Faculty Profile

Dr. S. Sathees Kumar, B.E.(Mech), M.E.(CAD/CAM), Ph.D.
Professor, Department of Mechanical Engineering

HIGHLIGHTS:

- Number of Journal Publications:**86**
- H-Index:**26**
- Patents Published: **09**

PROFESSIONAL LINKS:

- Scopus ID: **57190009971**
- Scopus Link: **https://www.scopus.com/authid/detail.uri?authorId=57190009971**
- Google Scholar ID: **https://scholar.google.com/citations?user=HLZtAY4AAAAJ&hl=en**
- AICTE Faculty ID: **1-10848709151**
- LinkedIn**: https://www.linkedin.com/in/dr-sathees-kumar-m-e-ph-d-7767465b/**

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 18 years 5 months

INTERNATIONAL EXPOSURE:

- Research fellow at INTI International University, Malaysia.

AREA OF SPECIALIZATION:

- Polymer composites
- Natural fiber composites
- Machine Learning
- Tribology

PUBLICATIONS WITH HIGH IMPACT FACTOR (IF)

- **IF – 6.2** : Influence of Prosopis Juliflora bark powder/fillers on the mechanical, thermal and damping properties of jute fabric hybrid composites, *Journal of Materials Research and Technology*, 33 (2024) pp.3452-3461.
- **IF – 6.2 :** Mechanical (Static and Dynamic) characterization and thermal stability of hybrid green composites for engineering applications, *Journal of materials Research and Technology*, 30 (2024) pp.7214-7227.
- **IF – 3.5 :** Static and dynamic mechanical analysis of hybrid natural fibrecomposites for engineering applications", *Biomass Conversion and Biorefinery*,14 (2024) pp.14889–14901.
- **IF – 8.3** : Processing and determination of mechanical Properties of prosopis juliflora bark, banana and coconut fiber reinforced hybrid bio composites for an engineering field, *Composites Science and Technology*, 208 (2021) 108695.
- **IF – 2.9 :** Investigation on mechanical and tribological behaviors of PA6 andgraphite-reinforced PA6 polymer composites." *Arabian Journal for Science and Engineering*, 41 (2016) pp. 4347-4357

PATENTS PUBLISHED/GRANTED:

- "Hybrid IC Engine", 408174-001, 2024 (Design Patent- Published)
- "Multiple camera-based system for 3D model construction of inner walls of ship propeller from 2D images", 202341062492, 2023. (Utility Patent - Published)
- "Wearable health care smart band for physically challenge people", 202341007806 , 2023. (Utility Patent - Published)
- "Expert system based mathematical model for humanoid robot designing", 202241071543 , 2022. (Utility Patent - Published)
- "IOT and AI image processing based robotic vehicle to identify and map lead metal concentration in agricultural soil" 202241066951, 2022 (Utility Patent - Published)
- "Innovative system of flexible production line manufacturing method", 2022410448312, 2022. (Utility Patent - Published)
- "Thermal Analysis Of Polymer-Modified Road Bitumens", 202241062488, 2022. (Utility Patent - Published)
- "Pineapple fiber composite as replacement for asbestos in brake pad manufacture", 202141007683, 2021. (Utility Patent - Published)
- "A Process for Synthesizing Polycaprolactam Composite" ,201941046927, 2019 (Utility Patent - Published)

COURSES CERTIFIED:

- Data science and Gen Al LLMs - six-month online certificate program at JNTUH, Hyderabad, 2025.
- Machine Learning using Python Programming – NPTEL – 2025
- Programming in java -NPTEL, 2024
- Robotics - NPTEL – 2023

ACHIEVEMENTS AND AWARDS:

- My name has consistently 3 times appeared in the rankings of the top 2% of scientists worldwide in 2021-22, 2022-23 and 2023-24 respectively.
- RULA Selected as the Best Researcher Award for Polymer and Natural Composites – 2020.
- Best Researcher Award for Contribution and Honorable Achievement in Innovative Research by the International Research Awards on Composite Materials (CM-2022).

BOOK CHAPTERS PUBLISHED

- "A review of ductile attributes of natural fiber composites", Plant and Animal based composites, De Gruyter - ISBN - 9783110695212, 13, pp.39-51,2021.
- "Experimental evaluation on wear and coefficient of frictional performance of Zirconium Oxide nano particles reinforced Polymer composites for gear applications" Nanomaterials and Nanocomposites Characterization, Processing, and Applications, CRC Press - ISBN: 978-1-003-16094-6, pp.122-138, 2021.
- S.Sathees Kumar, Ch.Nithin Chakravarthy and R.Muthalagu, Experimental evaluation on tribological behaviour of TiO2 reinforced polyamide composites validated by Taguchi and machine Learning methods", Computational Technologies in Materials Science, CRC Press – ISBN – 9781003121954,pp.23, 2021.

BOOKS PUBLISHED :

- "Green Hybrid composite in Engineering and Non – Engineering", ISBN – 978-81-19359-58-5 (2024)
- "Rapid Prototype and Rapid Tooling", ISBN – 978-81-86353315.(2023)
- "Computer Aided Mechanical Design and Analysis" ISBN – 978-93-6096-561-7 (2024)
- "Polymer Composites for Engineering Applications", ISBN –978-1636480510, 2020.

SPECIAL SESSIONS DELIVERED:

- Delivered an expert lecture on the topic "Natural Fiber Composites for Engineering Applications" Organized by University College of Engineering, Ramanathapuram, on 07th February 2020.

PROFESSIONAL MEMBERSHIPS:

- Life Fellow Member in Institution of Engineers (India), No. M-147520-1
- Life Member in Indian Society for Technical Education, No : LM 134600
- International Association for the Engineers, No.301566

EDITORIAL BOARD MEMBER

- Research on Intelligent Manufacturing and Assembly
- Composite Materials
- International Journal of Material Sciences and Engineering-
- Journal of Materials Science: Materials in Engineering – Springer

REVIEWER IN REPUTED JOURNALS

- Polymer Bulletin (SCI)
- Polymer Bulletin (SCI)
- International Journal of Materials Research (SCI)
- Fibers and Polymers (SCIE)
- Springer Nature (SN) Applied Sciences
- Materials Research (ESCI)
- IEEE Transactions od Dielectronics and Electrical Insulation (SCIE)
- Hybrid Advances (SCIE)
- Heliyon (SCIE)
- Construction and Building Materials (SCIE)
- Biomass conversion and Biorefinery (SCIE)
- International Journal of Biological Macromolecules (SCIE)