

GARIKIPATI NAGA MALLIKARJUN RAO (Ph. D)

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Career Objective

Passionate and dedicated research scholar with a strong foundation in mechanical engineering, seeking a teaching position to leverage my strong communication skills and enthusiasm for fostering a positive learning environment. Eager to contribute to the academic success and holistic development of students through innovative teaching methods and a commitment to educational excellence. Ready to bring a fresh perspective and a strong desire for continuous learning to your esteemed institution.

Educational Qualifications

Qualification	University/ Board	Institution	Year	Stream	Score
Ph D	VIT-AP University	VIT-AP University	2020-2024	Polymer nanocomposites	-
M.Tech	JNTUK	PVP Siddhartha institute of technology	2018-2020	Machine design	8.64
B. tech	Lingayas University	Lingayas University	2014-2018	B-Tech Automobile Engineering	8.57
Class 12 th	State	Sri Chaitanya Jr. college	2014	Math's, Physics, Chemistry	88.8
Class 10 th	State	St. Mary's High School	2012	-	8.8

Research Experience:

[Dec 2020- Feb 2024] Full Time Researcher, VIT-AP University, Guntur, Andhra Pradesh.

- Spearheaded research initiatives focused on the development of novel polymer nanocomposites with enhanced mechanical, thermal, and electrical properties.
- Designed and optimized synthesis routes for polymer nanocomposites using various nanofillers, including nanoparticles, nano clays, and carbon nanotubes.
- Conducted Mechanical characterization and comprehensive characterization studies utilizing advanced techniques such as SEM, FESEM, XRD, DMA and DSC to analyze the morphology and structure-property relationships of nanocomposites.
- Conducted literature reviews and contributed to the development of research proposals and grant applications.

- Provided mentorship and guidance to undergraduate students involved in laboratory activities.
- Contributed to the writing and editing of research papers for publication in scientific journals.

Publications

- A review on synthesis, characterization and applications of nanoparticles in polymer nanocomposites [International Conference on Advances in Mechanical Engineering and Material Science on 1st April 2023].
- A review on Recent advances in accumulative roll bonding of similar, dissimilar and metal matrix composites. [International Conference on Advances in Mechanical Engineering and Material Science on 1st April 2022].
- Mechanical and Shape recovery characterization of hybrid reinforced MWCNTs-Graphene thermal responsive shape memory polymer nanocomposites. [In communication].
- Exploring the Synergistic Effects of MWCNTs-Graphene Hybrid Nanocomposites on the Thermo-Mechanical Behavior of Shape Memory Polymers: Pre- and Post-Annealing Analysis. [In communication].

Patents

- School bag with backpack frame, **patent number-** 335515, **granted on-**12-11-2021.
- Center stand for two-wheeler motor cycle, **patent number-** 335102, **granted on-**01-01-2021.
- Dual clutch operated hybrid vehicle transmission system, **patent number-** 336993, **granted on-**12-03-2021.
- Water transfer siphon-**patent number-** 337417, **granted on-**11/01/2021.
- Backpack frame to carry school/trave l bag with less effort, **application number-** 202041030824, **published on-**31/07/2020.

Internship

- 4 months Internship in EICHER ENGINES, ALWAR, RAJASTHAN, (TAFE MOTORS LTD.)

Skills

- Proficient in polymer synthesis techniques, including solution blending, melt mixing, 3D and 4D printing.
- Expertise in characterizing polymer nanocomposites using microscopy (FESEM, SEM,), spectroscopy (FTIR) and thermal analysis (DSC, DMA, TGA).
- Strong understanding of structure-property relationships in polymer materials and nanocomposites.

- Excellent written and verbal communication skills, with a track record of publishing research papers and delivering presentations.

Projects undergone during under graduation

- Fabricated a Hybrid Vehicle 2017:
Built chassis of vehicle, developed steering and braking mechanism, machined the axel shaft and ergonomics.
- Fabricated a Electric Solar Vehicle 2017:
Built chassis of the vehicle, developed transmission of the vehicle and designed braking system of the vehicle.
- Fabricated a Hybrid Vehicle 2018:
Worked as a project leader, designed the chassis and braking system, designed the transmission system.

Accomplishments

- Fabricated a “Hybrid Vehicle” and participated in National Level championship conducted by IMPERIAL SOCIETY OF INNOVATIVE ENGINEERS.
- Awarded 1st place in Tech Fest conducted by Lingayas University.
- Fabricated an “Electrical Solar Vehicle” and participated in National Level Competition conducted by TECH IMPERIAL.

Personal profile

Declaration

Date of Birth	28-04-1996
Gender	Male
Marital status	Unmarried
Languages known	Telugu, English & Hindi
Permanent address	1-14, Moturu Village, Gudivada Md, Krishna Dt, AP- 521323.

I hereby declare that the information furnished above is true to the best of my knowledge.

Garikipati Naga Mallikarjun Rao