

Dr. Kritika Singh Somvanshi

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



Educational Qualifications

- 2017-2021** - **Ph.D. (Mechanical Engineering)** with **8.19 OGPA**
From G. B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand.
- 2014-2016** - **M. Tech. (Mechanical Engineering)** with **8.08 CGPA**
From National Institute of Technical Teachers Training and Research, Panjab University, Chandigarh.
- 2009-2013** - **B. Tech. (Mechanical Engineering)** with **80.6%**
From Acharya Narendra Deva University of Agriculture and Technology, Ayodhya.
- 2008-2009** - **Higher Secondary Education (XII)** with **77.4%**
From Central Board of Secondary Education.
- 2006-2007** - **Secondary Education (X)** with **83.6%**
From Central Board of Secondary Education.

Teaching Experience

Lecturer (Mechanical Engineering) Six Sigma Institute of Technology and Science, Rudrapur, Uttarakhand (July, 2013 – July, 2014).

Guest Faculty (Mechanical Engineering) Acharya Narendra Deva University of Agriculture & Technology, Ayodhya, Uttar Pradesh (October, 2021 – June, 2023).

Guest Faculty (Mechanical Engineering) Madan Mohan Malaviya University of Technology, Gorakhpur, Uttar Pradesh (September, 2023 – October, 2024).

Area of Interest (Teaching)

Kinematics of Machine, Strength of Material, Machine Design, Workshop Technology, Advance Manufacturing Process, Computer Aided Design.

Area of Interest (Research)

Fiber Reinforced Biocomposites, Nano-Materials, Natural Fibers, Material Characterization.

Awards and Achievements

- Receive Young Scientist Award by Uttarakhand Biotechnology Council.

- Receiver of Chancellor's Gold Medal.
- Fellowship Award by TEQIP – III for three years.
- GATE qualified both in Mechanical Engineering and Production Engineering.

Skills

Software Packages : Auto CAD, Solidworks, Minitab, Design Expert, ANSYS, ORIGIN 8.5

Programming language : C and Python

Professional Activities

- Reviewer –
 - (a) Materials Today Proceeding
 - (b) Innovation in Science and Technology
- Lifetime Member of Institution for Engineers.

Administrative Activities

- **Resident Warden** - Sarojini Bhawan Hostel, MMMUT, Gorakhpur from January, 2024 to October, 2024.
- **Warden** - Girls Hostel, MCAET, Acharya Narendra Deva University of Agriculture and Technology, Ayodhya from October, 2021 to June, 2023
- **Committee Head** - Academic Management System and UP Scholarship Portal, MCAET, Ambedkarnagar.
- **Committee Member** – Manav-sampada Portal, Digishakti Portal, Procurement, Sports and Cultural Group, MCAET, Ambedkarnagar.

Journal Publications

- **Somvanshi, K. S., & Gope, P. C. (2021).** *Effect of Ultrasonication and Fiber Treatment on Mechanical and Thermal Properties of Polyvinyl Alcohol/Cellulose Fiber Nano - Biocomposite Film.* Polymer Composites, 42(10), 5310-5322.
- **Somvanshi, K. S., Gope, P. C., & Tiwari, S. (2021).** *A Review on Properties of Nano Biocomposite Film for Packaging Applications from Cellulose Nano Fiber.* International Journal of Engineering Research and Applications, 11(1), 29-39.
- **Somvanshi, K. S., Gope, P. C., & Tiwari, S. (2021).** *Development of Antibacterial PVA/CNF Nano-Biocomposite Film Adapting Modified Solution Casting Method.* Journal of Research in Engineering and Sciences, 9(2): 52-57.
- **Jain, N., Somvanshi, K. S., Gope, P. C., & Singh, V. K. (2019).** *Mechanical Characterization and Machining Performance Evaluation of Rice Husk/Epoxy an Agricultural Waste based*

Composite Material. Journal of the Mechanical Behavior of Materials, 28(1), 29-38.

- **Somvanshi, K. S.,** Gope, P. C., & Dhama, S. S. (2017). *Tensile Properties Characterization of Rice Husk Fiber Reinforced Bio-Composite*. Int. J. Eng. Res. Appl, 7, 1-4.

Book Chapter

- **Somvanshi, K. S.,** Gope, P. C., & Tiwari, S. (2022). *Micro Machining of Polymer Composites and Nano Composites*. Polymer Nanocomposites: Fabrication to Applications. CRC Press, Taylor and Francis.

Conference Proceeding

- **Somvanshi, K. S.,** Tiwari, S., & Gope, P. C. “*Synthesis and Characterization of Nano-Biocomposite Reinforced with Cellulose Nano Fibers obtained from Agricultural Waste for Food Packaging Applications*”. 38th Indian Engineering Congress, December 27–29, 2023 in Jabalpur, Madhya Pradesh, India.
- **Somvanshi, K.S.** “*Mechanical Properties Characterization of Bio-composite Reinforced with Rice Husk Fiber*”. International Conference on Design, Materials and Manufacturing concerns in Production of Quality Engineering Goods, March 27- 29,2017, HBTU, Kanpur, India.
- **Somvanshi, K.S.,** Gope, P.C., Gautam, S., and Singh, V.K. “*Machining Performance Evaluation of Rice Husk Fiber Reinforced Bio-Composite*”. Advances in Engineering and Technology for Sustainable Development, November 25-27. 2017, Institution of Engineers, Pantnagar Local Center, College of Technology, GBPUAT, Pantnagar, Uttarakhand, India.

Conference Attended

- **Abstract Presented:**

- (a) International Seminar on Future Scope of Robotics and Space Sciences, NITTTR, Chandigarh, May 2016.
- (b) International Conference on Global Perspective in Agricultural and Applied Sciences for Food and Environmental Security (GAAFES 2019), Agricultural & Environmental Technology Development Society (AETDS), Nainital, Uttarakhand, December, 2019.
- (c) 14th Uttarakhand State Sciences and Technology Congress 2019-2020, State Council for Science and Technology, Dehradun, Uttarakhand, February, 2020.
- (d) 2nd Biotechnology Conclave, Uttarakhand Biotechnology Council, Haldi, Udham Singh Nagar, Uttarakhand, February, 2023.

Patent

- Applied for “A DOVETAIL JOINT WITH A WEDGE LOCK” in Indian Patent Office (Application No.202411036880 A).

Workshop and Short Term Courses

- One Week Short Term Course on Computational Fluid Dynamics-Theory and Practice, TEQIP-III, Mechanical Engineering Department, COT, GBPAUT, Pantnagar, Uttarakhand.
- One Week Short Term Course on Experimental and Numerical Methods in Thermal Science, TEQIP-III, Mechanical Engineering Department, COT, GBPAUT, Pantnagar, Uttarakhand.
- 3 Days workshop on Communication Skills and Personality Development, College of Technology, TEQIP-III, GBPUAT, Pantnagar, Uttarakhand.
- One Week Short Term Course on Finite Element Method for Engineers and Researchers, IIT Mandi, Himachal Pradesh.
- One-week Online Training Programme on Organic Farming, Regional Centre of Organic Farming, Ghaziabad, Uttar Pradesh.
- One week GIAN course on Manufacturing and Characterization of Composites, SVNIT, Surat.

Project Guided

Name	Title of Project	University	Year
Deepak Yadav Eti Om Singh Rajeev Srivastav	Fabrication and Application of Rocker Bogie Mechanism	Acharya Narendra Dev University of Agriculture and Technology, Ayodhya, U.P	May, 2022
Ajeet Raj Akash Rai Ashish Verma	Fabrication of Zero Friction Braking System	Acharya Narendra Dev University of Agriculture and Technology, Ayodhya, U.P	May, 2022
Aman Singh	Design and fabrication of Solar Panel Cleaning System.	Acharya Narendra Dev University of Agriculture and Technology, Ayodhya, U.P	May, 2023