

Dr. Pushpendra Pandey

PhD in Reliability Engineering (Mechanical Engineering)

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<https://scholar.google.com/citations?user=JWmzb8MAAAAJ&hl=en>



Curriculum Vitae

Summary: A Mechanical Engineer with a strong academic and technical background in *Reliability Engineering, Maintenance Optimization, Industrial Engineering, Operations Research*.

Innovative and task-driven professional with demonstrated background knowledge of Mechanical Engineering with strong technical skills.

Teaching Experience

Presently working as Assistant Professor (CF) at Institute of Engineering and Technology, Lucknow, A constituent college of AKTU, Lucknow. Here, I am teaching Industrial Engineering and Industrial Optimization Techniques.

Worked as Assistant Professor at Institute of Engineering and Rural Technology, Prayagraj since 08th October 2021 to 30th August 2023. Here, I taught Industrial Engineering, Strength of Materials, Engineering Mechanics and Material Science.

PROFESSIONAL AND EDUCATIONAL QUALIFICATION

Ph.D. (Reliability Engineering) from IIT(ISM) Dhanbad in December 2020.

Thesis Title: Reliability Modelling and Optimisation of Maintenance Scheduling of Dragline Excavator

Supervisor: Prof. A. K. Mukhopadhyay, Retired Prof, MME, IIT(ISM) Dhanbad.

B.Tech (Mechanical Engineering) from UIET CSJM University Kanpur in June 2014 with 67%.

GATE (Mechanical Engineering) qualified in 2014 with **96.04 percentile**.

Intermediate from **U.P. Board** in 2009 with 74.8%.

High School from **U.P. Board** in 2007 with 70.5%.

TEACHING EXPERIENCE

Assistant Professor (Contractual) (August 2023- Present) at **Institute of Engineering and Technology (IET) Lucknow**.

Assistant Professor (Contractual) (October 2021-August 2023) at **Institute of Engineering and Rural Technology (IERT) Prayagraj**.

PROFESSIONAL SERVICE

Technical Paper Reviewer

- Editorial Board Member in Insight – Mechanics, PiscoMed Publishing Journal.
- Active reviewer in Life Cycle Reliability and Safety Engineering, Springer Publication.
- Active reviewer in Journal of Production Research & Management, STM Journals.
- Active reviewer in Journal of Journal of Mechatronics and Automation, STM Journals.
- Active reviewer in Trends in Mechanical Engineering & Technology, STM Journals.

PUBLICATIONS AND CONFERENCES

- **Pandey P.**, Mithun A.G. et al. (2026), Smart Grid Innovations: Integrating Renewable Energy Sources for Sustainable Power Systems. *J. Electr. Eng. Technol.* <https://doi.org/10.1007/s42835-026-02668-1>.
- **Pandey P.**, Jha A.K. (2025), Reliability Analysis of Dragline Excavator: A Data-Driven Maintenance Optimization Approach to Enhance Reliability in Surface Mining, LAP Lambert Academic Publishing, ISBN 978-6208434113.
- **Pandey P.**, Tiwari, K., & Prakash, S. (2025), Securing the Smart Revolution: Cybersecurity Challenges in Industry 4.0. In *Chemical Industries in Industry 4.0 Era* (1st ed., pp. 81–96). Amber Publishers. <https://doi.org/10.5281/zenodo.16944247>
- **Pandey P.**, Mukhopadhyay, A. K., & Chattopadhyaya, S. (2018), Reliability analysis and failure rate evaluation for critical subsystems of the dragline. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 40(2), 50.
- **Pandey P.** & Dwivedi S. (2016). Study of projection of annual output, ownership cost and cost per tonne of coal exposed by dragline, *Journal of Mines, Metals & Fuels*, 64 (11), 568-571
- **Pandey P.**, Bahadur R, Gupta S.K., Rahi D.K. (2026), Advances in Machining of Metal Matrix Composites: Challenges, Innovations, and Future Directions, *International Conference on Circular Economy in Chemical and Environmental Systems: Challenges and Strategies for Achieving Sustainable Development Goals*, CHEM-TECHNOVA, vol. 4, 1.
- Kumar S.K., Subbiah M, Prakash S., **Pandey P.** & Subrahmanyam S. (2024), Reliability Design of Mechanical Systems, Cosmas Scientific Publications, ISBN: 978-93-6096-977-6, <https://doi.org/10.5281/zenodo.14228150>
- Gupta G, **Pandey P.**, Sinha S. (2026), Techno-Economic Optimization and Comparative Sustainability Assessment of Grid- Integrated Hybrid Renewable Energy Systems for Academic Infrastructure in Subtropical Climates *International Conference on Circular Economy in Chemical and Environmental Systems: Challenges and Strategies for Achieving Sustainable Development Goals*, CHEM-TECHNOVA, vol. 4, 1.
- Kumar A., Jha A.K., **Pandey P.**, Sinha S. (2026), Optimization of FDM processing parameters for improving mechanical properties of ABS/CF printed parts, *International Conference on Circular Economy in Chemical and Environmental Systems: Challenges and Strategies for Achieving Sustainable Development Goals*, CHEM-TECHNOVA, vol. 4, 1.
- **Pandey P.**, Mukhopadhyay A. K., Prakash S., Critical Investigation into the Reliability Evaluation of a Dragline System, 3rd National Conference on mining equipment: new technologies: challenges & applications (MENTCA 2018), IIT(ISM) Dhanbad, February 09-10, 2018
- **Pandey P.**, Sahu P. K., Ranjan A. and Kumar N., Reliability modelling and performance analysis of dragline for improving productivity and maintenance planning: 2nd International Conference on Mechanical and Manufacturing Engineering (ICMME-2017), SCSVMV University Kanchipuram, April 06-07, 2017
- **Pandey P.**, Dwivedi S., Performance Analysis of Dragline, 2nd National Conference on mining equipment: new technologies: challenges & applications (MENTCA 2015), IIT(ISM) Dhanbad, October 09-10, 2015
- Prakash S., Mukhopadhyay A. K., **Pandey P.**, Investigation of rock properties for tricone roller bits in blasthole drilling, 3rd National Conference on mining equipment: new technologies: challenges & applications (MENTCA 2018), IIT(ISM) Dhanbad, February 09-10, 2018.

PATENTS

- DEVICE FOR BATTERY THERMAL MANAGEMENT FOR ELECTRIC VEHICLES, Application No. 489436-001, **Granted**.
- AI BASED ROBOTICS ARM FOR PRECISION ENGINEERING WORKS, Application No. 473107-001, **Granted**.
- FRICTION STIR BASED ADDITIVE MANUFACTURING DEVICE, Application No. 455090-001, **Granted**.
- THERMAL SPARY GUN FOR NANOPARTICLE COATING, Application No. 417775-001, **Granted**.
- ANTI-MALARIA DRUG COMPOUND MAKING DEVICE, Application No. 408601-001, **Granted**.

CONFERENCE ATTENDED

- 4th International Conference on Circular Economy in Chemical and Environmental Systems: Challenges and Strategies for Achieving Sustainable Development Goals (CHEM-TECHNOVA 2026), HBTU Kanpur, March 12-14, 2026.
- 3rd National Conference on Mining Equipment: New Technologies, Challenges & Application (MENTCA-2018), IIT(ISM) Dhanbad, Feb. 09-10, 2018
- 2nd International Conference on Mechanical and Manufacturing Engineering (ICMME-2017), SCSVMV University Kanchipuram, April 06-07, 2017
- 2nd National Conference on Mining Equipment: New Technologies, Challenges & Application (MENTCA-2015), IIT(ISM) Dhanbad, Oct. 09-10, 2015

WORKSHOP, FDP AND SHORT-TERM COURSE ATTENDED

- Three-week Faculty Development Program on AI Mastery for Educators, IIT Patna, 15th May- 7th June, 2025
- One week Faculty Development Program on Advanced AI Development and Research Challenges, REC Banda, (21st April- 25th April, 2025)
- One Week National Level Interdisciplinary Short Term Training Program on Exploring Quality Research and its Societal Impact organized by Dr. D. Y. Patil Institute of Technology, Pimpri, Pune, 09th-13th October, 2023
- One-week online Faculty Development Program on Examination Reforms jointly organized by AICTE, New Delhi and Madan Mohan Malaviya University of Technology Gorakhpur, 6th to 30th March 2022.
- One Week Faculty Development Program on Integration of Renewable Energy and Smart Grids for Smart Cities, 07th March to 12th March 2022.
- One Week National Level Interdisciplinary Short Term Training Program on Exploring Quality Research and its Societal Impact organized by Dr. D. Y. Patil Institute of Technology, Pimpri, Pune, 09th-13th October, 2023
- International Workshop on Computational Methods in Vibration & Acoustics (IWCMVA 2015), IIT(ISM) Dhanbad, March 16-21, 2015
- Short Term Course on Advancing Research in Management under the sponsorship of TEQUIP-II, IIT Delhi, Dec. 03-05, 2015
- Workshop on Application of Statistical Tools in Research & Data Analysis, IIT(ISM) Dhanbad, Feb. 08-11, 2016
- Short Term Training Program on Reliability and Safety Analysis, IIT(ISM) Dhanbad, June 20-24, 2016
- Workshop on Energy Resources: Future Prospects of Fuel and Chemicals, IIT(ISM) Dhanbad, Nov. 07-08, 2016
- Self-Financed Workshop on Data Analysis and Machine Learning with R (DAMLR-2017), MNNIT Allahabad, May 29- June 2, 2017
- GIAN programme on The Three R's [Reliability, Robustness, Resistance] of Engineering systems: Synthesis and Applications, DCRUST Murthal, Oct. 13-17, 2017
- Workshop on Introduction to the Finite Element Analysis and its Application on commercial FE software ABAQUS 2018, IIT(ISM) Dhanbad, Nov. 03-04, 2018.
- One Week Faculty Development Program on Integration of Renewable Energy and Smart Grids for Smart Cities, 07th March to 12th March 2022.
- One-week online Faculty Development Program on Examination Reforms jointly organized by AICTE, New Delhi and Madan Mohan Malaviya University of Technology Gorakhpur, 6th to 30th March 2022.
- One Week National Level Interdisciplinary Short Term Training Program on Exploring Quality Research and its Societal Impact organized by Dr. D. Y. Patil Institute of Technology, Pimpri, Pune, 09th-13th October, 2023

OTHER RESPONSIBILITY

- Appointed as Nodal Officer of Fit India Week 2024 at IET Lucknow.

TEACHING & RESEARCH INTERESTS

- Industrial Engineering
- Operations Research
- Strength of Material
- Maintenance Optimization
- Reliability and Maintenance Engineering
- System Reliability Modelling

PERSONAL DETAILS

Date of Birth : February 03rd, 1993
Father’s Name : Late Vishwamitra Pandey
Marital Status : Unmarried
Address : 116/665 Rawatpur Gaon, Keshav Nagar, Kanpur, Uttar Pradesh, India-208019
Nationality : Indian
Languages Known : English and Hindi

DECLARATION

I hereby solemnly affirm that all the details provided above are true to the best of my knowledge.

(Dr. Pushpendra Pandey)

