
RAVI SHANKAR PRASAD

Assistant Professor,
Dept. of Mechanical Engineering,
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Educational Qualifications:

- **Ph.D.** in Mechanical Engineering from **Indian Institute of Technology (Indian School of Mines), Dhanbad.**
Topic: **Numerical Investigation of Natural Convection and Surface Radiation in Cavities.**
Under the supervision of **Dr. S.N. Singh**, Department of Mechanical Engineering, I.I.T. (I.S.M.), Dhanbad and **Dr. Amit Kumar Gupta**, Department of Chemical Engineering, B.I.T. Sindri, Dhanbad.
- **M.Tech.** in Mechanical Engineering (Heat Power Engineering) from **B.I.T. Sindri, Dhanbad** under Vinoba Bhave University, Hazaribag.
- **B.Sc. Engineering** in Mechanical Engineering from **B.I.T. Sindri, Dhanbad** under Vinoba Bhave University, Hazaribag.

Responsibilities and Posts held:

- Assistant Professor, Mechanical Engineering at B.I.T. Sindri from 07 September, 2006 till date.
Responsibilities:
 - **Teaching and Evaluation** for B.Tech., M.Tech. and Ph.D. course work,
 - Guiding Ph.D. **Research** Scholars, B.Tech. and M.Tech. Projects.

Area of Specialization / Interest:

- Heat and Mass Transfer
- Fluid Mechanics
- Computational Fluid Dynamics
- Computational Heat Transfer
- Solar Energy
- Non-conventional Energy
- Renewable and Sustainable Energy
- Biomimetics
- Scientific and Technical Terminology in Hindi
- Mechanical Engineering Pedagogy
- Intellectual Property Rights
- History of Science, Engineering and Technology

Ph.D. Guidance:

- Sri Mukesh Kumar, Assistant Professor, Department of Mechanical Engineering, Cambridge Institute of Technology, Tatisilwai, Ranchi. (In the field of Computational Fluid Dynamics / Heat and Mass Transfer, Ongoing).

M.Tech. Projects Guided: Eight

- Sharan Sandeep (10PG013) "Performance Analysis of Natural Circulation Solar Water Heater". Guided jointly by Prasad R.S. and Nayak U.K. (27-08-2013)
- Kumar Akhilesh (12PG004) "Design, Fabrication and Performance Evaluation of Pool boiling using single and binary mixture". Guided jointly by Prasad R.S. and Nayak U.K. (20-01-2015)
- Mahto Mintu Kumar (12PG008) "Experimental Investigation of Forced Circulation Solar Air Heater along with Double Glass Cover Plate and Phase change material (Paraffin wax)". Guided jointly by Prasad R.S. and Mahto J.N. (13-02-2015)
- Kishore Kaushal (12PG009) "Experimental Investigation of Forced Circulation Solar Air Heater along with integrated Solar Collector and Phase Change Material (Paraffin wax)". Guided jointly by Prasad R.S. and Mahto J.N. (13-02-2015)
- Sujeet Toppo (17PG022 / VBU Registration No. MT-1728768 / 2017), "Numerical Analysis of Free Convection in Square Cavity". Guided by R.S. Prasad (18-02-2021)
- Rakesh Kumar (20030760030 / 20PG011), "An Experimental Study of Natural Convection in The Vertical and Tilted Cavity Having Top and Right Side Opening with The Heated Plate Placed at The Bottom". Guided by R.S. Prasad (06-04-2023)
- Ravi Prakash Singh (20030760031 / 20PG012), "An Experimental Study of Free Convection in a vertical and tilted cavity with side and top opening". Guided by R.S. Prasad (06-04-2023)
- Arvind Kumar Paswan (21030760305 / 21PG014) "Experimental Investigation of Conventional LPG Stove Burner and Flame Shield Burner for Improving the Thermal Efficiency". Guided by R.S. Prasad (17-10-2024)

Teaching Responsibilities:

Teaching B.Tech. (UG) students at B.I.T., Sindri

- Engg. Thermodynamics
- Heat and Mass Transfer
- Engg. Mechanics
- Mechanics of Solids I (Strength of Materials I)
- Engg. Graphics I & II
- CAD G
- Machine Design
- Mechanical Systems Design
- Design of Machine Elements
- Design of Transmission Systems

Teaching M.Tech. (PG) students at B.I.T., Sindri

- Computational Fluid Dynamics
- Waste to Energy
- Solar Energy
- Organizational Behaviour

Additional Responsibilities Held:

- Member, Class Timetable Committee, B.I.T., Sindri (Since 2007 Till Date).
- Professor-in-Charge, Drawing Section, B.I.T., Sindri (Since 2008 To 2012).
- Professor-in-Charge, Rajbhasha Parishad (Hindi), B.I.T., Sindri (Since 2007 To 2018)
- Professor-in-Charge, Sarjana, The Institute Magazine, B.I.T., Sindri (Since 2007 To 2018)
- Professor-in-Charge, B.I.T., Sindri Official Website www.bitsindri.ac.in (Since 2012 To 2017).
- Professor-in-Charge, Mechanical Engineering Departmental Library (Since 2006 Till Date).
- Member, B.I.T., Sindri Anti-Ragging Committee.
- Editor and Executive Member, BIT Sindri Alumni Association, Sindri
- Hostel Superintendent, Hostel No. 04, 05 & 06, Since 2012 to 2016.
- Editor-in-Chief, Sarjana, The Institute Magazine, B.I.T., Sindri (During 2001-02).

Other Responsibilities Held:

- Various assignments and responsibilities assigned by Examination Department, B.I.T., Sindri; Vinoba Bhave University, Hazaribag and Jharkhand University of Technology, Ranchi; Several NITs, Central and State Engineering Colleges, Institutes and Universities.
- Various assignments and responsibilities in Short Term Courses, Seminar, Alumni Meet, Cultural Events, Passport Camps, JCECE Counselling, JEE Examination etc. at B.I.T. Sindri.

Technical Papers Recently Published:

- Singh S.K. and Prasad R.S., 2008, "Emerging Energy Sources with Sustainable Development" Presented in National Seminar on "Environmental Issues on Geotechnics & Mineral Industry (EIGMI)" at B.I.T., Sindri from 04th April, 2008 to 05th April, 2008. Proceedings of EIGMI-2008, Pages 80-88.
- Prasad R.S. and Singh S.K., 2012, "The ITER Project: The New Way to The New Energy" Presented in National Seminar on "Indian Nuclear Power Programme: Challenges and Opportunities (INCO-2012)" at B.I.T., Sindri jointly organized by B.I.T., Sindri, Dhanbad and B.A.R.C., Mumbai from 14th April, 2012 to 15th April, 2012.

- Prasad R.S. and Singh S.K., 2012, “झारखण्ड में कोयला खनन का वनस्पतीय एवं जैव विविधता पर दूरगामी प्रभाव (Long lasting effect of coal mining in Jharkhand on Plant and Bio-diversity)” Presented in National Seminar on “कोयला उपयोग: दृष्टि 2025 (Coal Utilization: Vision 2025)” at CIMFR, Dhanbad by CIMFR, Dhanbad (A CSIR organization) from 04th May, 2012 to 05th May, 2012, Pages 94-101.
- Nayak Ujjwal Kumar, Gupta Amit Kumar and Prasad Ravi Shankar, 2013, “A Review of Solar Water Heater with Flat Plate Collector (FPC)” Presented in National Seminar on “Energy and Environment for Sustainability (EES), 2013” at B.I.T. Sindri from 16th March, 2013 to 17th March, 2013.
- Kumar Akhilesh, Nayak U.K., Prasad R.S., Kumar Anil and Shankar Ravi, “Design, Fabrication and Performance Evaluation of Pool Boiling using single and binary mixture”, International Journal of Advanced Technology in Engineering and Science (IJATES), ISSN (online): 2348 – 7550, Volume 2, Issue 9, Pages 270-276, September, 2014.
- Kishore Kaushal, Roy S.C., Mahto J.N. and Prasad R.S. “Experimental Investigation Of Forced Circulation Solar Air Heater Along With Integrated Solar Collector And Phase Change Material (Paraffin Wax)”, International Journal of Scientific Research and Engineering Studies (IJSRES), ISSN: 2349-8862, Volume 1, Issue 4, Pages 50-60, October 2014.
- Prasad R.S. and Singh S.N., 2014, “Numerical Investigation of Natural Convection and Surface Radiation in Top Open Cavities with Right Side Wall Opening” in Fifth International Conference on “Fluid Mechanics and Fluid Power (FMFP-2014)” by F.M.F.P. at I.I.T., Kanpur on 12th December, 2014 to 14th December, 2014.
- Prasad R.S., Singh S.N. and Gupta Amit Kumar, “A Systematic Approach for Optimal Positioning of Heated Side Walls in a Side Vented Open Cavity under Natural Convection and Surface Radiation”, Frontiers in Heat and Mass Transfer (ISSN: 2151-8629), Volume 11, 15, 2018. (An Web of Science / ESCI / Scopus Indexed Journal).
- Prasad R.S., Singh S.N. and Gupta Amit Kumar, “Coupled Laminar Natural Convection and Surface Radiation in Partially Right Side Open Cavities”, Frontiers in Heat and Mass Transfer (ISSN: 2151-8629), Volume 11, 28, 2018. (An Web of Science / ESCI / Scopus Indexed Journal).
- Prasad, R.S., Singh, S.N. and Gupta, Amit Kumar, "Combined Laminar Natural Convection and Surface Radiation in Top Open Cavities with Right Side Opening", Journal of Engineering Science and Technology (JESTEC), (ISSN: 1823-4690), Taylor University, Malaysia, Volume 14, Issue 1, 2019, Pages 387-410. (An Web of Science / ESCI / Scopus Indexed Journal).
- Ravi Shankar Prasad, Ujjwal Kumar Nayak, Rajen Kumar Nayak and Amit Kumar Gupta, “Combined Natural Convection and Surface Radiation in A Square Cavity with The Inversely Linearly Heated Opposite Side Walls”, Frontiers in Heat and Mass Transfer (ISSN: 2151-8629), Volume 19, 04, 2022. (A Web of Science / ESCI / Scopus Indexed Journal).

- Rajen Kumar Nayak, Ravi Shankar Prasad, Ujjwal Kumar Nayak, and Amit Kumar Gupta, “Analytical Study of Thermal Performance of a Jet Plate Solar Air Heater with The Longitudinal Fins Under the Cross Flow and Non-Cross Flow Conditions”, *Frontiers in Heat and Mass Transfer* (ISSN: 2151-8629), Volume 19, 07, 2022. (A Web of Science / ESCI / Scopus Indexed Journal).
- Ravi Shankar Prasad, S.N. Singh and Amit Kumar Gupta, “Numerical Investigation of Coupled Natural Convection and Surface Radiation in a Square Cavity with the Linearly Heated Side Wall(s)”, *Frontiers in Heat and Mass Transfer* (ISSN: 2151-8629), Volume 19, 16, 2022. (A Web of Science / ESCI / Scopus Indexed Journal).
- Rajen Kumar Nayak, Ravi Shankar Prasad, Ujjwal Kumar Nayak, and Amit Kumar Gupta, “Performance Analysis of Longitudinal Fin Jet Plate Solar Air Heater under Cross Flow Condition”, *Frontiers in Heat and Mass Transfer* (ISSN: 2151-8629), Volume 19, 22, 2022. (A Web of Science / ESCI / Scopus Indexed Journal).
- Rajen Kumar Nayak, Ravi Shankar Prasad, Ujjwal Kumar Nayak, and Amit Kumar Gupta, “Effects of Geometrical and Flow Parameters on The Performance of Cross Flow Jet Plate Solar Air Heater”, *Frontiers in Heat and Mass Transfer* (ISSN: 2151-8629), Volume 20, 01, 2023. (A Web of Science / ESCI / Scopus Indexed Journal).
- Rakesh Kumar, Ravi Shankar Prasad, Ravi Prakash Singh, “An Experimental Analysis of Free Convection in The Top Open and Side Vented Inclined Cavity with The Bottom Heated Plate” in Fourth International Conference on Recent Advancements in Mechanical Engineering, 2023 (ICRAME 2023) at National Institute of Technology, Silchar on 03rd February, 2023 to 05th February, 2023. (In Scopus Indexed Proceeding).
- Ravi Prakash Singh, Ravi Shankar Prasad, Rakesh Kumar, “An Experimental Study of Free Convection in A Vertical and Tilted Cavity with Top and Side Opening” in Fourth International Conference on Recent Advancements in Mechanical Engineering, 2023 (ICRAME 2023) at National Institute of Technology, Silchar on 03rd February, 2023 to 05th February, 2023. (In Scopus Indexed Proceeding).
- Rakesh Kumar, Ravi Shankar Prasad, “An Experimental Investigation of Free Convection in the Vertical and Tilted Cavity having Top and Right Side Opening with the Heated Plate Placed at the Bottom” in International Conference on Emerging Aspects of Manufacturing, Thermal and Design Engineering, 2022 (MATHED 2022) at National Institute of Technology, Hamirpur on 15th February, 2023 to 17th February, 2023. (In Scopus Indexed Proceeding).
- Amit Kumar Gupta, Arvind Singh, Rajen Kumar Nayak, Ravi Shankar Prasad, Chelluboyana Vaishnava Raghunath, Chandradhwaj Nayak, Amar Kumar "Mathematical Approach and Experimental Validation on Criteria for Instability of Interface between Liquid Droplet and Water", *Zeitschrift für angewandte Mathematik und Physik* (Journal of Applied Mathematics and Physics) (Electronic ISSN: 1420-9039, Print ISSN: 0044-2275), Volume 74, Issue 2, Article 57, April 2023. (A SCIE / Web of Science / Scopus Indexed Journal).

- Abhishek Sharma, B. Pavani Srikavya, A.D. Urade, Amit Joshi, Renuka Shyam Narain, Vinay Dwarakanath, Tabish Alam, Ravi Shankar Prasad, Economic and environmental impacts of biofuels in Indian context, Materials Today: Proceeding (Online ISSN: 2214-7853).
- Arvind Kumar Paswan, Ravi Shankar Prasad, Pulkit Kumar, “Experimental Investigation for Improving the Thermal Efficiency of Conventional LPG Stove Burner and Flame Shield Burner” in International Conference on Recent Advances in Energy and Materials for Sustainable Development (RAEM 2023) at Lovely Faculty of Technology and Sciences (Lovely Professional University), Phagwara, Punjab, India on 24th November, 2023 to 25th November, 2023. (In Scopus Indexed Proceeding).

Other Achievements:

- NPTEL Believer, January-April, 2023
- NPTEL Enthusiast, January-April, 2023
- NPTEL Believer, July-December, 2023
- NPTEL Super Star, January-April, 2024
- NPTEL Discipline Star-Multidisciplinary, January-April, 2024
- NPTEL Discipline Star-Humanities and Social Sciences, January-April, 2024
- NPTEL Discipline Star-Management, January-April, 2024
- NPTEL Domain Scholar-Faculty Domain-Advanced, January-April, 2024
- NPTEL Domain Scholar-Patents and Intellectual Property Rights, January-April, 2024
- NPTEL Believer, July-December, 2024
- NPTEL Motivated Learner, July-December, 2024
- NPTEL Champion, July-December, 2024
- NPTEL Evangelist, July-December, 2024
- NPTEL Super Star, January-April, 2025
- Mentor at Web of Science Academy, Clarivate
- AIR 2656 in **IITJEE, 1999**
- AIR 2597 in **IITJEE, 2000**
- AIR 0185 in **CEED, 2002** (Common Entrance Examination for Design, 2002 conducted by IIT Bombay)

Hobbies and Interests:

- Teaching
- Research
- Making Engineering Models
- Reading Hindi Literature
- Writing Hindi Literature
- Web Designing
- Numismatics
- Gardening
- Planning Innovative