

CURRICULUM VITAE

Dr. Vinod Ayyappan

Research Scientist (Specialist -2)

Academic Enhancement Department (Office of President)
King Mongkut's University of Technology North Bangkok
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*** Recognized by Stanford University (Elsevier) as the World's Top 2% Most-Cited Scientists in Single Year Citation Impact 2022,2023**

Top 10 scientists in the field of materials in Thailand (Based on the Top 2% World Scientist list of Stanford University, USA)

*** Enlisted in AD Scientific Index - World Scientist Rankings – 2021, 2022, 2023**

Academic Qualifications

2022-2023 : Post-Doctoral Researcher

University : King Mongkut's University of Technology North Bangkok, Thailand.
Supervisor : Prof. Dr.-Ing. habil. Suchart Siengchin

2019-2022 : Doctor of Engineering.

Thesis title : *Natural Fibers based Ecofriendly Composites for Lightweight and 3D-Printing Applications*

Department : Department of Materials and Production Engineering.

Faculty : The Sirindhorn International Thai-German Graduate School of Engineering (TGGS),
Bilateral Collaboration between the Thai Government and the German Government, RWTH Aachen
University (Germany).

University : King Mongkut's University of Technology North Bangkok, Thailand.

QS WUR Ranking in Engineering: 400-450; Asian Universities Ranking: 301-350.

2012-2014 : Master of Engineering, (Engineering Design)

Department : Department of Mechanical Engineering

Institute : GKM College of Engineering and Technology, Chennai-600063, India.

University : Anna University, Chennai, India.

2008-2012 : Bachelor of Technology. (Mechanical Engineering)

Department : Department of Mechanical Engineering.

University : Bharath Institute of Higher Education and Research, Chennai-600073, India.

Professional Experience/Research/Academic

Jan 2023-till date : Research Scientist (Specialist – 2)

Department : Academic Enhancement Department (Office of President)

University : King Mongkut's University of Technology North Bangkok.

July 2016 to March 2019 : Assistant Professor

Department : Department of Mechanical Engineering

Institute : Sri Lakshmi Ammal Engineering College, Chennai, India.

University : Anna University, Chennai, India.

June 2014 to July 2016 : Assistant Professor

Department : Department of Mechanical Engineering

Institute : Prathyusha Institute of Technology and Management, Chennai, India.

University : Anna University, Chennai, India.

*** Also, worked as a scientific/technical researcher in many sponsored consultancy projects.**

Author Metrics

Researcher metrics	Scopus	Web of Science	Google Scholar
Citation	2200+	1800+	2700+
H-Index	22	19	23
i-10 Index	-	-	29

Publication History

Publications Summary	Numbers
Publication in SCI/WOS/Scopus	39
Manuscript under review (SCI/WOS)	4
Books Edited - Published	1
Books Edited – (Production/Staff review)	3
Book Editing under process	2
Book Proposal Under Review/submitted	5
Editorial Corner	1

Journal Editorial Activities

- 1). Journal Name** : Frontiers in Materials (Polymeric and Composite Materials)
Impact Factor : 3.2 **Quartile: Q2**
Indexing : SCIE, WOS, SCOPUS
Position : **Associate Editor**
Publisher : Frontiers
ISSN : 2296-8016
- 2). Journal Name** : International Research Journal of Multidisciplinary Technovation
Indexing : SCOPUS, Crossref, Scilit, Google Scholar, WorldCat, Dimensions
Position : **Associate Editor**
ISSN : 2296-8016
- 3). Journal Name** : Journal of Fibers and Polymer Composites
Indexing : Crossref, Index Copernicus, Scilit, Google Scholar
Position : **Editorial Board member**
Publisher : Green Engineering Society
ISSN : 2829-7687

Special Issue-Guest Editor

- 1). Journal Name** : Composites and Advanced Materials
Indexing : SCIE, SCOPUS **Impact Factor** : 2.4
Special issue on : Advancements in Polymer Matrix Selection for High-Performance Composites
Guest Editors : **Dr. Vinod Ayyappan**, Dr. Sembian Manoharan, Dr. Vijay Raghunathan, Dr. Yashas Gowda and Dr. Achille Beten .
Publisher : SAGE **Year** :2023-2024
Status: Papers Invited

- 2). **Journal** : Frontiers in Build Environment
Impact Factor : 3.0
Special issue on : Role of Reinforcements in Sustainable Light-Weight Structures
Editors : Dr. G. Saikrishnan, Dr. Vijay Raghunathan, **Dr. Vinod Ayyappan**.
Indexing : ESCI- Web of Science, Scopus
Year :2023-2024 **Status: Papers Invited**
- 3). **Journal Name** : Coatings
Special issue on :Surface Modifications and Performance Enhancement of Fibers and its Composites
Guest Editors : **Dr.Vinod Ayyappan**, Dr. Jiratti Tengsuthiwat
Publisher : MDPI
ISSN : 2079-6412
Year :2022-2023

Journal Publications and web profiles

- Google Scholar : <https://scholar.google.com/citations?user=pkZLHXIAAAAJ&hl=en>
Scopus : <https://www.scopus.com/authid/detail.uri?authorId=57194504582>
Orcid : <https://orcid.org/0000-0002-6569-6075>
Web of Science : <https://www.webofscience.com/wos/author/record/684652?state=%7B%7D>

Professional Affiliations

- 1). Life member of the Indian Society for Technical Education (ISTE) (Membership ID: LM99653)
- 2). Life Member of the International Association of Engineers (IAENG) (Membership ID: 170570)

Patents

Title of Invention	Formulation and Methodology of Polylactic Acid (PLA) with Water Hyacinth Composites for 3D Printing – Applied on 30 December 2021
Inventors	Suchart Siengchin, Jiratti Tengsuthiwat, <u>Vinod Ayyappan</u> , Sanjay M.R, Kraisuk Boonpardit
Application Number	<u>2203000264</u>
Issuing Agency	Department of Intellectual Property (Thailand)

- Process of filing 5 designs and 4 utility patents in India, South Africa, Germany and Australia

Research Interests:

Additive Manufacturing; Natural Fiber Reinforced Composites; Polymer Composites; Mechanical Behavior of Materials; Characterization of composites; Surface Treatments; Natural Fiber characterization; Multifunctional Composites, CAD 3D-Modelling; ANSYS Structural Analysis.

**** Also, interested in extending the area of research in core materials and mechanical-related fields, which best suits my knowledge in future years.***

Equipments Expertise

- 1). Thermogravimetric Analyzer (Model: TGA/DSC 3 + HT/1600, Company: Mettler Toledo, Switzerland)
- 2). Dynamic Mechanical Analyzer (Model: DMA/SDTA861e, Company: Mettler Toledo, Country: Switzerland)
- 3). Differential Scanning Calorimeter (Mettler Toledo DSC 3+, Switzerland)
- 4). Compression Molding Machine, Vacuum Bagging, Resin Transfer, Injection Molding
- 5). Hydraulic Servo Fatigue Testing Machine (Zwick Roell, LTM 2, TestXpert R & III)
- 6). Tribometer (Anton Paar TRB³)
- 7). 3D Scanner
- 8). Scanning Electron Microscope, Optical Microscope.
- 9). Fourier Transform Infrared Spectrometer (Model: Invenio S, Company: Bruker, Country: United Kingdom)
- 10). Thermomechanical Analyzer (Model: TMA/SDTA 1+, Company: Mettler Toledo, Country: Switzerland)
- 11). Contact Angle Analyzer (OCA 15LJ, Company: Data physics, Country: Germany)
- 12). Universal Testing Machine, Impact Tester, Hardness Tester (Shore D / Rockwell)
- 13). 3D Printing: FDM 3D-Printer, SLS 3D Printer; Resin Printer, Metal Printer
- 14). Weathering Machine
- 15). Hot Air Oven, Autoclave, Furnace.
- 16). Filament Extruders, Internal Mixer, and Blenders

Industrial project (Internship-UG)

Title : **Process Improvement in Handling of Grinding Wheel**
Objective : *To reduce human fatigue and to improve safety while handling the grinding wheel.*
Outome : *Fabricated a grinding wheel holder for easy mounting*
Name of the Industry : **Ashok Leyland, Chennai-600057**

Book Publications

- 1).**Book Title** : **Innovations in Graphene-based polymer composites**
Editors : Sanjay Rangappa, Jyotishkumar Parameswaranpillai, **Vinod Ayyappan**, Madhu Motappa, Suchart Siengchin
Publisher : Elsevier
eBook ISBN : 9780128237908 **Paperback ISBN** : 9780128237892
Status : Published
- 2).**Book Title** : **Additive Manufacturing Materials and Technologies**
Editors : Sanjay Rangappa, **Vinod Ayyappan**, Suchart Siengchin
Publisher : Elsevier
Status : Production
- 3).**Book Title** : **Synthetic and Mineral Fibers, Their Composites and Applications**
Editors : Sanjay Rangappa, **Vinod Ayyappan**, Gaurav Manik, Suchart Siengchin
Publisher : Elsevier
Status : Production
- 4).**Book Title** : **Woven & Non-woven Fabrics based Laminated Composites**
Editors : Sanjay Rangappa, **Vinod Ayyappan**, Jiratti Tengsuthiwat, Suchart Siengchin
Publisher : Springer
Status : Production

- 5).Book Title** : **Composites for Automobile Engineering**
 Editors : Vijay R, Sanjay M.R, **Vinod Ayyappan**, Suchart Siengchin
 Publisher : Elsevier
 Status : Contract Signed (Chapters Under Process)
- 6).Book Title** : **Lignocellulosic Composites: Processing, Properties, and Applications**
 Editors : R. Arun Ramnath, **Vinod Ayyappan**, M R, and Suchart Siengchin
 Publisher : CRC Press
 Status : Contract Signed (Chapters Under Process)
- 7).Book Title** : **3D Printing: Influence of Fibers, Particles and Matrix**
 Editors : **Vinod Ayyappan**, Vijay R, Jiratti Tengsuthiwat, Sanjay M.R., Suchart Siengchin
 Publisher : Elsevier
 Status : Proposal Communicated with Publisher

Publications in internationally Peer Reviewed Journals (SCI and WOS)

Editorial Corner

- 1). Syafri, E., **Vinod. A.**, Raghunathan, V., Rangappa, S.M. and Siengchin, S., 2023. Editor's Corner: Green Materials-The Advancements and Applications of Natural Fibers. *Journal of Fibers and Polymer Composites*, 2(2), pp.168-173.

Year 2024

- 1). **Vinod A.**, Jiratti Tengsuthiwat., Vijay R, Sanjay M.R., Suchart Siengchin, Advancing Additive Manufacturing: 3D-Printing of Hybrid Natural Fiber Sandwich (Nona/Soy – PLA) Composites through Filament Extrusion and Its Effect on Thermo-Mechanical Properties. *Polymer Composites*. (WOS, Q-1, Impact Factor: 5.2, Wiley Online Library).
- 2). **Vinod, A.**, Tengsuthiwat, J., Sanjay, M.R., Vincenzo Fiore., Siengchin, S. Investigation of thermo-mechanical and viscoelastic properties of 3D-printed Morinda Citrifolia particle-reinforced Poly (lactic acid) composites. *Polymer Composites*. (WOS, Q-1, Impact Factor: 5.2, Wiley Online Library).
- 3). Yorseng, K., Rangappa, S.M., **Vinod, A.**, Srisuk, R. and Siengchin, S., 2024. Bioepoxy based advanced lightweight hybrid composites from hemp fibers: Towards greener production. *Journal of Building Engineering*, p.108808.
- 4). Divakaran, D., Suyambulingam, I., Sanjay, M.R., Raghunathan, V., **Vinod, A.**, and Siengchin, S., 2024. Isolation and characterization of microcrystalline cellulose from an agro-waste tamarind (Tamarindus indica) seeds and its suitability investigation for biofilm formulation. *International Journal of Biological Macromolecules*, 254, p.127687.
- 5). Ganesh, S., Saraswathy, J.L., Vijay R., **Vinod, A.**, V., Dharnakrishnan, S., Rangappa, S.M. and Siengchin, S., 2024. Friction composite formulation from Lycium ferocissimum fibers as natural reinforcement for braking applications. *Express Polymer Letters*, 18(2), pp.144-159.

Year 2023

- 1). **Vinod, A.**, Sanjay, M.R. and Siengchin, S., 2023. Recently explored natural cellulosic plant fibers 2018–2022: A potential raw material resource for lightweight composites. *Industrial Crops and Products*, 192, p.116099. (SCI, Q-1, Impact Factor: 6.449, Elsevier).

- 2). **Vinod, A.**, Rapeeporn Srisuk, Jiratti Tengsuthiwat, Arun Ramnath R, Sanjay, M.R. and Siengchin, S., 2023. Agro-waste Capsicum Annum stem: An alternative raw material for lightweight composites. *Industrial Crops and Products*. 193, 116141 (SCI, Q-1, Impact Factor: 6.449, Elsevier).
- 3). Srisuk, R., Techawinyutham, L., **Vinod, A.**, Rangappa, S.M. and Siengchin, S., 2023. Agro-waste from Bambusa flexuosa stem fibers: A sustainable and green material for lightweight polymer composites. *Journal of Building Engineering*, p.106674. (SCI, Q-1, Impact Factor: 7.144, Elsevier).
- 4). Vijay R., **Vinod, A.**, Dhilip, J.D.J., Sundarrajan, D., Rangappa, S.M. and Siengchin, S., 2023. Influence of alkali-treated and raw Zanthoxylum acanthopodium fibers on the mechanical, water resistance, and morphological behavior of polymeric composites for lightweight applications. *Biomass Conversion and Biorefinery*, pp.1-13. (SCI, Q-2, Impact Factor: 4.050, Springer).

Year 2022

- 1). **Vinod, A.**, Tengsuthiwat, J., Gowda, Y., Vijay, R., Sanjay, M.R., Siengchin, S. and Dhakal, H.N., 2021. Jute/Hemp bio-epoxy hybrid bio-composites: Influence of stacking sequence on adhesion of fiber-matrix. *International Journal of Adhesion and Adhesives*, p.103050. (SCI, Q-1, Impact Factor: 3.848, Elsevier).
- 6). Yashas Gowda T. G., **Vinod. A.**, Madhu P., Sanjay Mavinkere Rangappa Siengchin, S. and Jawaid, M., 2022. Mechanical and thermal properties of flax/carbon/Kevlar based epoxy hybrid composites. *Polymer Composites*, 43(8), pp.5649-5662.v. (WOS, Q-1, Impact Factor: 5.2, Wiley Online Library).
- 2). Tengsuthiwat, J., **Vinod, A.**, Srisuk, R., Techawinyutham, L., Rangappa, S.M. and Siengchin, S., 2021. Thermo-mechanical Characterization of New Natural Cellulose Fiber from Zmioculus Zamiifolia. *Journal of Polymers and the Environment*, pp.1-16. (SCI, Q-1, Impact Factor: 4.705, Springer).
- 7). Yashas Gowda, T.G., **Vinod, A.**, Madhu, P., Sanjay, M.R., Siengchin, S. and Jawaid, M., 2022. Areca/synthetic fibers reinforced based epoxy hybrid composites for semi-structural applications. *Polymer Composites*, 43(8), pp.5222-5234. (WOS, Q-1, Impact Factor: 5.2, Wiley Online Library).
- 3). ArunRamnath, R., S. Murugan, M. R. Sanjay, **Vinod.A**, S. Indran, Ashraf Y. Elnaggar, Ahmed M. Fallatah, and Suchart Siengchin. "Characterization of novel natural cellulosic fibers from Abutilon Indicum for potential reinforcement in polymer composites." *Polymer Composites* (2022). (WOS, Q-1, Impact Factor: 5.2, Wiley Online Library).

Year 2021

- 1). **Vinod, A.**, Sanjay, M.R. and Siengchin, S., 2021. Fatigue and thermo-mechanical properties of chemically treated Morinda citrifolia fiber-reinforced bio-epoxy composite: A sustainable green material for cleaner production. *Journal of Cleaner Production*, p.129411. (SCI, Q-1, Impact Factor: 11.072, Elsevier).
- 2). **Vinod, A.**, Sanjay, M.R., Siengchin, S. and Fischer, S., 2021. Fully bio-based agro-waste soy stem fiber reinforced bio-epoxy composites for lightweight structural applications: influence of surface modification techniques. *Construction and Building Materials*, 303, p.124509. (SCI, Q-1, Impact Factor: 7.693, Elsevier), **Corresponding Author**.

- 3). **Vinod, A.**, Gowda, T.Y., Vijay, R., Sanjay, M.R., Gupta, M.K., Jamil, M., Kushvaha, V. and Siengchin, S., 2021. Novel Muntingia Calabura bark fiber reinforced green-epoxy composite: A sustainable and green material for cleaner production. *Journal of Cleaner Production*, 294, p.126337. (SCI, Q-1, Impact Factor: 11.072, Elsevier).
- 4). Yashas Gowda T. G., **Vinod, A.**, Madhu, P., Kushvaha, V., Sanjay, M.R. and Siengchin, S., 2021. A new study on flax-basalt-carbon fiber reinforced epoxy/bioepoxy hybrid composites. *Polymer Composites*. 42(4), pp.1891-1900. (WOS, Q-2, Impact Factor: 3.532, Wiley Online Library).
- 5). Vijay, R., Manoharan, S., Arjun, S., **Vinod, A.** and Singaravelu, D.L., 2020. Characterization of Silane-Treated and Untreated Natural Fibers from Stem of Leucas Aspera. *Journal of Natural Fibers*, pp.1-17. (SCI, Q-1, Impact Factor: 3.507, Taylor and Francis).

Year 2020

- 1). **Vinod, A.**, Siengchin, S. and Parameswaranpillai, J., 2020. Renewable and Sustainable Biobased Materials: An Assessment on Biofibers, Biofilms, Biopolymers and Biocomposites. *Journal of Cleaner Production*, p.120978. (SCI, Q-1, Impact Factor: 11.072, Elsevier).
- 2). **Vinod, A.**, Vijay, R., Lenin Singaravelu, D., Khan, A., Sanjay, M.R., Siengchin, S., Verpoort, F., Alamry, K.A. and Asiri, A.M., 2020. Effect of alkali treatment on performance characterization of Ziziphus mauritiana fiber and its epoxy composites. *Journal of Industrial Textiles*, p.1528083720942614. (SCI, Q-2, Impact Factor: 2.926, SAGE publications).
- 3). Kumaran, P., Mohanamurugan, S., Madhu, S., Vijay, R., Lenin Singaravelu, D., **Vinod, A.**, Sanjay, M.R. and Siengchin, S., 2019. Investigation on thermo-mechanical characteristics of treated/untreated Portunus sanguinolentus shell powder-based jute fabrics reinforced epoxy composites. *Journal of Industrial Textiles*. (SCI, Q-2, Impact Factor: 2.926, SAGE publications).
- 4). Vijay, R., **Vinod, A.**, Kathiravan, R., Siengchin, S. and Singaravelu, D.L., 2018. Evaluation of Azadirachta indica seed/spent Camellia sinensis bio-filler based jute fabrics–epoxy composites: Experimental and numerical studies. *Journal of Industrial Textiles*, p.1528083718811086. (SCI, Q-2, Impact Factor: 2.926, SAGE publications).
- 5). Jothibas, S., Mohanamurugan, S., Vijay, R., Lenin Singaravelu, D., **Vinod, A.** and Sanjay, M.R., 2018. Investigation on the mechanical behavior of areca sheath fibers/jute fibers/glass fabrics reinforced hybrid composite for lightweight applications. *Journal of Industrial Textiles*, p.1528083718804207. (SCI, Q-2, Impact Factor: 2.926, SAGE publications).
- 6). Dinesh, S., Kumaran, P., Mohanamurugan, S., Vijay, R., Singaravelu, D.L., **Vinod, A.**, Sanjay, M.R., Siengchin, S. and Bhat, K.S., 2020. Influence of wood dust fillers on the mechanical, thermal, water absorption and biodegradation characteristics of jute fiber epoxy composites. *Journal of Polymer Research*, 27(1), p.9. (SCI, Q-2, Impact Factor: 3.061, Springer)

Year 2019

- 1). **Vinod, A.**, Vijay, R., Singaravelu, D.L., Sanjay, M.R., Siengchin, S., Yagnaraj, Y. and Khan, S., 2019. Extraction and Characterization of Natural Fiber from Stem of Cardiospermum Halicababum. *Journal of Natural Fibers*, pp.1-11. (SCI, Q-1, Impact Factor: 3.507, Taylor and Francis).
- 2). **A. Vinod**, V. R, D.L. Singaravelu, M.R. Sanjay, S. Siengchin, M.M. Moure-Cuadrado, Characterization of untreated and alkali treated natural fibers extracted from the stem of Catharanthus Roseus, *Material Research Express*. (SCI, Impact Factor: 1.620, Institute of Physics)
- 3). Vijay, R., Manoharan, S., **Vinod, A.**, Singaravelu, D.L., Sanjay, M.R. and Siengchin, S., 2019. Characterization of raw and benzoyl chloride treated Impomea pes-caprae fibers and its epoxy

composites. *Materials Research Express*, 6(9), p.095307. (SCI, Impact Factor: 1.620, Institute of Physics), **Corresponding Author**.

- 4). Vijay, R., Singaravelu, D.L., **Vinod, A.**, Sanjay, M.R. and Siengchin, S., 2019. Characterization of Alkali-Treated and Untreated Natural Fibers from the Stem of Parthenium Hysterophorus. *Journal of Natural Fibers*, pp.1-11. (SCI, Q-1, Impact Factor: 3.507, Taylor and Francis).
- 5). Vijay, R., Singaravelu, D.L., **Vinod, A.**, Paul Raj, I.F., Sanjay, M.R. and Siengchin, S., 2019. Characterization of Novel Natural Fiber from Saccharum Bengalense Grass (Sarkanda). *Journal of Natural Fibers*, pp.1-9. (SCI, Q-1, Impact Factor: 3.507, Taylor and Francis).
- 6). Vijay, R., Singaravelu, D.L., **Vinod, A.**, Sanjay, M.R., Siengchin, S., Jawaid, M., Khan, A. and Parameswaranpillai, J., 2018. Characterization of raw and alkali-treated new natural cellulosic fibers from Tridax procumbens. *International Journal of Biological Macromolecules*. (125), pp-99-108. (SCI, Q-1, Impact Factor: 8.025, Elsevier)

Year 2018

- 1). **Vinod, A***, Vijay, R., & Lenin Singaravelu, D. (2017). Thermo Mechanical Characterization of Calotropis gigantea Stem Powder-Filled Jute Fiber-Reinforced Epoxy Composites. *Journal of Natural Fibers*, 1-10. (SCI, Q-1, Impact Factor: 3.507, Taylor and Francis).
- 2). Vijayanand, P., Kumar, A., Kumar, K. V., **Vinod, A.**, Kumaran, P., & Vendan, S. A. (2017). Characterizations of plasma sprayed composite coatings over 1020 mild steel. *Journal of Mechanical Science and Technology*, 31(10), 4747-4754. (SCI, Q-2, Impact Factor: 1.810, Springer).

Publications Scopus

- 1). Vijay, R., **Vinod, A.**, Singaravelu, D.L., Sanjay, M.R. and Siengchin, S., 2020. Characterization of Chemical Treated and Untreated natural fibers from Pennisetum Orientale grass-A potential reinforcement for lightweight polymeric applications. *International Journal of Lightweight Materials and Manufacture*, (Scopus Indexed).
- 2). Jothibasu, S., Mohanamurugan, S. and **Vinod, A.**, Influence of Chemical Treatments on The Mechanical Characteristics of Areca Sheath-Flax Fibres Based Epoxy Composites, *RASAYAN Journal of Chemistry* (Scopus Indexed), 11(3), 1255 - 1262
- 3). **Vinod, A***, Rajadurai, P. S. K. B., Kumar, V. A., & Leoni, S. Finite Element Modal Analysis of Composite Heavy Vehicle Chassis Using ANSYS, *RASAYAN Journal of Chemistry* (Scopus Indexed), 10(2), 513-521. **Corresponding Author**.

Book Chapters

- 1). **Vinod, A.**, Gowda, Y., Krishnasamy, S., Sanjay, M.R. and Siengchin, S., 2022. Thermal Properties of Hybrid Natural Fiber-Reinforced Thermoplastic Composites. *Natural Fiber-Reinforced Composites: Thermal Properties and Applications*, pp.17-30. (SCOPUS indexed)- *Wiley Publications*.
- 2). Vijay R, V.Vineeth Kumar, B. Surya Rajan, **Vinod A**, Sanjay Mavinkere Rangappa, Suchart Siengchin, Synergy effect of synthetic-mineral fibers in the performance of automobile brake friction composites, In book- Synthetic and Mineral Fibers, Their Composites and Applications. (SCOPUS indexed)- *Elsevier Publications*. – Accepted.
- 3). Manoharan S, Vijay R, **Vinod A**, Sanjay M. R. Suchart Siengchin. A case study on the Tribological behavior of recycled material-filled automobile brake friction composites. In book- Sustainable Composites for Automotive Engineering (SCOPUS indexed)- *Elsevier Publications*. – Accepted.

- 4). Girijappa, Y.G., **Vinod, A.**, Puttegowda, M., Rangappa, S.M., Parameswaranpillai, J. and Siengchin, S., 2020. *Plastics in Automotive Applications*. (SCOPUS indexed)- *Elsevier Publications*.
- 5). Sanjay, M.R., Bharath, K.N., Vijay, R., Singaravelu, D.L., **Vinod, A.**, Jawaid, M. and Khan, A., 2018. *Experimental and Analysis of Jute Fabric with Silk Fabric Reinforced Polymer Composites. Thermoset Composites: Preparation, Properties and Applications*, 38, p.66. (SCOPUS indexed)- *CRC Press, Taylor, and Francis*.

International Conferences

- 1). Presented a paper entitled “Physio-chemical and thermomechanical characterization of Raw-Alkali treated fiber-reinforced Bio-epoxy composite: An experimental study” at the International Conference on Sugar Palm and Allied Fibre Polymer Composites 2021. December 2021.
- 2). Presented a paper entitled “Influence of Chemical Treatment on Thermal and Mechanical Properties of Novel Morinda Citrifolia Reinforced Bio-Epoxy Composites”, at the *Research, Invention, and Innovation Congress, 2021*. September 2021.
- 3). Presented a paper entitled “Computational Analysis of Jet Aircraft Propulsion Noise Reduction by Introduction of Holes, Chevrons and Tabs” at the *National Conference on Recent Trends in Efficiency Management in Industries (RTEMI 2K15)* on 10th April 2015 organized by Saveetha School of Engineering the conference paper was published in *International Journal on Applied Engineering and Research* indexed by Scopus, Vol 10, No.33 (2015) pp.25846-25851.
- 4). Presented a paper entitled “Modeling and Computational Analysis of Flow inside a Chevron Nozzle to Reduce Aircraft Jet Engine Noise “at the *International Conference on Modeling Optimization and Computing 2014* held at NI UNIVERSITY, Kanyakumari, and the conference paper was published in the *International Journal on Applied Engineering and Research* indexed by Scopus, Vol. 9 No.26 (2014) pp. 9011-9014.

Collaborative work with other institutions

- 1) National Institute of Technology, Tiruchirappalli, Tamil Nadu, India (2015- Till date)
- 2) The Sirindhorn International Thai-German Graduate School of Engineering (TGGS), King Mongkut's University of Technology North Bangkok, Bangkok, Thailand (2016-2019)
- 3) Department of Biocomposite Technology, Institute of Tropical Forestry and Forest Products, Universiti Putra Malaysia, UPM, Serdang, Selangor, Malaysia (2016-2019)
- 4) Chemistry Department, Faculty of Science, King Abdulaziz University Jeddah, Saudi Arabia (2016-2019)
- 5) Department of Bioengineering and Aerospace Engineering, University Carlos III of Madrid, Avda de la Universidad, Leganés, Madrid, Spain (2018-2019)
- 6) Anna University, Chennai, India (Affiliated institutions) (2019-till date)

Journal Reviewer

- 1) Carbohydrate Polymers, Elsevier, SCI, Impact Factor: 10.723
- 2) Journal of Building Engineering, Elsevier, SCI, Impact Factor: 7.144.
- 3) International Journal of Biological Macromolecules, Elsevier, SCI, Impact Factor: 8.025
- 4) Materials Today Sustainability, Elsevier, SCI, Impact Factor: 7.244
- 5) Industrial Crops and Products, Elsevier, SCI, Impact Factor: 6.449
- 6) Journal of King Saud University- Engineering Sciences, Elsevier, SCI, Impact Factor: 4.70
- 7) Fibers and Polymers, Springer, SCI, Impact Factor:2.153
- 8) Polymer Composites, Wiley Online Library, Web of Science, Impact Factor: 3.531

- 9) Journal of Natural Fibers, Taylor & Francis, Web of Science, Impact Factor: 3.507
- 10) Advances in Materials & Processing Technologies, Web of Science, Impact Factor: 1.56
- 11) CyTA-Journal of Food, Taylor & Francis, Web of Science, Impact Factor: 2.255
- 12) Frontiers in Materials, Frontiers, Web of Science, SCI, Impact Factor: 3.985
- 13) Frontiers in Mechanical Engineering, Web of Science, SCI, Impact Factor: 2.3.
- 14) Heliyon, Elsevier, SCI, Impact Factor 3.776
- 15) Polymers, MDPI, Web of Science, SCI, Impact Factor 4.976
- 16) Materials, MDPI, Web of Science, SCI, Impact Factor 3.748
- 17) Energies, MDPI, Web of Science, SCI, Impact Factor 3.252
- 18) Forests, MDPI, Web of Science, SCI, Impact Factor 2.9
- 19) Journal of Industrial Textiles, SAGE Publishing, Web of Science, Impact Factor: 2.01
- 20) Material Research Express, Institute of Physics, Web of Science, Impact Factor: 1.929
- 21) Engineering Research Express, Institute of Physics, Web of Science, Cite Score: 0.5
- 22) Advances in Polymer Technology, Hindawi, Web of Science, SCI, Impact Factor: 2.502
- 23) Sustainable Chemistry for Climate Action, Elsevier, Scopus.
- 24) Results in Materials, Elsevier, Scopus.
- 25) Materials Today Proceedings, Elsevier, Scopus.
- 26) Rasayan Journal of Chemistry, Scopus indexed.



Invited Talks and Conference work

- 1) Organizing Committee member for “International Conference on Eco-friendly Fibers and Polymeric Materials” to be held during February 2024, KMUTNB, Thailand
<http://efpm.kmutnb.ac.th/Committees.aspx?p=01>
- 2) Technical Committee member for “International Symposium on Lightweight and Sustainable Polymer Materials” <http://lspm.tggs.kmutnb.ac.th/technical-committee/> LSPM 23 KMUTNB.
- 3) Invited Speaker at Annai Veilankanni College of Engineering Nedungundram, Chennai -127. for International Conference on “Recent Trends in Computing, Wireless Technologies, and Mechatronics”.

Workshops attended:

- 1) Attend MSME sponsored three days National Level Seminar on “Advanced Composites and its Manufacturing Technology for 3D-Printing held in February 2018 and organized by Rajalakshmi Institute of Technology.

- 2) Attended DST-SERB sponsored two days National Workshop on “Brake Friction Materials: Past, Present, and Future (BFMPPF’15) held in November 2015 organized by the Department of Production Engineering, National Institute of Technology, Trichy.
- 3) Attended National Workshop on “Advanced Engineering Optimization and Modelling using MATLAB and SCILAB” organized by Saveetha Engineering College in 2012.

Software Knowledge:

- | | | |
|----------------------------------|-----------------------------------|-------------------------------|
| 1. ANSYS- Structural simulation | 4). Solid Works | 9. CNC-Programming |
| 2. PTC-Creo | 5). AutoCAD | 10. Repetier Host-3D Printing |
| 3. X-Pert High Score Plus-XRD | 6). Chem Draw | 11. Minitab |
| 4. Simplify 3D, Cura 3D printing | 7). Origin Pro- Graphing Analysis | 12. MS-Office |

Training and Certifications:

- 1). Undergone 5 days of training on “Unconventional Machining Process” conducted by SAEINDIA, and Sri Sairam Engineering College from 26-07-2021 to 02-08-2021.
- 2). Undergone 5 days of training on “Additive Manufacturing: From 3D printing to the factory floor” conducted by AICTE Training and Learning (ATAL) Academy. From 23-08-2021 to 27-08-2021
- 3). Undergone three days of “Faculty Development Training Programme on Finite Element Analysis” held at Rajalakshmi Engineering College from 22nd December 2016 to 24th December 2016.
- 4). Undergone Special Training on “Quality and Six Sigma” organized by New Prince Shri Bhavani College of Engineering and Technology, Chennai on 14th October 2015.
- 5). Undergone seven days “Faculty Development Training Programme (FDTP) on Engineering Mechanics” organized by Prathyusha Institute of Technology and Management, held in December 2014
- 6). Undergone In-plant training and observed various activities of the machining process of automobile parts and assembling method of vehicles under World Class Technology (Buses and Trucks) at Ashok Leyland, Chennai-600057.
- 7). Participated in NCC (School Level-Air Wing).
- 8). Won prizes in Football at the School level.
- 9). Participated and completed MARATHON 21.09 km organized by MARG Chennai GIVE LIFE charity supporting 8000 Underprivileged Children, 2010.

Subjects and Lab handles

- | | | |
|--|------------------------------|----------------------------------|
| 1). Finite Element analysis | 5). Advanced IC Engines | 9). Strength of Materials Lab |
| 2). Dynamics of Machines | 6). Professional Ethics | 10). CAD-CAM Lab |
| 3). Mechatronics | 7). Maintenance Engineering | 11). Simulation and Analysis Lab |
| 4). Engineering Materials and Metallurgy | 8). Dynamics of Machines Lab | 12). Engineering Practices Lab |

Responsibilities

- | | | |
|------------------------------------|------------------------------------|--------------------------------|
| 1). First Year Overall Coordinator | 4). Internal Exam Cell Coordinator | 7). Faculty Advisor and Mentor |
|------------------------------------|------------------------------------|--------------------------------|

2). Advisory Committee and Coordinator for International Symposium

3). Workshop Coordinator

5). Advisory Committee for International Conferences

6). Got In-plant training and Internship projects for deserving students

8). Guided more than 20 UG Projects

Key Achievements in Academics & Research

1). Produced 80% results in Finite Element Analysis

2). Handled industrial projects at KMUTNB

3). Established CAD lab (3D modeling and Analysis) at Sri Lakshmi Ammal Engineering College

4). Supported in the advancement of the Polymer Composites lab at KMUTNB

5). Top 10 scientists in the field of materials in Thailand (Based on the Top 2% World Scientist list of Stanford University, USA)