### **FACULTY PROFILE**

SANKAR. I

### **Personal Details**

Salutation: Dr.

Instructor Name: Sankar. I

Designation: Assistant Professor (Senior

Grade)

**Department:** MECHANICAL ENGINEERING -

NEC

Date of Joining in

NEC:

04-07-2008

Date of Joining in Present Post: 10-07-2013

Mobile Number:

9894697322

College Id:

MECT017

College Email Id:

sankarmech@nec.edu.in

#### **Address for Communication**

Address Line 1: 5/92 A, Manju nagar Pincode: 628503

Address Line 2: A.Salaiputhur District: Thoothukudi

City: Kovilpatti State: Tamilnadu

#### **Educational Qualifications**

| Sr | Name of the Degree | Specialization               | Name of the Institute                          | Name of the<br>University | Year of Passing |
|----|--------------------|------------------------------|--|---------------------------|-----------------|
| 1  | Ph.D               | Mechanical Engineering       | National Engineering<br>College                | Anna University           | 2018            |
| 2  | M.E                | Manufacturing<br>Engineering | National Engineering<br>College                | Anna University           | 2008            |
| 3  | B.E                | Mechanical Engineering       | Dr.Sivanthi Aditanar<br>College of Engineering | Anna University           | 2006            |

### **Faculty Professional Experience**

| Sr | Name of Institute /<br>Organizations | Designation               | Date of Joining | То         | Total Experience |
|----|--------------------------------------|---------------------------|-----------------|------------|------------------|
| 1  | National Engineering<br>College      | Assistant Professor (S.G) | 10-07-2013      | 24-04-2022 | 8 years 9 months |
| 2  | National Engineering<br>College      | Assistant Professor       | 01-11-2011      | 09-07-2013 | 1 year 8 months  |



| Sr | Name of Institute /<br>Organizations | Designation | Date of Joining | То         | Total Experience |
|----|--------------------------------------|-------------|-----------------|------------|------------------|
| 3  | National Engineering<br>College      | Lecturer    | 04-07-2008      | 31-10-2011 | 3 years 3 months |

## FDP/ Workshop/ Seminar/ Training/ Knowhow Program Attended

| Sr | Name of the Event  | Event Type                     | Name of the Instituion or Organization                           | From       | То         |
|----|--|--------------------------------|--|------------|------------|
| 1  | National Faculty Development Programme in Entrepreneurship "                                     | Faculty Development<br>Program | Entrepreneurship<br>Development Institute of<br>India, Ahmedabad | 16-12-2019 | 27-12-2019 |
| 2  | Innovation and<br>Technology Enterprise:<br>Idea to Entrepreneurship                             | GIAN Course                    | National Institute of<br>Technology Silchar                      | 30-07-2018 | 10-08-2018 |
| 3  | Advanced Materials<br>Characterization<br>Techniques   | National Workshop              | Indian Institute of Metals,<br>Trivendrum                        | 10-08-2017 | 10-08-2017 |
| 4  | Tribology in Design  | Short Term Training<br>Program | Indian Institute of<br>Technology Madras                         | 07-11-2016 | 12-11-2016 |
| 5  | Formulation of Research<br>and Development Grant<br>Proposals by Scientists<br>and Technologists | National Workshop              | National Engineering<br>College                                  | 18-11-2015 | 20-11-2015 |
| 6  | Intellectual Property Rights & Innovations   | National Workshop              | National Engineering<br>College                                  | 07-11-2015 | 07-11-2015 |
| 7  | Research Issues in<br>Reinforced Materials   | International Workshop         | Kalasalingam University  | 30-03-2015 | 30-03-2015 |
| 8  | Optimization Techniques for Engineering Applications   | National Seminar               | Velammal College of<br>Engineering and<br>Technology             | 05-04-2008 | 05-04-2008 |
| 9  | Empowering Indian<br>Engineering Education<br>for Global Expectations                            | Faculty Development<br>Program | National Engineering<br>College                                  | 07-11-2014 | 08-11-2014 |
| 10 | Research Issues in Reinforced Materials  | National Workshop              | Kalasalingam University  | 27-02-2013 | 27-02-2013 |
| 11 | Recent Advances in<br>Welding of Dissimilar<br>Materials   | National Workshop              | National Engineering<br>College                                  | 19-04-2013 | 20-04-2013 |
| 12 | Analysis of Electrical<br>Generators for Wind<br>Energy Systems                                  | National Workshop              | National Engineering<br>College                                  | 29-12-2008 | 30-12-2008 |
| 13 | Micro Teaching   | National Workshop              | National Engineering<br>College                                  | 18-07-2008 | 19-07-2008 |
| 14 | Prior-art Searching with Google patents  | National Workshop              | Turnip Innovations<br>Pvt.Ltd                                    | 05-09-2020 | 05-09-2020 |

| Sr | Name of the Event   | Event Type                     | Name of the Instituion or Organization  | From       | То         |
|----|---|--------------------------------|---|------------|------------|
| 15 | Intellectual Property<br>Rights                             | National Workshop              | Pandit Deendayal Petroleum University   | 10-04-2020 | 11-04-2020 |
| 16 | Scanning Electron<br>Microscopy and X-Ray<br>Diffractometer | Faculty Development<br>Program | Indus University  | 25-05-2020 | 29-05-2020 |
| 17 | Waste Management  | Faculty Development<br>Program | National Institute of<br>Technical Teachers<br>Training and Research,<br>Chandigarh | 11-05-2020 | 15-05-2020 |
| 18 | IPR-Patent Filing & Processing in India                     | National Seminar               | National Productivity<br>Council  | 15-05-2020 | 15-05-2020 |
| 19 | Step-by-Step for writing<br>Research Articles               | Faculty Development<br>Program | Kalasalingam Academy<br>of Research and<br>Education                                | 21-05-2020 | 21-05-2020 |

### **International and National Conferences Attended**

| Sr | Name of the Conference   | Event Type                                   | Name of the Instituion or Organization  | Title of the Paper  | Authors           |
|----|--|--|---|---|-------------------|
| 1  | 3rd International<br>Conference On Recent<br>Advances in Material<br>Processing Technology<br>(RAMPT 13) | International<br>Conference<br>Participation | National Engineering<br>College   | Effect of Fiber Volume<br>Fraction on The<br>Mechanical Properties<br>of Coconut Sheath/USP<br>Composite            | I.Sankar, et al., |
| 2  | Bilateral second<br>International<br>Conference on<br>Advanced materials &<br>Processing                 | International<br>Conference<br>Participation | Kalasalingam University  Synergy of fiber surfa treatments and water absorption on the mechanical properties of palmyra fruit fiber reinforced polymer composites |   | I.Sankar, et al., |
| 3  | National Conference on<br>Vision of India with<br>Technological<br>Excellences                           | National Conference<br>Participation         | The Indian Engineering<br>College   | Design and optimization of large diameter bearing   | I.Sankar, et al., |
| 4  | Bilateral second International Conference on Advanced materials & Processing                             | International<br>Conference<br>Participation | Kalasalingam University   | Performance<br>Improvement of Single<br>Slope Stepped<br>Absorber Plate Solar<br>Still using Wicked<br>Coconut Coir | I.Sankar, et al., |
| 5  | Bilateral second International Conference on Advanced materials & Processing                             | International<br>Conference<br>Participation | Kalasalingam University   | Evaluation of Strength<br>and Stiffness<br>Characteristics of<br>A3003 Aluminum<br>Honeycomb Core<br>Sandwich Panel | I.Sankar, et al., |

| Sr | Name of the Event  | Event Type                     | Nature of funding                                | Name of the Funding<br>Agency   | Amount<br>received<br>from<br>funding<br>Agency | Role         |
|----|--|--------------------------------|--|---|---|--------------|
| 1  | Three days<br>Entrepreneurship<br>Awareness Camp-I                         | Short Term Training<br>Program | Fund Received<br>from external<br>funding agency | National Science &<br>Technology<br>Entrepreneurship<br>Development Board | ₹ 20,000.00                                     | Co-Ordinator |
| 2  | Three days<br>Entrepreneurship<br>Awareness Camp-II                        | Short Term Training<br>Program |  | National Science &<br>Technology<br>Entrepreneurship<br>Development Board | ₹ 20,000.00                                     | Co-Ordinator |
| 3  | Two weeks Faculty<br>Development Program<br>on Entrepreneurship            | Faculty Development Program    |  | National Science &<br>Technology<br>Entrepreneurship<br>Development Board | ₹<br>2,50,000.00                                | Co-Ordinator |
| 4  | One-day "Illuminate<br>(Pre-Eureka!)<br>Workshop on<br>Entrepreneurship"   | Workshop                       |  | Department of<br>Science and<br>Technology                                | ₹ 56,000.00                                     | Co-Ordinator |
| 5  | Product Expo   | National Workshop              |  | Department of<br>Science and<br>Technology                                | ₹ 3,000.00                                      | Co-Ordinator |
| 6  | One-day unique<br>lecture program,<br>"Entrepreneurship<br>Lecture Series" | National Seminar               |  | Department of<br>Science and<br>Technology                                | ₹ 3,000.00                                      | Co-Ordinator |
| 7  | One-day seminar "Techno Entrepreneurs: Opportunities and Challenges"       | National Seminar               |  | Department of<br>Science and<br>Technology                                | ₹ 0.00  | Co-Ordinator |
| 8  | Three-day Illuminate<br>(Pre-Eureka!)<br>Workshop on<br>Entrepreneurship   | Workshop                       |  | Department of<br>Science and<br>Technology                                | ₹ 13,950.00                                     | Co-Ordinator |

### **Guest Lecture Delivered**

| Sr | Name of the Event /<br>Program | Name of the Institution<br>/ Organization                 | Title of the Lecture delivered                        | From       | То         |
|----|--------------------------------|---|---|------------|------------|
| 1  | One day Seminar                | G. Venkataswamy<br>Naidu College, Kovilpatti              | Entrepreneurship and innovation as career opportunity | 24-01-2020 | 24-01-2020 |
| 2  | One day Seminar                | AAA College of<br>Engineering and<br>Technology, Sivakasi | Intellectual Property<br>Rights                       | 23-11-2019 | 23-11-2019 |

| Sr | Name of the Event /<br>Program                  | Name of the Institution / Organization   | Title of the Lecture delivered  | From       | То         |
|----|---|--|---|------------|------------|
| 3  | Faculty Development<br>Program                  | National Engineering<br>College, Kovilpatti                                    | New Product<br>Development and<br>Intellectual Property<br>Right            | 18-05-2019 | 18-05-2019 |
| 4  | One day Seminar                                 | Marthandam College of<br>Engineering and<br>Technology,<br>Marthandam          | Natural Fiber<br>Composites   | 27-09-2018 | 27-09-2018 |
| 5  | One day Seminar                                 | P.A.C. Ramasamy Raja<br>Polytechnic College                                    | Composite Materials   | 15-09-2018 | 15-09-2018 |
| 6  | One day Seminar                                 | K.R. College of Arts and<br>Science, Kovilpatti                                | Entrepreneurship as a Career Opportunity                                    | 12-01-2021 | 12-01-2021 |
| 7  | One day Seminar                                 | Kanchi sankara<br>vidhyashram matric<br>higher secondary<br>school, Trichendur | How to Identify a Real-<br>time Problem                                     | 28-08-2021 | 28-08-2021 |
| 8  | One day Seminar                                 | Tamilnadu Career<br>Counsellors Association                                    | Systematic approach of<br>New Product<br>Development Process                | 23-06-2021 | 23-06-2021 |
| 9  | One day Seminar                                 | V.O. Chidhambaram college, Thoothukudi   | National Innovation and Start-up Policy                                     | 05-01-2021 | 05-01-2021 |
| 10 | One day Seminar                                 | P.A.C. Ramasamy Raja<br>Polytechnic College                                    | Entrepreneurship as a Career Opportunity                                    | 17-11-2021 | 17-11-2021 |
| 11 | One day Seminar                                 | A.P.C. Mahalaxmi<br>College for Women  | Workshop on Design<br>Thinking, Critical<br>Thinking & Innovation<br>Design | 31-01-2022 | 31-01-2022 |
| 12 | One day Seminar                                 | V.O. Chidhambaram college, Thoothukudi   | Idea to Prototype: A systematic approach                                    | 21-03-2022 | 21-03-2022 |
| 13 | Entrepreneurship<br>Development Program<br>2022 | Lakshmi Ammal<br>Polytechnic College,<br>Kovilpatti                            | Entrepreneurship  | 21-04-2022 | 22-04-2022 |

# **Faculty Research Publications**

| Sr | Title of the Paper   | Name of the<br>Journal                                  | Year of Publication | Authors   | DOI (Digital Object Identifier System) |
|----|--|---|---------------------|---|--|
| 1  | Fiber loading and<br>treatment effects on dry<br>sliding wear of Palmyra<br>fruit fiber composites   | Science and<br>Engineering of<br>Composite<br>Materials | 2016                | Sankar, I &<br>Ravindran, D                                 | https://doi.org/10.1515/secm-2014-0101 |
| 2  | 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<br>Composites                                   | 2018                | Sankar, I,<br>Ravindran, D,<br>Siva, I & M,<br>Thirukumaran | https://doi.org/10.1002/pc.24163       |

| Sr | Title of the Paper  | Name of the<br>Journal   | Year of Publication | Authors  | DOI (Digital Object Identifier System)      |
|----|---|--|---------------------|--|---|
| 3  | Wear mechanisms in palmyra fruit-fiber-reinforced polymer Composites  | Plastics Research  | 2018                | Sankar, I,<br>Ravindran, D &<br>Siva   | DOI 10.2417/spepro.006745                   |
| 4  | Combined effect of nano clay and fiber surface treatment on mechanical behaviors of palmyra fruit fiber/MMT clay reinforced polyester hybrid composite            | International<br>Journal of<br>Computer Aided<br>Engineering and<br>Technology | 2016                | Sankar, I &<br>Ravindran, D  |   |
| 5  | Modal analysis on the additive manufactured robotic segments: Effect of printing densities on the vibrational properties  | Materials Today:<br>Proceedings  | 2020                | I Siva, DK<br>Sangaran, PR<br>Praveen Balan, P<br>Siddharth, I<br>Sankar   | https://doi.org/10.1016/j.matpr.2020.07.230 |
| 6  | Frictional response of<br>functionally graded 3/2<br>natural rubber based<br>lead-bismuth eutectic<br>alloy metal rubber<br>laminates                             | Materials Today:<br>Proceedings  | 2020                | I Siva, M<br>Bharathi, C<br>Krishnaveni, M<br>Priyanka, I<br>Sankar  | https://doi.org/10.1016/j.matpr.2020.06.510 |
| 7  | Evaluation of Mechanical<br>and Free Vibrational<br>Analysis of Vegetable<br>Fiber Reinforced<br>Polyester Sandwich<br>Composites with<br>Polyvinyl Chloride Core | SSRN   | 2020                | Senthilkumar<br>Krishnasamy,<br>Siva<br>Irullappasamy,<br>Sankar<br>Irullappasamy,<br>Sandro Campos<br>Amico, Suchart<br>Siengchin | http://dx.doi.org/10.2139/ssrn.3653990      |
| 8  | Post Impact Behavior<br>and Compression After<br>Impact Properties of<br>Polymers and Their<br>Composites—A Review  | Impact Studies of<br>Composite<br>Materials                                    | 2021                | I Siva, Avinash<br>Shinde, I Sankar,<br>Chithirai Pon<br>Selvan, MTH<br>Sultan   | DOI: 10.1007/978-981-16-1323-4_4            |
| 9  | Study on mechanical properties of glass wool/epoxy reinforced composite   | International Journal of Computer Aided Engineering and Technology             | 2018                | M Thirukumaran,<br>L Vadivel Kannan,<br>I Sankar   |   |
| 10 | Effect of fiber volume fraction on the mechanical properties of coconut sheath/USP composite  | Journal of<br>Manufacturing<br>Engineering                                     | 2013                | W Siva, I Sankar,<br>SC Amico  |   |

## **Research Supervisor & Scholars Details**

| Sr | Name of the<br>University | Name of the Faculty | Reference No.<br>(Supervisor id<br>Number) |  | Date of supervisor recognition |
|----|---------------------------|---------------------|--|--|--------------------------------|
|----|---------------------------|---------------------|--|--|--------------------------------|

| • | Sr | Name of the<br>University | Name of the Faculty       | Reference No.<br>(Supervisor id<br>Number) | Research Area       | Date of supervisor recognition |
|---|----|---------------------------|---------------------------|--|---------------------|--------------------------------|
| 1 | 1  | Anna University           | Mechanical<br>Engineering | 3320035                                    | Composite materials | 30-01-2019                     |

## **Funded Research Project Details**

| Sr | Name of the<br>Project  | Principal<br>Investigator | Co-Investigator   | Amount<br>of Fund<br>Received | Funding<br>Agency   | Project<br>Duration | Project<br>Starting<br>Date | Project<br>Completion<br>Date | Present<br>Status |
|----|---|---------------------------|---|-------------------------------|---|---------------------|-----------------------------|-------------------------------|-------------------|
| 1  | Development<br>of Heat<br>Resisting<br>panels for<br>cold storage<br>using residue<br>from water<br>treatment<br>plants | Dr.I.Sankar               | Mr.<br>Muruganantham.P,<br>Mr.<br>Sankarapandi.S,<br>Mr. Mohana<br>Sundaram and Mr.<br>Mohamed Hussain<br>S | ₹<br>10,000.00                | Tamilnadu<br>State<br>Council for<br>Science<br>and<br>Technology | 6 months            | 27-01-<br>2018              | 25-05-2018                    | completed         |

## **Membership in Professional Societies**

| Sr | Name of the Society / Organization | Type of Membership | Membership ID |
|----|------------------------------------|--------------------|---------------|
| 1  | The Institution of Engineers-India | Associate Member   | AM1616709     |

### **Book / Book Chapters Published**

| Sr | Name of the Book  | Name of the Chapter   | Authors   | Publisher                  | ISSN Number       |
|----|---|---|---|----------------------------|-------------------|
| 1  | Bio composites:<br>Properties,<br>Performance and<br>Applications | The development of<br>bio-sandwich Structures<br>with Brazilian curaua<br>Fiber / polyester as<br>face and PVC as core<br>for antifrictional<br>applications. | I. Siva, M. Thirukumaran, S. Anand Kumar, J.T. Winowlin Jappes, I.Sankar and Sandro C. Amico. | Nova Science<br>Publishers | 978-1-53612-120-9 |
| 2  | Impact Studies of<br>Composite Materials                          | Post Impact Behavior<br>and Compression After<br>Impact Properties of<br>Polymers and Their<br>Composites A Review  | I Siva, Avinash Shinde, I<br>Sankar, Chithirai Pon<br>Selvan, MTH Sultan                      | Springer, Singapore        | 978-981-16-1323-4 |