

VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

Name: Dr. Ch. Sri Chaitanya
Designation: Assistant Professor
Department: Automobile Engineering
Mail ID: srichaitanya_ch@vnrvjiet.in
[Google Scholar](#)



Experience (in years): 3 Teaching: 3 Research: 0 Others(if any, specify):

1. Educational / Technical qualifications:

S.No	Level (UG / PG / Ph.D)	Year of passing	Specialization
01	B.Tech (IIITDM Kancheepuram)	2014	Mechanical Engineering
02	M.TECH (NIT Warangal)	2017	Machine Design
03	Ph.D. (NIT Warangal)	2021	Mechanical Engineering

2. Teaching and Learning:

- 2.1. Teaching Interests: Design, Dynamics, Tribology
- 2.2. Novel Teaching & Learning Techniques adopted: PPT, Simulations and animations of applications to the theoretical concepts.
- 2.3. Involvement in curriculum updating / Design: -

3. Co-curricular and Extra-Curricular Activities

- 3.1. Interests and Hobbies: Reading
- 3.2. CCA/ECA Organized:
- 3.3. CCA/ECA participated:
- 3.4. Counselling and Mentoring Activity:
 1. Counsellor for B.Tech Mechanical Students at VRSEC (2021-2023)
- 3.5. Committees involved in:
 - Department level:
 - Institute Level:

4. Conference / Workshop / Seminar / Guest Lectures:

- 4.1 Conducted: 5
 1. Guest Lecture on “Recent Trends of Hydraulic and Pneumatic Control Technology” on 16th November 2023 at VRSEC, Vijayawada.
 2. Guest Talk on “Kickstart your CAT Preparation” on 28th February 2023 at VRSEC, Vijayawada.

3. Webinar on “Digital Twin – Virtually Integrated Real Time Industry Operations” on 18th December 2021 at VRSEC, Vijayawada.
4. Webinar on “Life Coming out of college and finding your way to corporate world, being entrepreneurs” on 11th December 2021 at VRSEC, Vijayawada.
5. Co-coordinator for One day seminar on “Recent Advances in Automobile Engineering” on 28th April 2021 at VRSEC, Vijayawada.

4.2 Attended:

1. One-week online faculty development program on “Engineering Graphics through AUTOCAD” by VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad during 3rd – 7th April 2023.
2. Five-day faculty development program on “Progressive Trends in Mechanical Engineering” by Andhra Loyola Institute of Engineering and Technology, Vijayawada during 28th March – 1st April 2022.
3. One-week faculty development program on “Universal Human Values Refresher 1” by All India Council for Technical Education during 7th – 11th 2022.
4. Five-day faculty development program on “Inculcating Universal Human Values in Technical Education” by All India Council for Technical Education during 6th – 10th December 2021.
5. Three-day faculty development program on “Recent Trends, Opportunities & Challenges in Tribology and Surface Coatings” by VR Siddhartha Engineering College, Vijayawada during 16th – 18th November 2021.

5. Academic Contribution and Research & Consultancy:

5.1. Invited Lectures:

5.2. Articles / Chapters published in Books:

1. Tribological Behaviour of Polymer Matrix and Metal Matrix Composites, in Toughened Composites, CRC Press, ISBN: 9780429330575.
2. Development of Close Celled Cenosphere Based Polymer Syntactic Foams, Recent Trends in Product design and Intelligent Manufacturing Systems, Springer, ISBN: 978-981-19-4606-6.
3. Statistical Energy Analysis Parameters Investigation of Composite Specimens Employing Theoretical and Experimental Approach, Recent Advances in Layered Materials and Structures, Springer Nature, ISBN: 978-981-33-4550-8.
4. Effect of Material Damping on the Vibration Response of Cantilever Beams in Dynamic Environment, Advances in Applied Mechanical Engineering, Springer, ISBN: 978-981-15-1201-8.
5. Material removal mechanism of hybrid Grp/SiCp/Al-Mg-Si composites during high stress abrasive wear condition, Proceedings of Asia International Conference on Tribology. ISBN: 978-967-13625-2-5
6. Effect of rotational speed on dimensional wear coefficients of solution treated Al-Mg-Si and Al-Zn alloys tested in abrasion condition, Proceedings of Asia International Conference on Tribology. ISBN: 978-967-13625-2-5

5.3. Books published as single author or as editor:

5.4. Projects Guided :

a) UG :4 b) PG : 0

5.5. Research Interests: Tribology, Design, Dynamics.

5.6. Ph.D students :

a) Enrolled: b) Submitted: c) Awarded :

5.7. Papers published in reviewed journals:

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ ISSN No.	Impact Factor/ Citation Index	National/ International
1	Design and analysis of angle-ply arrangement on fracture properties of FRP composite structure under thermo-mechanical loading conditions subjected to central circle cut-out	International Journal on Interactive Design and Manufacturing (IJIDeM), 17(6), 2847-2854, 2023	Electronic ISSN 1955-2505	2.1	International
2	Modelling and mechanical properties evaluation for lap joint of natural composites using finite element method	International Journal on Interactive Design and Manufacturing (IJIDeM), 2023	Electronic ISSN 1955-2505	2.1	International
3	Tribological performance of the aluminium based syntactic foams – Influence of sliding distance	Materials Today: Proceedings, 2023	Online ISSN: 2214-7853	3.2	International
4	Design and analysis of a natural lighting system for underground structures	Materials Today: Proceedings, 2023	Online ISSN: 2214-7853	3.2	International
5	Tensile behaviour of natural polymer composite materials at ambient and elevated temperatures: tensile behaviour of natural polymer composite materials	Indian Journal of Engineering and Materials Sciences (IJEMS), 30(2), 2023	Online ISSN: 0975-1017	0.9	International
6	Tribological behaviour of titanium carbide reinforced aluminum composite materials	AIP Conference Proceedings 2810(1), 2023	Online ISSN 1551-7616		International
7	Compression deformation models of cenosphere reinforced polymer syntactic foams	AIP Conference Proceedings 2810(1), 2023	Online ISSN 1551-7616		International
8	Computational analysis for flexural response of composite laminates using finite element method	International Journal on Interactive Design and	Electronic ISSN	2.1	International

		Manufacturing (IJIDeM), 2023	1955-2505		
9	Effect of shape on depth profile Nuclear Magnetic Resonance data of multilayered composite structure	Nondestructive Testing and Evaluation, 38(3), 539-552, 2023	Online ISSN: 1477-2671	2.6	International
10	Force and Roughness Analysis for Natural Bagasse Fiber Reinforced Composites Under Milling Machining: An Experimental Study	Advances in Materials and Processing Technologies, 2023	Online ISSN: 2374-0698	2.2	International
11	Influence of Cu particulates on a356mmc using frequency response function and damping ratio	Advances in Materials and Processing Technologies, 2023	Online ISSN: 2374-0698	2.2	International
12	Effect of angle-ply arrangement on fracture behaviour of FRP composite laminate under the thermal loading conditions subjected to central elliptical cut-out	Advances in Materials and Processing Technologies, 2022	Online ISSN: 2374-0698	2.2	International
13	Influence of the Manufacturing Variances on the Strength of the Pressure Vessel	IOP Conference Series: Materials Science and Engineering, 1248, 2022	Online ISSN: 1757-899X		International
14	Evaluation of mechanical properties of Banyan/glass fiber reinforced epoxy composites	AIP Conference Proceedings 2469, 2022	Online ISSN 1551-7616		International
15	Application of low field magnetic resonance for defect detection in multi-layered cylindrical composite structures	Nondestructive Testing and Evaluation, 37(1), 22-40, 2022	Online ISSN: 1477-2671	2.6	International
16	Detection of planar defects in multilayered GFRP composite structures using low-field nuclear magnetic resonance	Materials Evaluation, 79(9), 897-904, 2021	ISSN: 0025-5327	2.18	International
17	Influence of Manufacturing Variances on the Strength of Pressure Vessels: Analytical Study	Arabian Journal for Science and Engineering, 45(11), 9413-9421, 2020	Online ISSN 2191-4281	2.9	International
18	Tribological Behavior of Cenosphere-Filled Epoxy Syntactic Foams in Dry Sliding Conditions	ASME - Journal of Tribology, 142(5), 051701, 2020	eISSN: 1528-8897	2.5	International

19	A novel NDE approach towards evaluating adhesive bonded interfaces	Materials Today: Proceedings, 20(2), 1191-1197, 2020	Online ISSN: 2214-7853	3.2	International
20	Damping enhancement of softmag material by vacuum annealing in vibration environment	Materials Today: Proceedings, 26(2), 905-912, 2020	Online ISSN: 2214-7853	3.2	International
21	Effect of addition of reinforcements on the tribological behaviour of the polymer based syntactic foams	Materials Today: Proceedings, 26(2), 415-418, 2020	Online ISSN: 2214-7853	3.2	International
22	Energy absorption capabilities of cenosphere reinforced epoxy syntactic foams	Materials Research Express, 6(12), 125303, 2019	ISSN: 2053-1591	2.3	International
23	Surface failure of syntactic foams in sliding contact	Materials Today: Proceedings, 15(1), 63-67, 2019	Online ISSN: 2214-7853	3.2	International
24	Effect of material addition on the vibration response of a cantilever beam	Materials Today: Proceedings, 18(7), 63-67, 2019	Online ISSN: 2214-7853	3.2	International
25	Abrasive grit size effect on wear depth of stir cast hybrid Al–Mg–Si composites at high stress condition	Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 232(6), 672-684, 2018	Online ISSN: 2041-305X	2.0	International

5.8. Papers presented at National / International Conferences:

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Low frequency NMR Relaxometry Studies of Elastomeric Thermal Insulation Liners for Aerospace Structures	68th Conference of the Indian Society of Theoretical and Applied Mechanics (ISTAM)	International	December 7-9, 2023
2	Topology Optimization of the Bell Crank Lever	Second Australian International Conference on Industrial Engineering and Operations Management	International	November 14-16, 2023

3	Influence of Biofiber Reinforcement Materials on the Mechanical Strength of the Hybrid Composite Materials (Invited)	8 th European Congress on Advanced Nanotechnology and Nanomaterials	International	October 12-13, 2023
4	Development of Natural Lighting System Using Fiber Optics for Underground Structures	International Conference on Advancements in Materials, Manufacturing, and Automation (AMMA-2023)	International	April 7-8, 2023
5	Influence of the Laminate Thickness and the Thermal Loads on the Buckling of a Cylindrical Shells	International Conference on Materials Science and Engineering & International Conference on Nanomaterials and Nanotechnology	International	March 27-28, 2023
6	Influence of the Orientation Angle of the fiber on the Strength of the Pressure Vessel	International Conference on Innovations in Technology & Management [ICITM – 2022]	International	December 21-23, 2022
7	Influence of Cross-ply Arrangement on the Fracture Behaviour of Fiber Reinforced Polymer Composite Laminate	International Conference on Innovations in Technology & Management [ICITM – 2022]	International	December 21-23, 2022
8	Effect of Angle-ply Arrangement on the Fracture Behaviour of FRP Composite Laminate under the Thermal and Mechanical Loading Conditions Subjected to Central Elliptical cut-out	International Conference on Innovations in Technology & Management [ICITM – 2022]	International	December 21-23, 2022
9	Influence of Laminate Width on the Fracture Behaviour of the Symmetric Angle-ply Laminates under Thermo-Mechanical Loading Conditions	International Conference on Advanced Functional Materials: Future Perspectives [AFMFP – 2022]	International	August 6-8, 2022
10	Study of Fracture Behaviour of a Composite Laminate with Central Circular crack subjected to Temperature Fall Loading	International Conference on Advanced Functional Materials: Future Perspectives [AFMFP – 2022]	International	August 6-8, 2022
11	Fracture Behaviour of a Rectangular Composite Lamina with a Virtual Crack Under Different Loading Conditions	5 th International Conference on Design, Analysis, Manufacturing	International	May 18-19, 2022

		and Simulation [ICDAMS – 2022]		
12	Fracture Behaviour of a Composite Lamina under Mechanical, Thermal and Thermo-Mechanical Loading Conditions	5 th International Conference on Design, Analysis, Manufacturing and Simulation [ICDAMS – 2022]	International	May 18-19, 2022
13	Tribological Behaviour of Titanium Carbide Reinforced Aluminum Composite Materials	International Conference on Smart Materials and Structures [ICSMS - 2022]	International	February 15-16, 2022
14	Compression Deformation Models of Cenosphere Reinforced Polymer Syntactic foams	International Conference on Smart Materials and Structures [ICSMS - 2022]	International	February 15-16, 2022
15	Influence of Sliding Distance on the Dry Sliding Wear Behaviour of the Syntactic Foams	10th International Conference on Industrial Tribology [IndiaTrib-2019]	International	December 1-4, 2019
16	Effect of Tribological Parameters on the Dry Sliding Wear Coefficients of Syntactic Foams (Invited)	The 2nd World Summit on Advances in Science, Engineering and Technology [INDIANA SUMMIT-2019]	International	October 3-5, 2019
17	Tribological Behaviour of Syntactic Foams in Dry Sliding Conditions: Effect of Applied Load and Sliding speed	International Conference on Advanced Functional Materials and Devices [ICAFMD-2019]	International	February 26-28, 2019
18	Vibration Response Comparison of Magnesium and Steel Cantilever Beams	International Conference on Advanced Functional Materials and Devices [ICAFMD-2019]	International	February 26-28, 2019
19	Failure Analysis of Fibre Reinforced Polymer Matrix Composites (Invited)	10th International Conference on Advancements in Polymeric Materials [APM-2019]	International	January 22-24, 2019
20	Tribological Behaviour of Aluminium Syntactic Foams under Dry Sliding Conditions: Effect of Sliding Distance	Emerging Trends in Mechanical Engineering [ETME 2019]	National	January 9-10, 2019
21	Experimental Analysis of the Vibration Amplitudes of Cantilever Beams	Emerging Trends in Mechanical Engineering [ETME 2019]	National	January 9-10, 2019
22	Effect of Porosity on the Tribological Behaviour of Syntactic Foams in Dry Sliding Conditions	An International Conference on Tribology TRIBOINDIA-2018	International	December 13-15, 2018

23	Tensile Behaviour of Unidirectional T700 Carbon Fibre and Epoxy Epophine Composite at Different Fibre Orientations and Strain Rates	2nd international Conference on Frontiers in Engineering, Applied Sciences and Technology [FEAST-2018]	International	April 27-28, 2018
24	Effect of Winding angle on the Performance of Composite Pressure Vessels	2nd international Conference on Frontiers in Engineering, Applied Sciences and Technology [FEAST-2018]	International	April 27-28, 2018
25	Effect of Sliding Speed on the Tribological Behaviour of Grp/SiCp/Al - Cu Hybrid Composites under Dry Sliding Condition	International Conference on Composite Materials and Structures [ICCMS-2017]	International	December 27-29, 2017
26	Effect of Sliding Distance on Two Body Abrasive Wear Resistance of Al-SiC-Gr Hybrid Composites	2nd International Conference on Mechanical Engineering and Robotic Research [ICMERR-2017]	International	December 11-13, 2017
27	Effect of Applied Load on Dry Sliding Wear Coefficients of Al 2014 Hybrid Composites	9th International Conference on Industrial Tribology [ICIT-2017]	International	December 6-9, 2017
28	Tribological Behaviour of Al-2014 Hybrid Composites in Dry Sliding Condition	1st International and 18th ISME Conference [ISMEC-2017]	International	February 23-25, 2017
29	Effect of T6 Heat Treatment on Dry Sliding Wear Characteristics of Stir Cast Al 2014 Hybrid Composites	Recent Advances in Industrial Tribology and Maintenance [RAITM-2017]	International	February 10-11, 2017
30	Dry Sliding Wear Coefficients of Al-Cu Hybrid Composites: Effect of Applied Load and Sliding Speed	Advances in Smart and Functional Materials [ASFM]	National	January 13-14, 2017

5.9. Sponsored research Projects:

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed

5.10 Consultancy Projects:

S.No	Title	Agency	Period	Sanctioned Amount	Ongoing / Completed

6. Awards / Honors received:

1. Best Paper Award for the paper titled "Development of Natural Lighting System Using Fiber Optics for Underground Structures" at First International Conference on Advancements in Materials,

Manufacturing & Automation [AMMA-2023], April 7-8, 2023, Amrita School of Engineering, Chennai, India.

2. Best Paper Award for the paper titled “Compression deformation models of cenosphere reinforced polymer syntactic foams” at International Conference on Smart Materials and Structures [ICSMS - 2022], February 15-16, 2022, Vasireddy Venkatadri Institute of Technology, Nambur, India.
 3. Best Paper Award for the paper titled “Tribological Behaviour of Titanium Carbide Reinforced Aluminum Composite Materials” at International Conference on Smart Materials and Structures [ICSMS - 2022], February 15-16, 2022, Vasireddy Venkatadri Institute of Technology, Nambur, India.
7. **Motto:** Every act or thought has consequences, which themselves will have consequences; life is the most intricate web of interconnections.