



Department of Mechanical Engineering
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DR. MINUGU OM PRAKASH | Lecturer

CURRENT DESIGNATION/ INVOLVEMENT

Currently working as a Lecturer in the Department of Mechanical Engineering, School of Technology, Maulana Azad National Urdu University (Central University), Cuttack, Odisha, India.

AREA OF SPECIALIZATION

Tribology, Polymer Composites, Activated Carbon materials, Biomass materials, Pyrolysis, Machine Design

ONGOING ACADEMIC RESEARCH/PROJECTS

Completed Minor Research Project titled “ **Development of Eco-Friendly Brake Pads using Biomass-Based Carbon- Silica Hybrid Fibre Polymer Composites**” funded by Maulana Azad National Urdu University

INNOVATION WITH FIELD OF STUDY AND COLLABORATIVE EFFORTS

Worked under SERB project on “ Fabrication and characterization of porous nano carbon from activated biowaste for structural and tribological applications” in NIT Warangal

ACADEMIC AND ADMINISTRATIVE EXPERIENCE

▪ **EXPERIENCE AS ASSISTANCE PROFESSOR: 6 YEARS**

EDUCATIONAL QUALIFICATION

- **DOCTOR OF PHILOSOPHY (Ph.D.), 2020**
Mechanical Engineering, National Institute of Technology Warangal
- **MASTER OF TECHNOLOGY (M. TECH), 2016**
Mechanical Engineering, National Institute of Technology Warangal
- **BACHELOR OF ENGINEERING (B.E.), 2013**
Mechanical Engineering, M.V.S.R Engineering College

TEACHING PROFICIENCY

- **Design of Machine Elements**
- **Dynamics of Machines**
- **Design of Machine Components**
- **Strength of Materials**
- **Automobile Engineering**
- **Composite Materials Laboratory**
- **CREO laboratory**

Journal Publications

1. Minugu, Om Prakash, et al. "Investigation of mechanical, thermal, and tribological properties of activated carbon-glass/epoxy composites." *Composites Part C: Open Access* (2025): 100614.
2. Om Prakash, M., Raghavendra, G., Ojha, S., Panchal, M., & Kumar, D (2022). Effect of biomass-biochar content on the erosion wear performance of biochar epoxy composites. *Polymer Composites*. *Polymer Composites*, 43(5), 3189-3203.
3. Om Prakash, M., Raghavendra, G., Ojha, S., Panchal, M., & Kumar, D. (2021). Investigation of tribological properties of biomass developed porous nano activated carbon composites. *Wear*, 466, 203523.
4. Om Prakash, M., Gujjala, R., Shakuntala, O., Manoj, P., & Chowdary, M. S. (2021). Effect of biomass derived biochar materials on mechanical properties of biochar epoxy composites. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 0954406221990705.
5. Om Prakash, M., Gujjala, R., Panchal, M., & Ojha, S. (2020). Mechanical characterization of arhar biomass based porous nano activated carbon polymer composites. *Polymer Composites*, 41(8), 3113-3123.
6. Om Prakash, M., Raghavendra, G., Panchal, M., Ojha, S., & Anji Reddy, B. (2018). Effects of environmental exposure on tribological properties of Arhar particulate/epoxy composites. *Polymer Composites*, 39(9), 3102-3109.
7. Om Prakash, M, Raghavendra, G., Panchal, M., Ojha, S., & Bose, P. S. C. (2018). Influence of distinct environment on the mechanical characteristics of Arhar fiber polymer composites. *Silicon*, 10(3), 825-830.
8. Om Prakash, M, Raghavendra, G., Ojha, S., & Panchal, M. (2021). Characterization of porous activated carbon prepared from arhar stalks by single step chemical activation method. *Materials Today: Proceedings*, 39, 1476-1481.
9. Panchal, M, Om Prakash, M, Raghavendra, G, Ojha, S, Somaiah, M, and Alamgir, Md (2022). Study of environmental behavior and its effect on solid particle erosion behavior of hierarchical porous activated carbon-epoxy composite. *Polymer Composites*, 43(4), 2276-2287.
10. Panchal, M., Raghavendra, G., Omprakash, M., & Ojha, S. (2020). Fabrication and Characterization of Silica Based Ceramic Composite for Filtration Applications. *Silicon*, 1-10.
11. Panchal, M., Raghavendra, G., Prakash, M. O., & Ojha, S. (2018). Effects of environmental conditions on erosion wear of eggshell particulate epoxy composites. *Silicon*, 10(2), 627-634.

12. Panchal, M., Raghavendra, G., Reddy, A. R., Omprakash, M., & Ojha, S. (2020). Experimental investigation of mechanical and erosion behavior of eggshell nanoparticulate epoxy biocomposite. *Polymers and Polymer Composites*, 0967391120943454.
13. Panchal, M., Raghavendra, G., Ojha, S., Omprakash, M., & Acharya, S. K. (2019). A single step process to synthesize ordered porous carbon from coconut shells-eggshells biowaste. *Materials Research Express*, 6(11), 115613.
14. Panchal, M., Raghavendra, G., Prakash, M. O., Ojha, S., & Bose, P. S. C. (2018). Moisture absorption behavior of treated and untreated eggshell particulate epoxy composites. *Silicon*, 10(3), 859-867.
15. Chowdary, M. S., Raghavendra, G., Kumar, M. N., Ojha, S., & Prakash, M. O. (2020). A review on the degradation of properties under the influence of liquid medium of hybrid polymer composites. *SN Applied Sciences*, 2(10), 1-12.
16. Panchal, M., Raghavendra, G., kumar Reddy, P. S., Omprakash, M., & Srikar, P. (2020). Study of moisture absorption and its effect on erosion wear behavior of eggshell nanoparticulate epoxy composite. *Materials Today: Proceedings*, 33, 5746-5750.

Conference Proceedings

1. M. Sivaji Ganesh, G. Raghavendra, S. Ojha, and M. O. Prakash, "Investigation of Solid Particle Erosion Wear Behavior of Activated Carbon Polymer Composites," in Proc. Adv. Manuf. Syst. and Innov. Prod. Des., Feb. 2021. pp. 283–292.
2. M. O. Prakash, G. Raghavendra, S. Ojha, and M. Panchal, "Characterization of porous activated carbon prepared from arhar stalks by single step chemical activation method," Mater. Today Proc., vol. 39, pp. 1476–1481, Jan. 2021
3. M. O. Prakash, G. Raghavendra, M. Panchal, and S. Ojha, "Thermogravimetric Analysis of Biochar from Arhar Fiber Powder Prepared at Different Pyrolysis Temperatures," in Proc. Innov Prod. Des. and Intel. Manuf. Syst, Mar.2020, pp. 429–437.
4. M. Panchal, G. Raghavendra, M. Omprakash, S. Ojha, and B. Vasavi, "Effect of Eggshell Particulate Reinforcement on Tensile Behavior of Eggshell-Epoxy Composite," in Proc. Innov Prod. Des. and Intel. Manuf. Syst, Mar.2020, pp. 389–397.
5. M. Panchal, G. Raghavendra, P. Sai kumar Reddy, M. Omprakash, and P. Srikar, "Study of moisture absorption and its effect on erosion wear behavior of eggshell nanoparticulate epoxy composite," Mater. Today Proc., vol. 33, pp. 5746–5750, Jan. 2020

Book chapters

1. Gara D., Raghavendra G., Ojha S., Om Prakash M., Prasad P.S. (2022).

"Rheology of Epoxy/Natural Fiber Composites" In: Mavinkere Rangappa S., Parameswaranpillai J., Siengchin S., Thomas S. (eds) Handbook of Epoxy/Fiber Composites. Springer, Singapore

2. Gara D., Raghavendra, Satish Jain G., Ojha S., Om Prakash.(2022) "Case studies on toughened composites for structural and engineering applications" , Handbook of Toughened Composites: Micro and Macro Systems, CRC Press, 2022

DETAILS OF
CONFERENCE/SEMINAR
/WORKSHOP/ FDP
(ATTENDED/PRESENTED)

Conference attended/presented

1. **M. Om Prakash**, " Effect of biomass and biochar materials as wear resistant reinforcements in polymer composites" Conference on Innovations in Materials Science & Workshop on Characterization Techniques, Institute Instrumentation Centre, Indian Institute of Technology Roorkee, India during 24th-27th April 2024 .
2. **Ch. Karunakar, M. Om Prakash**, "_Investigation of Mechanical and Morphological Studies of Cellulose Reinforced Isophthalic Polyester Composites" EBPPM 2021, NIT Trichy.
3. **Manoj Panchal, G. Raghavendra, M. Om Prakash and Shakuntala Ojha** "Preparation and characterization of eggshell particulate pellet: As a future prospect for wastewater treatment" IPDIMS 2021, NIT Rourkela
4. **M. Om Prakash**, G. Raghavendra, "Effect of temperature on physicochemical properties of bio char prepared from arhar fiber" Ramsa 17 international conference on recent advances in mathematical sciences and applications.
5. **M. Om Prakash**, G.Raghavendra, "Preparation and characterization of activated carbon from arhar fiber and from its bio char". International Conference on Advanced Functional Materials and Devices 26-28th February, 2019 NIT Warangal
6. G. Raghavendra, **M Om Prakash**, O. Shakuntala and Satish Ben. "Effect of different environments on the mechanical properties of arhar filler polymer composite". 3rd International Conference on Bio-based Polymers and Composites (BiPoCo) Szeged, Hungary. August 28th -1st. 2016.

FDPs Attended

1. Faculty Development Program (FDP) on "Drone and Drone Applications" at NITTTR Bhopal 16th to 20th March 2026
2. AICTE Training and Learning (ATAL) Academy Online FDP on "Novel Materials" at organized by MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR. 2021
3. AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Processing of Novel Materials' Organized by INDIAN INSTITUTE OF TECHNOLOGY (BHU) VARANASI. 2021
4. AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Nanoscience and Nanotechnology: Current Perspectives in Nanomaterials Synthesis and Characterizations" Organized by Dr. Babasaheb Ambedkar Marathwada University. 2021
5. AICTE Training and Learning (ATAL) Academy Online FDP on "Waste

DETAILS OF KEYNOTE SPEAKER/RESOURCE PERSON/ SESSION CHAIR ETC.	▪ Delivered expert talk on "Insights of Research Article Writing" organized by Kakatiya Institute of Technology and Science, Warangal, Telangana
ACHIVEMENTS	1. Most distinguished paper at National conference on 2nd Innovative Product Design and Intelligent Manufacturing Systems (IPDIMS) during 12th & 13th February 2021, NIT Rourkela 2. Best conference research paper presentation award in ICPIDHIMS 2019 held at NIT Rourkela. 3. Established Composite Materials Laboratory in Kakatiya Institute of Technology and Science, Warangal, Telangana
DETAILS OF SUPERVISION (M.PHIL/M.TECH/P.HD.)	<u>M-Tech thesis Supervision</u> 1. Arvind Kumar. L: Investigation of Tribological Behavior of Graphite-Silica Hybrid Polymer Composites. 2022 2. O. Rohith: Effect of Temperature on Abrasive Wear of Composite Materials. 2023
PROFESSIONAL MEMBERSHIPS	▪ LIFE TIME MEMBERSHIP IN ISTE
PERSONAL DETAILS	Father's Name : MINUGU MALLAIAH Date of Birth : 15-05-1991 Gender : MALE Marital Status : MARRIED Nationality : INDIAN Language Known : TELUGU, ENGLISH, HINDI, URDU Etc..

Date: 29-09-2026

Place: Cuttack

(Dr. M. Om Prakash)