

DR. I. SANKAR



Mobile : +91 98946 97322
Email : isankarmech@gmail.com
ORCID : 0000-0001-7929-0714

Anna University, Chennai Recognized Ph.D. Supervisor (Reference Number: 3320035)

EDUCATIONAL QUALIFICATIONS

Doctorate of Philosophy (Ph.D)

Ph.D. Research Area : Natural Fiber Composite Materials
Affiliation : Anna University, Chennai
Ph.D. Thesis title : Fabrication and characterization of Palmyra fruit fiber / Nano-clay reinforced polymer composite
Year of Completion : June 2018

M.E - Master of Engineering

Branch : Manufacturing Engineering
Institution : National Engineering College, Thoothukudi, Tamilnadu
Affiliation : Anna University, Chennai
Year of Completion : June 2008
Score : 77% (I class)

B.E - Bachelor of Engineering

Branch : Mechanical Engineering
Institution : Dr. Sivanthi Aditanar College of Engineering, Trichendur, Tamilnadu
Affiliation : Anna University, Chennai
Year of Completion : April 2006
Score : 73% (I class)

WORK EXPERIENCE

Name of the Institute	Positions held	From	To	Teaching Experience
National Engineering College	Assistant Professor (Senior Grade)	10-07-2013	Till date	12 years and 2 months
	Assistant Professor	01-11-2011	09-07-2013	
	Lecturer	04-07-2008	31-10-2011	

High-level responsibilities in the Institution

1. **Chief Coordinator** of New Generation Innovation and Entrepreneurship Development Centre (**NewGen IEDC**) implemented and by Entrepreneurship Development Institute of India (**EDII**) and sponsored by Department of Science and Technology (**DST**), Government of India.
2. **Coordinator** of Entrepreneurship Development Cell in National Engineering College.
3. **Secretary** of Intellectual property Rights (**IPR**) Cell- (Established the cell and framed a detailed Intellectual Property Rights policy for my institution to set-up and standardize the activities of the IPR Cell.)

Regular Academic responsibilities in the Institution

- Develop and implement innovative instructional methods through modern Learning Management Systems (LMS) like Google and Moodle Class rooms.
- Develop professional logistics to improvise student performance.
- Support and mentor the students in academic and research projects.
- Evaluate and monitor and mentor student academic progress.
- Create, innovate and implement career- enhancement programs and activities.
- Supervise and support teaching assistants.
- Conduct outcome-based education (OBE) methodology in teaching and assessment activities.
- Curriculum designing and syllabus framing.

Engineering Courses Handled

Frequently Handling Courses		Infrequently Handling Courses	
1	Manufacturing Technology-I	1	Power plant Engineering
2	Manufacturing Technology-II	2	Kinematics of Machinery
3	Engineering Graphics	3	Heat and Mass Transfer
4	Unconventional Machining Processes	4	Mechanics of rigid bodies
5	Metal Cutting Theory and Practice	5	Basic Civil and Mechanical Engineering
6	Natural Fiber Composites	6	Principles of Management
7	Composite Materials	7	Professional Ethics in Engineering

Professional Society Membership

- ❖ Lifetime member of Indian Society for Technical Education (ISTE)
- ❖ Lifetime member of The Institution of Engineers IE (India).

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

- organized a three days **Entrepreneurship Awareness Camp (EAC)** for our college students from 25.02.20 to 27.02.20 through our college Entrepreneurship Development Cell. This three-day camp is sponsored and an amount of Rs 20,000/- is sanctioned by National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology (DST), Govt. of India, New Delhi and this Camp is coordinated by the Entrepreneurship Development Institute of India (EDII), Ahmedabad.
- organized a three days **Entrepreneurship Awareness Camp (EAC)** for our college students from 17.09.19 to 19.09.19 through our college Entrepreneurship Development Cell. This three-day camp is sponsored and an amount of Rs 20,000/- is sanctioned by National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology (DST), Govt. of India, New Delhi and this Camp is coordinated by the Entrepreneurship Development Institute of India (EDII), Ahmedabad.
- Organized a Two weeks **Faculty Development Programme (FDP) on “Entrepreneurship”** for the faculty of Arts & Science, Polytechnic and Engineering colleges from 02.12.19 to 14.12.19 through Entrepreneurship Development Cell (EDC) of our college. This two-weeks FDP is sponsored and an amount of Rs 2,50,000/- is

sanctioned by National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology (DST), Govt. of India, New Delhi and this FDP is coordinated by the Entrepreneurship Development Institute of India (EDII), Ahmedabad.

- organized a two days entrepreneurial program, for our college students called **Bazaar** on 07.03.2019 and 08.03.2019 through New Generation Innovation and Entrepreneurship Development Centre (NewGen IEDC). It is a platform for the students to trial their business ideas and an opening to translate it as their career path.
- organized a **one-day Illuminate (Pre-Eureka!) Workshop on Entrepreneurship** in association with E-Cell, IIT Bombay on 20-09-2019 through our college NewGen IEDC
- Organized a **Product Expo** through NewGen IEDC of our college on 21st and 22nd September 2019. This product expo is arranged for disseminating the products developed through NewGen IEDC of our college, products developed by various student projects from our college and other colleges throughout the country and outside start-up entrepreneurs to the general public and enhancing the commercialization possibilities of the developed products.

SPECIAL TRAINING COURSES ATTENDED:

- ❖ Attended a **two weeks National Faculty Development Programme in “Entrepreneurship”** organized by Entrepreneurship Development Institute of India (EDII), Ahmedabad, Gujarat (India) from 16th to 27th December 2019.
- ❖ Attended a **two weeks 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. (Successfully completed with Grade point: 9 out of 10)

EVENTS/TRAINING PROGRAMMES ATTENDED

- Participated National workshop on “Advanced materials characterization techniques” at the Indian Institute of Metals (IIM), Trivandrum chapter on 10th Aug, 2017.
- Participated Short term course on “Tribology in Design” at Indian Institute of Technology Madras during 7th to 12th Nov, 2016.
- Participated National Level Workshop on Formulation of Research and Development Grant Proposals by Scientists and Technologists at National Engineering College during 18th to 20th Nov 2015.
- Participated Workshop on Intellectual Property Rights & Innovations at National Engineering College on 7th Nov 2015.
- Participated in Indo-Brazil Bilateral International Workshop on Research Issues in Reinforced Materials at Kalasalingam University on 30th March 2015.
- Participated in National level Seminar on Optimization Techniques for Engineering Applications at Velammal College of Engineering and Technology on 5th April 2008.
- Participated Faculty Development Programme (FDP) on Empowering Indian Engineering Education for Global Expectations at National Engineering College during 7th & 8th Nov 2014.
- Participated in National Level Workshop On Research Issues In Reinforced Materials at Kalasalingam University on 27th Feb 2013.

- Participated in Workshop on Recent Advances in welding of Dissimilar Materials at National Engineering college during 19th & 20th April 2013.
- Participated in National level workshop on Analysis of Electrical Generators for Wind Energy Systems at National Engineering college during 29th & 30th Dec, 2008.
- Participated in a two days workshop on “ Micro Teaching” at National Engineering college during 18th & 19th July, 2008.

PATENT FILED

Title of the Invention: Heat Resisting Intermediate Panels for Cold Items Container
Produced through Charcoal waste of water treatment plant.

Inventor Name : Dr. I. Sankar, Asst. Prof., (S.G)/Mech, NEC

Application Number : 5533/CHE/2014 & filed on: 05-11-2014

Type of IP : Product Patent

INTERNATIONAL BOOK CHAPTER PUBLICATION

Title of the Book : Bio composites: Properties, Performance and Applications

Publisher : Nova Science Publishers, Inc. ISBN: 978-1-53612-145-2

Release Date : July 2017

Title of the Chapter : The development of bio-sandwich Structures with Brazilian curaua Fiber/polyester as face and PVC as core for anti-frictional applications.

Authors : I. Siva, M. Thirukumaran, S. Anand Kumar, J.T. Winowlin Jappes,
I.Sankar and Sandro C. Amico.

RESEARCH PUBLICATIONS

- ❖ Sankar, I & Ravindran, D, Fiber loading and treatment effects on dry sliding wear of Palmyra fruit fiber composites, Science and Engineering of Composite Materials (Impact factor: 0.59), Volume:23; Issue:2; Pg: 217-226; year:2016.
- ❖ Sankar, I & Ravindran, D, Combined effect of nano clay and fiber surface treatment on mechanical behaviors of palmyra fruit fiber/MMT clay reinforced polyester hybrid composite, International Journal of Computer Aided Engineering and Technology, Volume:10; Issue: 1; Pg: 26-34; year:2016.
- ❖ Sankar, I, Ravindran, D, Siva, I & M, Thirukumaran, Investigation on Wear Behaviours and Worn Surface Morphology of Surface Treated Palmyra Fruit Fiber/Polyester Composites to Appraise the Effects of Fiber Surface Treatments, Polymer Composites (Impact factor: 1.943), Volume:39; Issue:6; Pg: 2029-2036; year:2018.
- ❖ Sankar, I, Ravindran, D & Siva, I Wear mechanisms in palmyra fruit-fiber-reinforced polymer Composites, Plastics Research (online), DOI 10.2417/spepro.006745.

EXPERT LECTURES DELIVERED:

- ❖ Delivered an expert lecture to the students in the one-day workshop on “Entrepreneurship and innovation as career opportunity” conducted by Institution’s Innovation Council of G. Venkataswamy Naidu College on 24-01-2020.
- ❖ Delivered an expert lecture to the faculties in the one-day workshop on “Intellectual Property Rights” organized by Institution’s Innovation Council of AAA College of Engineering and Technology on 23-11-2019

- ❖ Delivered an expert lecture to the faculties during the Faculty Development Programme in the theme “New Product Development and Intellectual Property Rights” at National Engineering College on 18-05-2019
- ❖ Delivered an expert lecture to the UG students in the theme “Natural Fiber Composites” at Marthandam College of Engineering and Technology on 27-08-2018
- ❖ Delivered an expert lecture to the Diploma students in the theme “Composite Materials” at P.A.C. Ramasamy Raja Polytechnic College on 15-08-2018

CERTIFICATION COURSES

National Programme on Technology Enhanced Learning (NPTEL) online certification course:

- ❖ Introduction to Research. (Successfully Completed)
- ❖ Manufacturing of Composites (Successfully completed)

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.

Student project Honorarium

- One of my undergraduate student project proposals **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.
- One of my undergraduate student project won “Best project of the year” in the institution

PROJECT PAPERS PRESENTED IN INTERNATIONAL / NATIONAL CONFERENCES

National Journal Publication

Effect of Fiber Volume Fraction on The Mechanical Properties of Coconut Sheath/USP Composite, Journal of Manufacturing Engineering, Volume:8; Issue:1; Pg: 60-63; 2013.

International Conferences participation

- Presented a paper entitled as “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 as “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 27th28th March, 2017.

LANGUAGES KNOWN

Tamil - Fluent speaking, writing, listening (Mother tongue)

English - Fluent speaking, writing, listening