

Dr. V Chandra Sekhara Rao P^{Ph.D.(IIT-Madras)}

Former Controller of Examinations & Assistant Professor

Department of Mechanical Engineering

Rajiv Gandhi University of Knowledge Technologies- Basar.

Telangana.504107.

Email: chandrasekhararaopv@rgukt.ac.in

Contact number: +91- 9444240356



Research Interests: High Strength High performance Structural Materials, Fracture Mechanics, Polymer Matrix Composites, Non-Destructive Testing, and Renewable Energy Sources

Academic qualification:

	Degree	University/Institution
1.	B.Tech.	JNTU-H
2.	M.Tech.	National Institute of Technology Calicut(NIT-C)
3.	Ph.D.	Indian Institute of Technology Madras(IIT-M)

Ph.D. Thesis title: Mechanical, Fracture and Durability Characteristics of Polymer Composites with Variations in Micro Fillers, Macro Fillers and Fibers.

Work experience: Total of more than 11 years' experience.

International Journal Papers

Rao, P.V. Chandrasekhara. "Effects of Matrix Modification on Mechanical and Durability Characteristics of Polymer Composites through Variations in Micro Fillers, Macro Fillers and Fibers." *Construction and Building Materials*, vol. 235, 2020, p. 117505., doi:10.1016/j.conbuildmat.2019.117505.

Rao, P.V. Chandrasekhara, et al. "Fabrication and Testing of Composite Tile Made from Plastic Waste and Mineral Admixture for Aggressive Environments." *Materials Today: Proceedings*, vol. 15, 2019, pp. 90–95., doi:10.1016/j.matpr.2019.05.029.

Rao, P.V. Chandrasekhara, et al. "Process Parameters Optimization on FSW of Polycarbonate and AA6061." *Materials Today: Proceedings* 19 (2019): 637–641., <https://doi.org/10.1016/j.matpr.2019.07.745>.

Rao, P.V. Chandrasekhara, et al. "Residual stress measurement of Inconel 600 on different welding techniques by using conventional and XRD methods." *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2020.09.403>

Rao, P.V. Chandrasekhara, et al. "The Study of Surface Integrity on Friction Stir Welded Brass Plates." *AIP Conference Proceedings* 2020:030107. doi:10.1063/5.0019656.

Rao, P.V. Chandrasekhara, et al. “Study on Effects of Matrix Modifications on the Properties of Polymeric Composites by using NDT technique.” *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2020.11.828>

Conference Proceedings

P. V. Chandra Sekhara Rao. “Design, Fabrication and Thermal Analysis of Alternative Aluminium Alloys 5086 and 6061 using for cylindrical Blocks.” 2nd Indian *National Conference on Applied Mechanics – INCAM 2015*, July 13-15, 2015, IIT Delhi..

P. V. Chandra Sekhara Rao. “Design, Fabrication and Analysis Of Composite Drive Shaft For Future Underwater Application.” *International seminar on Current and Future Challenges in Design and Construction of Underwater Vehicles* November 22, 2016 FICCI Federation House, Tansen Marg, New Delhi.

P. V. Chandra Sekhara Rao et al. “Fabrication and testing of composite tile made from plastic waste and mineral admixture for aggressive environments.” *Two-day National Conference on Frontiers in Corrosion Control of Materials (FCCM-2018)* June 28th - 29th, 2018, NIT- Warangal.

P.V Chandra Sekhara Rao et al. “The Study of Surface Integrity on Friction Stir Welded Brass Plates”, *International Conference on Multifunctional Materials (ICMM-2019)* December 19th – 21st, 2019, Geethanjali College of Engineering and Technology, Hyderabad, India.

P.V Chandra Sekhara Rao et al. “Residual stress measurement of Inconel 600 on different welding techniques by using conventional and XRD methods.” *International Conference on Advances in Minerals, Metals, Materials, Manufacturing and Modelling 2019 (ICAM5-2019)* September 25th-27th, 2019, NIT-Warangal, India.

P.V Chandra Sekhara Rao. “Effects of Matrix Modifications on the Properties of Polymeric Composites.” *International Conference on Advances in Minerals, Metals, Materials, Manufacturing and Modelling 2019 (ICAM5-2019)* September 25th-27th, 2019, NIT-Warangal, India.

P.V Chandra Sekhara Rao. “Study on Effects of Matrix Modifications on the Properties of Polymeric Composites by using NDT technique.” 11th *International Conference on Materials Processing and Characterisation 2020 (ICMPC 2020)*, December 15th-17th, 2020, IIT-Indore, India.

Academic/Administrative Responsibilities

- Acted as the Controller of Examinations at RGUKT Basar
- Acted as I/c Head of the Department of Mechanical, RGUKT Basar.
- Acted as a Coordinator for IIED Cell at RGUKT Basar.
- Board of Studies (BoS) member at RGUKT Basar.
- Acted as a Chief Superintendent for conducting Telangana State Public Service Commission (TSPSC-VRO) Exam on 16th September, 2018 at RGUKT Basar
- Reviewer for 'Innovation in Science Pursuit for Inspired Research' (INSPIRE) scheme which is one of the flagship programmes of **Department of Science & Technology (DST)** with National Innovation Foundation – India (NIF), Government of India.

- Reviewer at An international journal “Construction& Building Materials” from Elsevier.
- Reviewer at an international, peer-reviewed, open-access journal “Mechanics of Advanced Composite Structures”.
- Reviewer at Journal of Advanced Research in Fluid Mechanics and Thermal Sciences.
- Faculty Representative for the Training and Placement cell during AY 2016-2017 to 2019-2020.
- Acted as a SPOC for SIH2019 for RGUKT Basar.
- Acted as Mess warden for Dining Hall 3 at RGUKT Basar.
- Resource Person in the “Training Programme on CNC machine” during 14th - 23rd July, 2018 organized by Department of Mechanical Engineering, RGUKT Basar.
- Presiding Officer at Nirmal Assembly Constituency for the General Elections 2019 to House of the People.
- Presiding Officer at Bhainsa Constituency for the General Elections 2018 - Elections to TSLA 2018
- Organized internship on “CNC Lathe Machines” for Govt. ITI, Nizamabad.
- Conducted DassaultSystèmes "Certified SOLIDWORKS Associate (CSWA)" Online certification Exam for the students of Dept. of Mechanical Engineering at RGUKT Basar.
- Mentor for Team Tayuva at Smart India Hackathon- Hardware Edition 2019”, and my team from Rajiv Gandhi University of Knowledge Technologies (RGUKT), Basar were declared as winners in National level.
- Lab In-charge for Strength of Materials Lab.
- Exhibitor at India International Trade Fair during 14th – 27th November, 2017
- Advisory Committee member for Techfest2020 at RGUKT Basar.
- Life Member in “The Indian Society For Technical Education”.
- Mentor for Air-conditioning helmet patent.
- Member in Indian Society for Technical Education (ISTE) and American Society of Mechanical Engineers (ASME).
- Apart from thesis work, was actively involved in various research based consultancy projects, in collaboration with esteemed firms like IGCAR, NOCL etc., under the able guidance of Professors at Department of Ocean Engineering, IIT Madras.

Projects Supervised

Guided various projects, few projects that **came into reality** are mentioned below.

Solid Waste Management

- This project is presented at World’s biggest five days’ National mega event “Smart India Hackathon-2019(Hardware Edition)”
- Our team won a Cash Prize of 1lakh rupees.
- The project is implemented by the MHRD, Government of India.

World's First Air-Conditioned Helmet

- Jarsh Safety was started in 2016 with the purpose of creating the world’s first air-conditioned safety helmet.
- It has been funded by SID-IISC Bangalore, MSME, Govt. of Telangana, Govt. of Andhra Pradesh. Patent has been filed with the title of “Air-conditioning helmet”

Seminars/Workshops/FDP

- Participated in the Two day workshop on “3D Printing” during 19th – 20th March, 2015 organized by the Department of Mechanical Engineering, VNRVJIET, Hyderabad
- Participated in the TEQIP Sponsered One day FDP on “Light Harvesting Materials” on 10th October, 2015 organized by the Department of Physics, GRIET, Hyderabad.
- Participated in the two weeks ISTE STTP on “Introduction to Structural Engineering” during 30th November, 2015 – 9th January, 2016 conducted by the IIT Kharagpur.
- Participated in the three day workshop on “Finite Element Method in Mechanical Engineering” during 25th – 27th February, 2016 organized by the Department of Mechanical Engineering, VNRVJIET, Hyderabad.
- Presented poster in Convergence Open House-2016 on “Design of Mechanism for Lifting Vehicle and Wheel Fixing” during 29th Feb – 2nd Mar 2016 organized by the Department of Mechanical Engineering, VNRVJIET, Hyderabad.
- Participated in One Week National Workshop on “Composites Material sand Applications” during 29th Feb – 5th Mar 2016 organized by the Anurag Group of Institutions, Ghatkesar, Hyderabad.
- Participated in the Ten days “FDP in Entrepreneurship” during 11th – 22nd July, 2016 organized by the e Entrepreneurship Development Institute of India, Bengaluru.
- Participated in the five day FUP on “Product Design and Manufacturing” during 24th – 28th October, 2016 organized by the C-DAC, Hyderabad in association with TASK.
- Participated in the 49th UGC Orientation Programme during 12th – 13th March, 2018 organized by the JNTUH, Hyderabad.
- Participated in the AICTE Sponsored QIP short term course on “Mechanical Properties and Deformation Behaviour of Structural Materials” during 27th August – 1st September, 2018 conducted by the IIT Varanasi.
- Participated in the “Global Business Foundation Skills (GBFS)” Train the Trainer Program from 3rd April 2018 to 7th April 2018 at RGUKT, Basar.
- Completed a course on “Energy Conservation Building Code (2017) Program and Expert Certification Assessment” during 11th – 15th March, 2019 organized by ASCI, Hyderabad.
- Participated in the Refresher Course on “Advances in Material Science and Application” during 15th – 27th July, 2019 organized by the JNTUH, Hyderabad
- Participated in “Excellence in Peer Review: How to be an effective peer reviewer” organized by Taylor & Francis Peer Review Systems Webinars.
- Participated in " Australian Virtual Industry Masterclass Series 1 - Renewable Energy: Hydrogen – The missing link for Clean Energy : Monday, 31 August 2020”
- Participated in “Design Thinking & Problem Solving workshop” held under Samanvay 2020- The Annual Business Fest of DoMS IITMadras.
- Attended industrial Training in GMR Aero Technic Ltd, RGIA-Hyderabad. (GAT is a leading airframe Maintenance, Repair and Overhaul facility, provides complete maintenance support, Services and Recovery of the Aircraft) in that opted **NDTE of Composites** from 01-09-2021 to 14-09-2021.