

**PERSONAL DETAILS AND AFFILIATION**

**Name** Dr.Sathishkumar M

**Designation** Assistant Professor (Senior Grade)

**Department** Electronics and Communication Engineering

**Date of joining the institution** 13.05.2013

**Date of Birth** 14.05.1988

**Address for Communication** No.3C, K.V.K.Nagar, Thoothukudi-628008

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**EDUCATIONAL QUALIFICATION**

| Degree     | Institution Studied                       | University / Board                         | Year Of Passing |
|------------|-------------------------------------------|--------------------------------------------|-----------------|
| Ph.D.      | Anna University                           | Anna University                            | 2026            |
| M.E.       | National Engineering College, Kovilpatti  | Anna University of Technology, Tirunelveli | 2011            |
| B.E. (ECE) | Hindustan College of Engineering, Chennai | Anna University, Chennai                   | 2009            |
| H.S.C.     | C.M. Higher Secondary School, Tuticorin   | State Board                                | 2005            |
| S.S.L.C    | C.M. Higher Secondary School, Tuticorin   | State Board                                | 2003            |

**EXPERIENCE (As on 20.02.2026)**

| Name of the Institution / Organization                 | Position Held                      | From       | To         | Experience |    |
|--------------------------------------------------------|------------------------------------|------------|------------|------------|----|
|                                                        |                                    |            |            | Y          | M  |
| National Engineering College                           | Assistant Professor (Senior Grade) | 06.04.2022 | Till Date  | 3          | 10 |
| National Engineering College                           | Assistant Professor                | 13.05.2013 | 05.04.2022 | 8          | 10 |
| Nadar Saraswathi College of Engineering and Technology | Assistant Professor                | 20.06.2011 | 01.04.2013 | 1          | 10 |
| <b>Total Experience</b>                                |                                    |            |            | 14         | 6  |

## LIST OF JOURNAL PUBLICATIONS

|   |                                                                                                                                                                                                                                                                                                                                                                                  |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>Sathishkumar, M.</b> , Geege, A.S., Samuel, T.S, I. Vivek Anand K. Ramkumar, Investigation of GaSb (p+) Pocket doped GaSb/Si Vertical TFETs for High-Frequency Analog Circuits. Semiconductors 60, 295–308 (2026).<br><a href="https://doi.org/10.1134/S1063782625603401">https://doi.org/10.1134/S1063782625603401</a>                                                       |
| 2 | <b>M. Sathishkumar</b> , T.S. Arun Samuel, K. Ramkumar, I. Vivek Anand, S.B. Rahi, <i>“Performance evaluation of gate engineered InAs–Si heterojunction surrounding gate TFET”</i> Superlattices and Microstructures, Volume 162, 2022, <a href="https://doi.org/10.1016/j.spmi.2021.107099">https://doi.org/10.1016/j.spmi.2021.107099</a> .                                    |
| 3 | <b>Sathishkumar, M.</b> , Samuel, T.S.A., Vimala, P. et al. <i>“Performance Analysis of HfO<sub>2</sub>-SiO<sub>2</sub> Stacked Oxide Quadruple Gate Tunnel Field Effect Transistor for Improved ON Current”</i> Silicon (2021). <a href="https://doi.org/10.1007/s12633-021-01394-9">https://doi.org/10.1007/s12633-021-01394-9</a>                                             |
| 4 | B.Sivaranjani , R.Krishnaveni , P.Sakthy Priya , <b>M.Sathishkumar</b> , I.Vivek Anand, 2020, <i>“Design of Low Power Multiplier Unit using Wallace Tree Algorithm”</i> , International Journal Of Engineering Research & Technology (Ijert) Vol.09, No. 02 (February 2020), <a href="http://dx.doi.org/10.17577/IJERTV9IS020069">http://dx.doi.org/10.17577/IJERTV9IS020069</a> |

## LIST OF INTERNATIONAL / NATIONAL CONFERENCE PUBLICATIONS

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>M. Sathishkumar</b> , K. Dhilipkumar, A. Alwin and S. R. Suriya Kishan, "IoT-based System for Outdoor Fire Prevention in Fireworks Manufacturing Units," <i>International Conference on Automation, Computing and Renewable Systems (ICACRS)</i> , 2025, pp. 338-343, doi: <a href="https://doi.org/10.1109/ICACRS67045.2025.11324439">https://doi.org/10.1109/ICACRS67045.2025.11324439</a>                                                                          |
| 2 | P. Lovely, K. S. Subashree, J. S. Ragavi, I. V. Anand, T. S. A. Samuel and <b>M. Sathishkumar</b> , "Device Parameter Variation for Gate Engineered Silicon Nanowire (SiNW) MOSFET," 2025 Fifth International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT), Bhilai, India, 2025, pp. 1-7, doi: <a href="https://doi.org/10.1109/ICAECT63952.2025.10958829">https://doi.org/10.1109/ICAECT63952.2025.10958829</a> |
| 3 | K. Karthika, G. Archana, K. Mariammal alais Mala, I. V. Anand, <b>M. S. Kumar</b> and T. S. A. Samuel, "Performance Analysis of Silicon Carbide Processing for Power MOSFET," <i>2024 9th International Conference on Communication and Electronics Systems (ICCES)</i> , Coimbatore, India, 2024, pp. 72-78, <a href="https://doi.org/10.1109/ICCES63552.2024.10859928">https://doi.org/10.1109/ICCES63552.2024.10859928</a>                                            |
| 4 | <b>M. Sathishkumar</b> , T. S. Arun Samuel and P. Vimala, <i>“A Detailed Review on Heterojunction Tunnel Field Effect Transistors,”</i> 2020 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE), 2020, pp. 1-5, doi: <a href="https://doi.org/10.1109/ic-ETITE47903.2020.197">https://doi.org/10.1109/ic-ETITE47903.2020.197</a>                                                                                           |
| 5 | M.Sathishkumar, V.Vijayarangan, .P.Kavitha, <i>“Quantifying the capacity loss of MIMO OFDM Systems on Nakagami-m fading Channel”</i> National Conference on Microwave and Optical Communication, (NCMOC-2011)                                                                                                                                                                                                                                                            |

**MEMBERSHIP IN PROFESSIONAL SOCIETY**

| S.No. | Name of the Society                    | Membership No | Category |
|-------|----------------------------------------|---------------|----------|
| 1     | The Institution of Engineers (India)   | M-1843435     | Member   |
| 2     | International Association of Engineers | 553909        | Member   |

**INDUSTRIAL TRAINING ATTENDED**

| S.No. | Name of the Organization                    | Dates With Duration      |
|-------|---------------------------------------------|--------------------------|
| 1     | M/s. Recynergy Technology India Pvt Ltd     | 29.08.2025               |
| 2     | M/s. Data Patterns India Ltd, Chennai       | 29.08.2025               |
| 3     | M/s. Avalon Technologies Ltd, Chennai       | 30.08.2025               |
| 4     | M/s. Data Patterns India Ltd, Chennai       | 09.12.2024 to 13.12.2024 |
| 5     | M/s. Zolt Energy Private Limited, Hyderabad | 23.05.2018 to 26.05.2018 |

**WORKSHOPS/SEMINARS/CONFERENCES/TRAINING PROGRAMMES ORGANIZED**

| S.No. | Name of the Programme & Venue          | Dates With Duration      | No. Of Participants | Responsibility |
|-------|----------------------------------------|--------------------------|---------------------|----------------|
| 1     | Antenna Design using IE3D / ADS        | 22.09.2014               | 25                  | Coordinator    |
| 2     | Faculty Development Training Programme | 30.05.2016 to 06.06.2016 | 20                  | Co-Coordinator |

**GUEST LECTURE / RESOURCE PERSON**

| S.No. | Name of the Program                                 | Venue                                                    | Dates With Duration | No. Of Participants |
|-------|-----------------------------------------------------|----------------------------------------------------------|---------------------|---------------------|
| 1     | Placement Readiness: Strategies for a Bright Future | University VOC<br>College of Engineering,<br>Thoothukudi | 27.09.2025          | 60                  |

**WORKSHOPS/SEMINARS/CONFERENCES/TRAINING PROGRAMMES ATTENDED**

| S.no. | Name of the programme                                                        | Nature of the program | Conducted By                                         | Dates                    |
|-------|------------------------------------------------------------------------------|-----------------------|------------------------------------------------------|--------------------------|
| 1.    | Multicoreware Academia Global Innovation Centre (MAGIC)                      | R&D Symposium         | M/s. Multicoreware Inc,<br>@ Kalasalingam University | 07.06.2025               |
| 2.    | Emerging Nano & 2D Materials for Scalable and Energy Efficient VLSI Circuits | FDP                   | VIT, Chennai                                         | 21.03.2025 to 25.03.2025 |

| WORKSHOPS/SEMINARS/CONFERENCES/TRAINING PROGRAMMES ATTENDED |                                                                                                           |                       |                                                                    |                          |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------|--------------------------|
| S.no.                                                       | Name of the programme                                                                                     | Nature of the program | Conducted By                                                       | Dates                    |
| 3.                                                          | Multicoreware Academia Global Innovation Centre (MAGIC)                                                   | R&D Symposium         | M/s. Multicoreware Inc, @ IIT Palakkad                             | 17.06.2024               |
| 4.                                                          | Recent Trends in Nano devices, Materials and its applications                                             | FDP                   | SIMATS Engineering, Chennai                                        | 26.02.2024 to 02.03.2024 |
| 5.                                                          | Insights to the Art of Analog Design                                                                      | Workshop              | IIT Guwahati                                                       | 12.02.2024 to 16.02.2024 |
| 6.                                                          | Recent Trends in Semiconductor devices / VLSI Chip devices and its sensor applications                    | Workshop              | Koneru Lakshmaiah Education Foundation                             | 23.01.2023 to 27.01.2023 |
| 7.                                                          | Advanced Materials and Process for Next Generation Nano Electronic Devices: Challenges and Opportunities. | FDP                   | SRM Institute of Science and Technology                            | 27.06.2022 to 04.07.2022 |
| 8.                                                          | Next-Generation Nanoelectronics Devices Trends (NGND): Materials to Applications                          | FDP                   | NIT, Patna                                                         | 31.01.2022 to 04.02.2022 |
| 9.                                                          | Recent Advances and Challenges in Nanoelectronics Devices                                                 | ATAL – FDP            | IIIT, Bhagalpur                                                    | 13.12.2021 to 17.12.2021 |
| 10.                                                         | Nanodevices and Advanced Nanomaterials                                                                    | ATAL – FDP            | Sikkim Manipal Institute of Technology, Sikkim                     | 06.12.2021 to 10.12.2021 |
| 11.                                                         | Future Perspective of Semiconductor Devices                                                               | ATAL – FDP            | Kalasalingam Academy of Research and Education, Krishnankoil       | 21.06.2021 to 25.06.2021 |
| 12.                                                         | Modeling and Simulation of Nano-Transistors                                                               | Short Term Program    | IIT Kanpur                                                         | 17.02.2021 to 07.03.2021 |
| 13.                                                         | Emerging CMOS Technologies and Beyond: Trends and Challenges                                              | FDP                   | Malaviya National Institute of Technology Jaipur                   | 26.11.2020 to 30.11.2020 |
| 14.                                                         | Opportunities and Challenges in Next Generation Semiconductor Devices                                     | FDP                   | Anil Neerukonda Institute of Technology and Sciences, Visakapatnam | 16.06.2020 to 20.06.2020 |
| 15.                                                         | Entrepreneurship                                                                                          | FDP                   | National Engineering College, Kovilpatti                           | 02.12.2019 to 14.12.2019 |
| 16.                                                         | Power Semiconductor Device modeling and TCAD Simulation                                                   | Workshop              | Vellore Institute of Technology, Vellore                           | 29.11.2019 to 01.12.2019 |
| 17.                                                         | Training program on “Technology enabled teaching learning process”                                        | FDP                   | National Engineering College, Kovilpatti                           | 28.05.2017 & 29.05.2017  |
| 18.                                                         | Training program on “Instructional design and delivery systems” by NITTTR                                 | FDP                   | National Engineering College, Kovilpatti                           | 22.05.2017 to 27.05.2017 |
| 19.                                                         | Network Simulator (NS-2)                                                                                  | Workshop              | National Engineering College, Kovilpatti                           | 19.08.2014 to 20.08.2014 |
| 20.                                                         | Soft skills in English for Technocrats,                                                                   | FDP                   | Anna University of Technology, Madurai                             | 15.03.2012               |

| LIST OF NPTEL COURSES COMPLETED |                                                                         |                      |                       |            |                                     |
|---------------------------------|-------------------------------------------------------------------------|----------------------|-----------------------|------------|-------------------------------------|
| S.NO.                           | Title of the Course                                                     | Conducted by         | Duration              | Marks      | Performance                         |
| 1.                              | <b>Effective Engineering Teaching In Practice</b>                       | <b>IIT Madras</b>    | <b>Jan – Feb 2025</b> | <b>92%</b> | <b>Elite with Gold</b>              |
| 2.                              | <b>Design Thinking -A Primer</b>                                        | <b>IIT Madras</b>    | <b>Jul-Aug 2023</b>   | <b>85%</b> | <b>Elite + Silver<br/>5% Topper</b> |
| 3.                              | Fundamentals of electronic device fabrication                           | IIT Madras           | Jul-Aug 2022          | 75%        | Elite + Silver                      |
| 4.                              | Microelectronics: Devices To Circuits                                   | IIT Roorkee          | Jul – Oct 2021        | 60%        | Elite                               |
| 5.                              | Fundamentals of electronic materials and devices                        | IIT Madras           | Jan – Mar 2021        | 68%        | Elite                               |
| 6.                              | Semiconductor Devices and Circuits                                      | IISc Bangalore       | Sep – Dec 2020        | 55%        | -                                   |
| 7.                              | Evolution of Air Interface towards 5G                                   | IIT Kharagpur        | Feb – Apr 2020        | 84%        | Elite + Silver                      |
| 8.                              | Principles of Communication Systems – Part II                           | IIT Kanpur           | Aug – Sep 2019        | 79%        | Elite + Silver                      |
| 9.                              | <b>An Introduction to information theory</b>                            | <b>IIT Kanpur</b>    | <b>Aug – Sep 2018</b> | <b>71%</b> | <b>Elite + Silver<br/>Topper</b>    |
| 10.                             | Introduction to Wireless and Cellular Communication                     | IIT Madras           | Jul – Oct 2017        | 77%        | Elite + Silver                      |
| 11.                             | Probability and Random Variables / Processes for Wireless Communication | IIT Kanpur           | Jan - Feb 2017        | 62%        | Elite                               |
| 12.                             | <b>Fundamentals of MIMO Wireless Communication</b>                      | <b>IIT Kharagpur</b> | <b>Jul - Sep 2016</b> | <b>93%</b> | <b>Elite with Gold &amp; Topper</b> |
| 13.                             | Introduction to research                                                | IIT Madras           | Jan - Feb 2016        | 72%        | Elite + Silver                      |