



## CONTACT



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## COURSES HANDLED

Engineering Graphics  
Manufacturing Technology-I  
Manufacturing Technology-II  
Unconventional Machining Processes  
Metal Cutting Theory and Practice  
Natural Fiber Composites  
Composite Materials  
Basic Civil and Mechanical Engineering  
Principles of Management  
Professional Ethics in Engineering

# Dr. I. SANKAR

ACADEMICIAN & ENTREPRENEURSHIP DEVELOPEMENT EXPERT

**Anna University, Chennai recognized Phd. Supervisor**

Reference Number: 3320035

## PERSONAL PROFILE

- 13 plus years of experience as Academician with highly developed research qualitative and analytical skills with a strong capacity to conduct independent research
- Demonstrated ability to develop goals, objectives and implement strategies through lesson planning and teaching experience
- Proven ability to conceptualise problems and develop well-reasoned and integrated solutions, as demonstrated throughout PhD and research

## WORK EXPERIENCE

**Assistant Professor (Senior Grade)**

**NATIONAL ENGINEERING COLLEGE | AUG 2008 - PRESENT**

- Develop and implement innovative instructional methods through modern Learning Management Systems (LMS) like Google and Moodle Classrooms
- Support and mentor the students in academic and research projects
- Create, innovate and implement career- enhancement programs and activities.
- Conduct outcome-based education (OBE) methodology in teaching and assessment activities

## HIGHER LEVEL RESPONSIBILITIES IN THE INSTITUTION

- **Chief Coordinator** - New Generation Innovation and Entrepreneurship Development Centre (NewGen IEDC) of National Engineering College implemented by Entrepreneurship Development Institute of India (EDII) and sponsored by Department of Science and Technology (DST), Government of India.
- **Coordinator** - Entrepreneurship Development Cell in National Engineering College.
- **Former Secretary** - Intellectual property Rights (IPR) Cell in National Engineering College.

## EDUCATIONAL HISTORY

**Doctorate of Philosophy (PhD)**

**NATURAL FIBER COMPOSITE MATERIALS | JUNE 2018**

- Affiliation : Anna University, Chennai
- PhD. Thesis title : Fabrication and characterization of Palmyra fruit fiber / Nano-clay reinforced polymer composite

**M.E - Master of Engineering**

**MANUFACTURING ENGINEERING | JUNE 2008**

- Affiliation : Anna University, Chennai
- Institution : National Engineering College, Tamilnadu

**B.E - Bachelor of Engineering**

**MECHANICAL ENGINEERING | APRIL 2006**

- Affiliation : Anna University, Chennai
- Institution : Dr. Sivanthi Aditanar College of Engineering, Tamilnadu

## EXTERNAL SPONSORED R&D PROJECTS

**Title of the Project :** Development of Heat Resisting panels for cold storage using residue from water treatment plants

**Agency :** Tamilnadu State Council for Science and Technology (TNSCST)

**Role :** Principle Investigator

**Amount :** INR 10000

**Sanctioned Year :** 2018

## INTERNATIONAL CONFERENCES PARTICIPATION

- Presented a paper entitled “**Effect of Fiber Volume Fraction on The Mechanical Properties of Coconut Sheath/USP Composite**” at “3rd International Conference On Recent Advances in Material Processing Technology (RAMPT’13) organized by National Engineering College.
- Presented a paper entitled “**Synergy of fiber surface treatments and water absorption on the mechanical properties of palmyra fruit fiber reinforced polymer composites**” at Bilateral second International Conference on Advanced materials & Processing (amp 17) jointly organized by Kalasalingam University, India and Universidade de Brasilia, Brazil on 27th/28th March, 2017.

## PROFESSIONAL SOCIETY MEMBERSHIP

- Lifetime Member of **Indian Society for Technical Education (ISTE)**
- Lifetime Member of **The Institution of Engineers IE (India)**

## NPTEL CERTIFICATION COURSES

- Introduction to Research
- Manufacturing of Composites - **Elite level**
- Polymer Assisted Abrasive Finishing Processes - **Elite level**

## RESEARCH PAPER PUBLICATIONS

- **Irullappasamy Sankar**, Ravindran Durairaj, Siva Irullappasamy, and Thirukumaran Manoharan. 2018. “**Investigation on Wear Behaviors and Worn Surface Morphology of Surface Treated Palmyra Fruit Fiber/Polyester Composites to Appraise the Effects of Fiber Surface Treatments.**” *Polimer Composite*, 39 (6): 2029–35. <https://doi.org/10.1002/PC.24163>.
- **Irullappasamy Sankar**, and D. Ravindran. 2018. “**Combined Effect of Nano Clay and Fibre Surface Treatment on Mechanical Behaviours of Palmyra Fruit Fibre/MMT Clay Reinforced Polyester Hybrid Composite.**” *International Journal of Computer Aided Engineering and Technology* 10 (1–2): 26–34. <https://doi.org/10.1504/IJCAET.2018.088825>.
- Siva, I., M. Bharathi, C. Krishnaveni, M. Priyanka, and **I. Sankar**. 2020. “**Frictional Response of Functionally Graded 3/2 Natural Rubber Based Lead-Bismuth Eutectic Alloy Metal Rubber Laminates.**” *Materials Today: Proceedings* 33 (January): 960–63. <https://doi.org/10.1016/J.MATPR.2020.06.510>.
- Thirukumaran, M., L. Vadivel Kannan, and **I. Sankar**. 2018. “**Study on Mechanical Properties of Glass Wool/Epoxy Reinforced Composite.**” *Undefined* 10 (1/2): 15. <https://doi.org/10.1504/IJCAET.2018.10009678>.
- **I sankar**, D Ravindran 2016. "**Fiber loading and treatment effects on dry sliding wear of palmyra fruit fiber composites**". *Sci. Eng. Compos. Mater. De Gruyter* DOI: 10.1515/secm-2014-0101.
- **Sankar Irullappasamy**, Durairaj Ravindran, and Irullappasamy Siva 2016. **Wear mechanisms in palmyra fruit-fiber-reinforced polymer composites**. *Plastics research online. Society of plastics engineers*. DOI: 10.2417/spepro.006745.
- I siva, Dk sangaran, Prp balan, P siddharth, **I sankar** 2020. **Modal analysis on the additive manufactured robotic segments: effect of printing densities on the vibrational properties**. *Mater. Today: Proc. Elsevier*. DOI: <https://doi.org/10.1016/j.matpr.2020.07.230>
- Senthilkumar krishnasamy, Siva irullappasamy, **Sankar irullappasamy**, Sandro campos amico, Suchart siengchin 2020. **Evaluation of mechanical and free vibrational analysis of vegetable fiber reinforced polyester sandwich composites with polyvinyl chloride core**. *Mater. Today: Proc. Elsevier*. DOI: <https://doi.org/10.1016/j.matpr.2020.06.510>
- W siva, **I sankar**, sc amico 2013. **Effect of fiber volume fraction on the mechanical properties of coconut sheath/usp composite**. *Journal of manufacturing engineering. Society of manufacturing*

## INTERNATIONAL BOOK CHAPTER PUBLICATIONS

- Irullappasamy, Siva & Manoharan, Thirukumaran & Kumar, S. & J T, Winowlin & **Irullappasamy Sankar** & Amico, Sandro. (2017). **The Development of Bio-Sandwich Structures with Brazilian Curaua Fiber/Polyester as Face and PVC as Core for Anti-Frictional Applications. Bio-composites Properties**, Performance and Applications (pp.273-288) Chapter: 15 Publisher: Nova Science Publishers.
- Irullappasamy, Siva & Shinde, Avinash & **Sankar, I.** & Selvan, Chithirai & Sultan, M.. (2021). **Post Impact Behavior and Compression After Impact Properties of Polymers and Their Composites**—A Review. *Impact Studies of Composite Materials* (pp.47-55) 10.1007/978-981-16-1323-4\_4.
- I Siva, Avinash Shinde, **I Sankar**, Chithirai Pon Selvan, MTH Sultan 2021. **Abrasive Water Jet Cutting and its Optimization Model for Machining the Sheep Wool/Polyester Composites. Wool - Polymer Composites**

## SPECIAL TRAINING COURSES ATTENDED

- National Faculty Development Programme in “**Entrepreneurship**” organized by Entrepreneurship Development Institute of India (EDII), Ahmedabad, Gujarat (India), from 16th to 27th December 2019
- Global Initiative of Academic Networks (GIAN) certification course on “**Innovation & Technology Enterprise: Idea to Entrepreneurship**” Organized by National Institute of Technology, Silchar-Assam (India) from 30th July to 10th August 2018. (Completed with Grade point: 9 out of 10)

## STUDENT PROJECT HONORARIUM

- Undergraduate student projects got a project grant from the government of Tamilnadu under the scheme **TNSCST** Student Project Scheme and a project fund from **Alumni association** of the college during 2017-18
- Undergraduate student projects won “**Best project of the year**” in the Institution 2017-18

## EXPERT LECTURES DELIVERED

- “**Entrepreneurship and innovation as career opportunity**” conducted by Institution’s Innovation Council of G. Venkataswamy Naidu College, Kovilpatti 24-01-2020.
- “**Intellectual Property Rights**” organized by Institution’s Innovation Council of AAA College of Engineering and Technology, Sivakasi on 23-11-2019
- Faculty Development Programme in the theme “**New Product Development and Intellectual Property Rights**” at National Engineering College, Kovilpatti, on 18-05-2019

## UNDERGRADUATE STUDENT PROJECTS GUIDED

- Design and development of Automatic side stand releasing mechanism for two wheelers.
- Investigation on static Mechanical properties of Neem root fiber reinforced Polymer matrix composites.
- Investigation on static Mechanical properties of natural fiber reinforced Polymer matrix composites.
- Tribology studies on natural Fruit fiber Reinforced polymer composite.
- Fabrication and thermal characterization of charcoal particles reinforced polymer composites. (A novel composite material is fabricated and characterized and a **product patent is filed** on that material)
- Investigation of mechanical Properties of natural Fiber/ polymer honeycomb Sandwich panel.
- Optimization of process parameters to obtain maximum wear resistance in the natural fiber/polyester composites.
- Investigation on wear resistance and wear mechanisms of natural fiber-Nano clay reinforced polyester hybrid composites under dry sliding.
- Investigation on the combined effects of fiber surface treatments and water absorption on the static mechanical properties of Palmyra fruit fiber reinforced polyester composites.
- Development of Heat resisting panels for cold storage using residue from water treatment plants. (**TNSCST funded project**)

## EVENTS/TRAINING PROGRAMMES ATTENDED

- National workshop on **Advanced materials characterization techniques” at the Indian Institute of Metals (IIM)**, Trivandrum chapter on 10th August 2017.
- Short term course on **Tribology in Design** at Indian Institute of Technology Madras from 7th to 12th November 2016.
- National Level Workshop on **Formulation of Research and Development Grant Proposals by Scientists and Technologists** at National Engineering College from 18th to 20th November 2015.
- Workshop on **Intellectual Property Rights & Innovations** at National Engineering College on 7th November 2015.
- Indo-Brazil Bilateral International Workshop on **Research Issues in Reinforced Materials** at Kalasalingam University on 30th March 2015.
- National level Seminar on **Optimization Techniques for Engineering Applications** at Velammal College of Engineering and Technology on 5th April 2008.
- Faculty Development Programme (FDP) on **Empowering Indian Engineering Education for Global Expectations** at National Engineering College 7th & 8th November 2014.
- National Level Workshop on **Research Issues In Reinforced Materials** at Kalasalingam University on 27th February 2013.
- Workshop on **Recent Advances in welding of Dissimilar Materials** at National Engineering college during 19th & 20th April 2013.
- National level workshop on **Analysis of Electrical Generators for Wind Energy Systems** at National Engineering college during 29th & 30th December 2008.
- Workshop on **Micro Teaching** at National Engineering college during 18th & 19th July 2008.

## EXPERT LECTURES DELIVERED

- “Natural Fiber Composites” at Marthandam College of Engineering and Technology, Marthandam, on 27-08-2018
- “Composite Materials” at P.A.C. Ramasamy Raja Polytechnic College on 15-08-2018
- “Entrepreneurship as a Career Opportunity” at K.R. College of Arts and Science, Kovilpatti, on 12-01-2021.
- “How to Identify a Real-time Problem” for Kanchi sankara vidhyashram matric higher secondary school, Trichendur, on 28-08-2021
- “Systematic approach of New Product Development Process” during the event conducted by Tamilnadu Career Counsellors Association on 23-06-2021
- “National Innovation and Start-up Policy (NISP)” for V.O.Chidambaram college, Thoothukudi, on 05-01-2021
- “Entrepreneurship as a Career Opportunity” at P.A.C. Ramasamy Raja Polytechnic College on 17-11-2021
- "Workshop on Design Thinking, Critical Thinking & Innovation Design" at A.P.C. Mahalaxmi College for Women, Thoothukudi. on 31.01.2022

"Idea to Prototype: A systematic approach" at V.O. Chidambaram College, Thoothukudi. on 21.03.2022

## EVENTS/TRAINING PROGRAMMES ORGANIZED (FUNDED BY GOVERNMENT OF INDIA)

**FUNDED AGENCY : NATIONAL SCIENCE & TECHNOLOGY ENTREPRENEURSHIP DEVELOPMENT BOARD (NSTEDB), DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST), GOVT. OF INDIA, NEW DELHI & ENTREPRENEURSHIP DEVELOPMENT INSTITUTE OF INDIA (EDII), AHMEDABAD.**

- **Three-days “Entrepreneurship Awareness Camp-I (EAC)”**
  - Date : 25.02.20 to 27.02.20
  - Role : Coordinator
  - Amount Sanctioned : INR 20,000
- **Three-days “Entrepreneurship Awareness Camp-II (EAC)”**
  - Date : 17.09.19 to 19.09.19
  - Role : Coordinator
  - Amount Sanctioned : INR 20,000
- **Two-weeks “Faculty Development Programme (FDP) on Entrepreneurship”**
  - Date : 02.12.19 to 14.12.19
  - Role : Coordinator
  - Amount Sanctioned : INR 2,50,000
- **Two days entrepreneurial program: Bazaar**
  - Date : 07.03.2019 and 08.03.2019
  - Role : Chief coordinator (NewGen IEDC)
- **One-day “Illuminate (Pre-Eureka!) Workshop on Entrepreneurship”**
  - Date : 20-09-2019
  - Role : Chief coordinator (NewGen IEDC)
  - Associate Partner: E-Cell, IIT Bombay
- **Product Expo**
  - Date : 21st and 22nd September 2019
  - Role : Chief coordinator (NewGen IEDC)
- **One-day unique lecture program, “Entrepreneurship Lecture Series”**
  - Date : 10-12-2019
  - Role : Chief coordinator (NewGen IEDC)
- **One-day seminar “Techno Entrepreneurs: Opportunities and Challenges”**
  - Date : 08-01-2020
  - Role : Chief coordinator (NewGen IEDC)
- **One-day workshop “Idea – Product – Patent – Income”**
  - Date : 18-03-2019
  - Role : Chief coordinator (NewGen IEDC)
- **Three-day Illuminate (Pre-Eureka!) Workshop on Entrepreneurship**
  - Date : 20-09-2019
  - Role : Chief coordinator (NewGen IEDC)
  - Associate Partner: E-Cell, IIT Bombay