers of Industry 4.0 technologies in manufacturing industry
 Co-Supervisor: None
- 2025 **Sachchida Nand**
Development and investigation of mechanical and machining characteristics of Aluminium-6061 multi-walled carbon nanotube composites
 Co-Supervisor: Dr. Nasir Khan
- 2025 **Anil Chourasia**
Development and evaluation of mechanical and machining characteristics of hybrid Al-matrix composites
 Co-Supervisor: None
- Ongoing **Srinivasulu Vardhini**
Optimal trajectory planning and control for robotic manipulators for asynchronous motion
 Co-Supervisor: Dr. Ravi K. Mandava

Patents

- 2021 **Rooftop Farming Structure with Automated Pesticide Distribution Arrangement, Government of India**, Status: Granted
 Co-Investigators: Dr. Shailesh Kumar Gupta, Dr. Vidosh Maware, Dr. Rakesh Patel

Subjects Taught

P.G. Courses

Meta-heuristic Techniques
Accelerated Product Design and Development
Creative Design
Soft Computing Methods
CNC Technology and Programming
Design and Development of Product Prototype

U.G. Courses

Manufacturing Processes-I
Statistical Quality Control
Industrial Engineering
Industrial Engineering and Operations Research
Production and Operations Management
Engineering Optimization
CAM and Robotics
Product Design and Development
Advanced Operations Research

Projects Guided

PG projects guided: 32

UG projects guided: 56

Outreach Activities

A. EVALUATION OF PHD/M.TECH THESIS AS EXTERNAL EXAMINER

- Osmania University, Hyderabad, Telangana
- Amravati University, Amravati, Maharashtra
- Anna University, Chennai, Tamil Nadu
- JNTU, Hyderabad, Telangana
- N.E.R.I.S.T, Nirjuli, Arunachal Pradesh

B. INVITED TALKS ARRANGED

- "How to establish Start up and Grow" — MANIT Rolta Incubation Centre, February 2016.
- "Finite Element Method in Design of Bearings" — Dr. Raghu Echampati, University of Kettering, USA.
- "How to convert Innovation into Business Plan" — MRIC, 12 August 2016 (Mr. Uttam Ganguly & Mr. K. S. Nanda).
- "How to start a Startup, nurture, nourish and empower Entrepreneurs" — MRIC, 19 September 2016, by Ms. Deepa Prakash.
- "Smart Cities – Their influence on Rural Development" — MRIC, 15 October 2017.

C. OTHER PROGRAMMES / PARTICIPATION

- Conducted Diagnostic Study for Engineering Cluster, Govindpura, Bhopal (2011–12).
- Evaluated innovations at 21st National Children's Science Congress (NCSC-2013), MPCST, Bhopal.
- Delivered keynote lecture in National Conference on "Advances in Rapid Prototyping" (SR Patel Engineering College, Gujarat, April 2015) and expert lecture at BIS, Bhopal (October 2014).

- Organized workshops and STTPs with Confederation of Indian Industry (CII) in 2013 and 2016.
- Invited industrialists to deliver lectures in workshops, STTPs and conferences (2013, 2015, 2016).
- Evaluated PhD theses (Anna University, Amravati University, JNTU Hyderabad) as External Examiner.
- Showcased MANIT Rolta Incubation Centre innovations at Bhopal Vigyan Mela — awarded 2nd prize and Best Innovation (20 Feb 2016).
- Evaluated MTech and PhD works for Gujarat Technological University (2015–2016).
- Invited to the launch of Digital Identity Research Initiative — ISB Hyderabad, held at Habitat Centre, New Delhi (5 July 2017).
- Reviewer for reputed national and international journals.
- Guest Editor — Special Issue, Journal of Mechatronics and Intelligent Manufacturing, NOVA Publishers.
- Reviewer — *Journal of Advanced Manufacturing Systems*, World Scientific.
- Editorial Board Member — *International Journal of Frontiers in Technology*, MANIT Bhopal.
- Advisory Board Member — five national and international conferences.

Administration

N.E.R.I.S.T

- **Chairman (Transport)** 2008–2010
To make policy decisions related to transport services.

M.A.N.I.T, BHOPAL

- **Nodal Officer, I.I.I Cell** Mar 2013–Mar 2015
Established and strengthened interaction between industry and academia.
- **Secretary, MRIC** Oct 2014–Oct 2016
Facilitated activities of all Cells under MANIT Rolta Incubation Centre.
- **TPO Coordinator** Oct 2010–Dec 2011
Overall coordination of Training and Placement Office activities.
- **ARC Member** Jun 2011–Jan 2017
Monitored ragging-related issues in the assigned region of the institute.
- **Stock Verification Committee Member** Jun 2011–Jun 2017
Verified stock and assets of assigned departments/sections.
- **DRPC Convener** Sept 2013–Feb 2017
Ensured PG and PhD students adhered to academic ordinance rules.
- **Chairman (ARC)** Oct 2021–Till date
Preventing ragging activities and taking corrective action when needed.

* I.I.I — Institute–Industry Interaction Cell
MRIC — MANIT Rolta Incubation Centre

Citations

Google Scholar Lp_0sSYAAAAJ | h-index: – | i10-index: –
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