



**National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members**

|                                  |  |                 |               |
|----------------------------------|--|-----------------|---------------|
|                                  | Government of India,<br>Pune   |                 |               |
| <b>Scientist B</b>               | DIT, Defence Research and Development Organization (DRDO), Government of India, Pune                 | February 1991   | June 1994     |
| <b>Graduate Engineer Trainee</b> | Neyveli Lignite Corporation Limited, Public Sector, Government of India, Neyveli, Tamil Nadu, India. | January 1990 to | February 1991 |

8. Academic Qualifications (From Highest Degree to High School):

| Examination | Board / University                                    | Year | Division/ Grade | Subjects   |
|-------------|---|------|-----------------|--|
| Ph. D.      | Indian Institute of Technology Bombay, Mumbai, INDIA  | 2001 |                 | Modeling and Piecewise Constant Output Feedback Control for Smart Structures |
| M. Tech     | Indian Institute of Technology Madras, Chennai, INDIA | 1990 | First           | Precision Engineering and Instrumentation                                    |
| B.E         | Government College of Technology, Coimbatore, INDIA   | 1988 | First           | Instrumentation and Control Engineering                                      |

9. Academic/Administrative Responsibilities within the University

| Position                        | Faculty/Department/Centre/Institution  | From        | To         |
|---------------------------------|--|-------------|------------|
| Deputy Director                 | NIT, Tiruchirappalli   | 25-03- 2021 | 02-02-2022 |
| Director                        | Centre for Entrepreneurship Development and Incubation (CEDI), NIT, Tiruchirappalli                    | 27-03-2019  | Till date  |
| Chairman                        | Sophisticated Instrumentation facility (SIF), NIT, Trichy  | 29-09- 2020 | Till date  |
| Registrar In-Charge             | NIT, Tiruchirappalli   | 19-01-2021  | 16-03-2021 |
| Dean (Research and Consultancy) | NIT, Tiruchirappalli   | 4-10-2017   | 21-09-2020 |
| Chairman                        | Special Task Force for Centre of Excellence in Smart Systems and MEMS (S2- MEMS), NIT, Tiruchirappalli | March 2012  | March 2015 |

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|                               |  |                  |                   |
|-------------------------------|--|------------------|-------------------|
| Chairman                      | Management Information System Team, NIT, Tiruchirappalli                               | September 2012   | May 2014          |
| Member                        | Board of Governors of NIT, Tiruchirappalli   | September 2011   | September 2013    |
| Member                        | Finance committee of NIT, Tiruchirappalli  | September 2011   | September 2013    |
| Chairman,                     | Estate Welfare committee, NIT, Tiruchirappalli   | November 2010    | February 2011     |
| Head                          | Department of Instrumentation and Control Engineering, NIT, Tiruchirappalli            | October 2006     | December 2009.    |
| Nodal Officer Finance         | TEQIP (Phase -I), NIT, Tiruchirappalli   | November 2005    | February 2010     |
| Head                          | Department of Instrumentation and Control Engineering Department, NIT, Tiruchirappalli | June 2000        | February 2004     |
| Associate Dean Administration | NIT, Tiruchirappalli   | December 2005    | June 2007         |
| Secretary                     | 5th International Conference TIMA07  | January 4th 2007 | January 6th, 2007 |
| Member Chairman               | purchase committee   | Nov 1996         |                   |

10. Academic/Administrative Responsibilities outside the University

| Position      | Institution   | From | To   |
|---------------|---|------|------|
| Member of BOS | Department of Electronics and Instrumentation Engineering, Pondicherry Engineering College, Puducherry  | 2015 | 2017 |
| Member of BOS | Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore.   | 2015 | 2016 |
| Member of BOS | Pondicherry University, Puducherry  | 2014 | 2017 |
| Member of BOS | Madurai Kamaraj University, Madurai   | 2014 | 2016 |
| Member of BOS | Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore    | 2014 | 2015 |
| Member of BOS | Department of Electronics and Instrumentation Engineering, Government College of Technology, Coimbatore | 2013 | 2015 |

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|   |  |          |          |
|---|--|----------|----------|
| Member of BOS                                 | Instrumentation and Control Engineering, Manipal Institute of Technology, Manipal                    | 2013     | 2015     |
| Member of BOS                                 | Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore | 2012     | 2013     |
| Member of BOS                                 | Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore | 2011     | 2012     |
| Member of BOS                                 | Faculty of Electronics & Instrumentation Engineering, Anna University, Coimbatore                    | 2007     | 2010     |
| Member of BOS                                 | Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore | 2008     | 2009     |
| Member of BOS                                 | Instrumentation Technology, Sri Jayachamarajendra College of Engineering                             | 2008     | 2009     |
| Member of BOS                                 | Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore | 2007     | 2008     |
| Member of BOS                                 | Electronics & Instrumentation Engineering, Adhiyamaan College of Engineering                         | 2007     | 2008     |
| Member of BOS                                 | Electronics & Instrumentation Engineering, Ramakrishna Engineering College, Coimbatore               | 2007     | 2008     |
| Member of BOS                                 | College of Engineering, Anna University, Chennai   | 2008     |          |
| Member of BOS                                 | Instrumentation Engineering, Annamalai University, Chidambaram                                       | 2003     | 2006     |
| Member of BOS                                 | Electronics & Instrumentation Engineering, Vellore Institute of Technology, Vellore                  | 2003     | 2004     |
| Member of BOS                                 | Mechanical Engineering, SASTRA Deemed University, Thanjavur  | 2004     |          |
| Member / Chairman of various court of enquiry | DIT (IAT), DRDO, Pune  | Feb 1991 | Oct 1996 |

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|                               |                       |      |          |
|-------------------------------|-----------------------|------|----------|
| Food member,<br>Officers Mess | DIT (IAT), DRDO, Pune | 1992 | Oct 1996 |
|-------------------------------|-----------------------|------|----------|

### 11. Awards, Associateships etc.

| Year of Award | Name of the Award                         | Awarding Organization  |
|---------------|---|--|
| 2013          | Eminent Engineer Award                    | IEI (India) Madurai local centre   |
| 2007          | Best Teacher Award for the year 2006-2007 | National Institute of Technology Tiruchirappalli, India  |
| 1996          | Awarded commendation certificate          | Defence Research and Development Organization (DRDO), Ministry of Defence, Government of India |

### 12. Fellowships

| Year of Award | Name of the Fellowship     | Awarding Organization | From (Month/Year) | To (Month/Year) |
|---------------|----------------------------|-----------------------|-------------------|-----------------|
| 1999          | Young Scientist Fellowship | TNSCST                | June 1999         | Aug 1999        |

### 13. Details of Academic Work

- (i) Curriculum Development
- (ii) Courses taught at Postgraduate and Undergraduate levels

#### UG Level

Sensors and Transducers  
Industrial Instrumentation  
Power plant Instrumentation and Control  
Modern Control system  
Automotive Instrumentation  
Logic and distributed control system  
Sensors and Transducers lab  
Instrumentation lab

#### PG Level

Instrumentation  
Modern Control  
Instrumentation and Control lab

- (iii) Projects guided at Postgraduate level

| S.No | Title of the project work  | Project Period |
|------|--|----------------|
| 1.   | SOFT SENSOR FOR PARAMETER ESTIMATION IN LIQUID ROCKET ENGINE (Student Name: DEVAKUMAR M) | June 2022      |

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|-----|--|---------------------------|
| 2.  | Precision position control of shape memory alloy using inverse neural control and super twisting sliding mode control (Student Name: Vinod Sharma) | Jan 2015-May 2015         |
| 3.  | Gain scheduled LQI controller for aero thermal turbofan engine model (Student Name: Jerrin Joseph)   | Jan 2015-May 2015         |
| 4.  | Non linear modeling of SMA using RNN with higher order gradient descent techniques and its position control (Students Name: Vinod Sharma)          | June 2014-Dec 2014        |
| 5.  | Modelling and identification of nonlinear aero thermal turbofan gas turbine engine (Student Name: Jerrin Joseph)                                   | June 2014-Dec 2014        |
| 6.  | Modeling and Performance test on Magnetorheological Damper (Student Name: Veena Mathew)  | Jan 2014- May 2014        |
| 7.  | Position Control of Shape Memory Alloy using Sliding Mode Control (Student Name: Veena Mathew)   | June 2013- Dec 2013       |
| 8.  | Control scheme for precipitation of uranium peroxide (Student Name: Manish Kumar)  | Jan 2013- May 2013        |
| 9.  | Controller design for ER semi active suspension system (Student Name: V S Mohan)   | Jan 2013- May 2013        |
| 10. | Design and fabrication of ER damper (Student Name: V S Mohan)  | June 2012- Dec 2012       |
| 11. | Design of Microcantilever sensor using sliding mode control (student Name: Manish Kumar)   | June 2011- Dec 2011       |
| 12. | Modeling of coriolis mass flow meter (student Name: D Jyoti Swarup)  | January 2011<br>June 2011 |
| 13. | Design of measurement system using smart materials (student Name: D Jyoti Swarup)  | June 2010- Dec 2010       |
| 14. | Design of sliding mode controller for ER damper base suspension system (student Name: Naman Mittal)  | January 2011<br>June 2011 |
| 15. | Design and fabrication of ER damper (student Name: Naman Mittal)   | June 2010- Dec 2010       |
| 16. | Performance Enhancement of Resonant Systems with Strong Mechanical Coupling between two degrees of Freedom (Student Name: Suneel Kumar K)          | January 2007<br>June 2007 |
| 17. | Development of Algorithms for Sensor Fault Detection and Identification (FDI) for Industrial Control Loops (Student Name: D. Pardhasarathy)        | January 2006<br>June 2006 |
| 18. | Control Block Simulator (Student Name: M. Indumathy)   | January 2006<br>June 2006 |

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|-----|---|---------------------------|
| 19. | Control of Gyroscope stabilized Platform (Student Name:G. Kalpana)  | January 2006<br>June 2006 |
| 20. | Vibration Control of Cantilever Beam Using LABVIEW (Student Name: P.V. Challapathy)   | January 2006<br>June 2006 |
| 21. | Design of Output Feedback Compensator Using Quantitative Feedback Theory (Student Name: D. Pardhasarathy)                           | June 2005- Dec 2005       |
| 22. | Design and Implementation of Variable Structure Control for Piezo Actuated Structures (Student Name: A. Girija)                     | June 2005- Dec 2005       |
| 23. | Design and Implementation of H Infinity Controller for Flexible Structures (Student Name: Soudravalli)                              | June 2005- Dec 2005       |
| 24. | Vibration Control in Electrorheological Fluid Actuated Vehicle Suspension System (Student Name: M. Indumathi)                       | June 2005- Dec 2005       |
| 25. | Sensor Integration Using Communication Protocol TCP/IP(Student Name: P. Bhuvanewari)  | June 2005- Dec 2005       |
| 26. | Modeling and Simulation of Acoustic Vector Sensor (Student Name: P.V. Challapathy)  | June 2004- Dec 2004       |
| 27. | Robust Vibration Control of Piezolaminated Smart Structure (Student Name: M. Sridevi)   | Jan 2004-June 2004        |
| 28. | Vector Sensor (Student Name: S. Anitha)   | June 2004- Dec 2004       |
| 29. | Finite Element Modeling for Active Control of PiezoIntegrated Plate Based on Higher Order Plate Theory                              | Jan 2004-June 2004        |
| 30. | (Student Name: Manikandan)  |                           |
| 31. | Design and Implementation of Periodic Output Feedback Control for PZT Integrated System Using dSPACE (Student Name: G. Krishnaveni) | June 2003-Dec 2003        |
| 32. | Finite Element Modeling and Control of Piezoelectric Integrated Plate Structure (Student Name: Manikandan)                          | June 2003-Dec 2003        |
| 33. | Design of Output Feedback Control for MIMO Smart Structure Models (Student Name: S. Sankarasubramanian)                             | June 2002-Jan 2003        |
| 34. | Design of Variable Structure Control for Shape Memory Alloy Actuated Flexible Beam (Student Name: K.S. Jai Bhavani)                 | June 2002-Jan 2003        |
| 35. | Design, Simulation and Optimization of Microaccelerometer (Student Name: S. Sathya)   | Jan 2003-June 2003        |
| 36. | Design, Simulation and Optimization of Micro-gyroscope (Student Name: X. Femila Mary)   | Jan 2003-June 2003        |

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|-----|--|--------------------|
| 37. | Design, Simulation and Optimization of Micro-mirror (Student Name: A. Suganya)                                     | Jan 2003-June 2003 |
| 38. | Modeling, Simulation and Analysis of Micro Electro Mechanical Systems (Student Name: R. Aravindan)                 | Jan 2002-June 2002 |
| 39. | Design and Implementation of Output Feedback Control (Student Name: C. Gomathi Saratha)                            | June 2001-Jan 2002 |
| 40. | Modeling, Optimization and Control of Piezoelectric Integrated Structures (Student Name: G. Krishnaprasad)         | June 2001-Jan 2002 |
| 41. | Modeling and Control of Flexible Manipulators (Student Name: Mallikarjuna Reddy)                                   | June 2001-Jan 2002 |
| 42. | Design of Sliding Mode Control for Chemical Process System (Student Name: R. Balan)                                | June 2001-Jan 2002 |
| 43. | Design and application of output feedback control to process control problems (Student Name: Nirmala)              | June2000-Jan 2001  |
| 44. | Modeling and Output Feedback Control Design and Smart Structures (Student Name: Lakshmi Prathibha))                | June2000-Jan 2001  |
| 45. | Object Oriented Design of Temperature Measurement System(Student Name: S. D. Padghan and N. G. Patel)              | 1995               |
| 46. | Vibration Control of Flexible Beam Through Smart Structure Concept (Student Name: Prasad Goud)                     | 1995               |
| 47. | Acoustic Ranging System (ARS) for Structural Vibration Measurement (Student Name: H.R. Krishna and Ramakrishnanan) | 1992               |
| 48. | Load Measurement Using Strain Gauges(Student Name: Sivaramakrishnan and Madhavan)                                  | 1991               |

(iv) Other contribution(s)

**Participation in assessment board**

- Expert Member of National Board of Accreditation
- Served as a Member of GATE-2014 related operation
- Served as AICTE representative in the Expert Committee of UGC
- Served as an external expert in the assessment board for scientists of DRDO
- Served as an external expert in the assessment board for scientists of CSIR labs
- Served as an external expert in the faculty recruitment for the Electronics and Instrumentation Engineering, Pondicherry Engineering College, Pondicherry
- Served as a question paper setter for the selection of executive trainees, NTPC, New Delhi.

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14. Details of Major R&D Projects

| Title of Project   | Funding Agency  | Duration |      | Status             |
|--|---|----------|------|--------------------|
|  |   | From     | To   | Ongoing/ Completed |
| On-line oil debris monitoring sensor   | Department of Science & Technology under DDP programme  | 2020     | 2024 | Ongoing            |
| Self-Powered Sensor System for Condition Monitoring of Nuclear Waste Packages  | MHRD, Government of India under the Scheme for Promotion of Academic and Research Collaboration | 2018     |      | Ongoing            |
| Health Monitoring and Fault Diagnosis of Turbo pumps of Liquid Rocket Engines (LREs) using Deep Learning Neural Networks | Indian Space Research Organisation, Department of Space, Government of India.                   | 2019     |      | Ongoing            |
| Design of Spin based Piezoelectric Energy Harvester with Storage System  | Armament Research and Development Establishment, DRDO ,Pune                                     | 2017     | 2019 | Completed          |
| Sensor Development for the Detection of Oil Debris in Gas Turbine Applications   | Gas Turbine Research Establishment (GTRE), Bangalore  | 2016     | 2018 | Completed          |
| Design, Fabrication and Testing of Meso and Micro Scale Resonant Sensors with Electronics                                | Science and Engineering Research Board(SERB), DST, Government of India                          | 2013     | 2016 | Completed          |
| Establishment of New National MEMS Design Center   | National Programme on Micro and Smart   | 2009     | 2010 | Completed          |

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|  | Systems<br>(NPMAS)  |      |      |           |
|--|---|------|------|-----------|
| Design of Electrorheological (ER) Damper based suspension control system                                 | ARDB, Ministry of Defence, Government of India                                    | 2008 | 2010 | Completed |
| Experimental Investigation of SMA Actuated Flexible Structure under Piecewise Output Feedback Control    | ISRO, Bangalore   | 2008 | 2009 | Completed |
| Micro Pressure Sensor for Fuel level Indicator in Automobile   | FTD Solutions Pte Ltd, Singapore  | 2008 | 2009 | Completed |
| Micro Resonating Beam Differential Pressure Sensor: Simulation and Electronic Interface Design           | ISRO, Bangalore   | 2007 | 2008 | Completed |
| Uncertainty Analysis of Chain error in Instrumentation System for Space Application                      | ISRO, Bangalore   | 2007 | 2008 | Completed |
| Design and Fabrication of Micro Devices  | National Program on Smart Materials (NPSM)  | 2002 | 2007 | Completed |
| Modeling and Control of Smart Structures using Multi-sensor Data Fusion                                  | MHRD, Government of India under the scheme of Research and Development            | 2003 | 2005 | Completed |
| Design and Development of Structural Vibration Control System using Smart Materials as Sensors/Actuators | MHRD, Government of India, under the scheme of Thrust Area in Technical Education | 2002 | 2004 | Completed |

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15. Number of PhDs guided

| Name of the PhD Scholar | Title of PhD Thesis   | Role(Supervisor/ Co-Supervisor) | Year of Award |
|-------------------------|---|---------------------------------|---------------|
| G. Uma                  | Design of meso and micro resonators with piezoelectric sensing and actuation                            | Supervisor                      | 2009          |
| D. Ezhilarasi           | Identification and multirate output feedback control of piezo actuated structures                       | Supervisor                      | 2009          |
| K. Dhanalakshmi         | Design, modeling and control of shape memory alloy actuated structures                                  | Supervisor                      | 2009          |
| B.Vasuki                | Analysis of uncertainty for instrumentation systems using interval methods                              | Supervisor                      | 2009          |
| S. Neduncheliyan        | Modeling and control of piezo actuated structures with uncertainties using interval arithmetic approach | Supervisor                      | 2009          |
| L.R. Karlmarx           | Modeling and design of discrete time sliding mode control for smart structures                          | Supervisor                      | 2011          |
| J. Arunshankar          | Control of piezo actuated structure using multisensor data fusion                                       | Supervisor                      | 2011          |
| M. Shanmugavalli        | Modeling and experimental investigation of coriolis flow meter  | Supervisor                      | 2011          |

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|                      |   |            |      |
|----------------------|---|------------|------|
|                      | using piezoelectric sensing and actuation   |            |      |
| S. Dharmalingam      | Determination of accumulation value for the evaporator system of fossil fuel boilers and a novel control system design for fuel switching | Supervisor | 2012 |
| K. Suresh            | Micro and meso scale piezo excited and sensed resonance sensor with electronics   | Supervisor | 2012 |
| Senthilkumar P       | Position control of shape memory alloy wire actuators using modulated adaptive controllers  | Supervisor | 2013 |
| P. Pandiyan          | Design and Modelling of MEMS based Logic Devices  | Supervisor | 2018 |
| Mr. V. ParthaSarathi | Design and Analysis of Fractional Order Measurement System  | Supervisor | 2019 |
| Mr. V. ParthaSarathi | Design and Analysis of Fractional Order Measurement System  | Supervisor | 2019 |
| Mr. T. N. Satish     | Design Development and Functional Evaluation of Sensors For Aero Gas Turbine Engine Application   | Supervisor | 2020 |

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|--------------------------|--|----------------|---------|
| Mr. S. Raghavendran      | Electronic interface circuits for piezoelectric energy harvesting system                                       | Supervisor     | 2020    |
| Mrs. S. Shereen          | Design, Fabrication and Testing of MEMS Magnetic Field Sensor with an Emphasis on Permanent Magnetic Materials | Co- Supervisor | 2020    |
| Ms. Ramya A              | Design of Embedded system for temperature sensors  | Supervisor     | 2022    |
| Mr. V. Madhu             | Flow Instrumentation   | Supervisor     | Ongoing |
| Mr. V. Raja              | Design of Spin based Piezoelectric Energy Harvesting with Storage system                                       | Supervisor     | Ongoing |
| Ms. MD Vasumathi         | Modeling and Control   | Supervisor     | Ongoing |
| Miss. Elsa Sharu Johnson | MEMS Fabrication and Testing of MEMS Devices   | Co- Supervisor | Ongoing |

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

| Date (s) | Title of Activity | Level of Event (International/ National/ Local) | Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other) | Event Organized by | Venue |
|----------|-------------------|---|--|--------------------|-------|
|          |                   |   |  |                    |       |
|          |                   |   |  |                    |       |
|          |                   |   |  |                    |       |

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### 17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

| Title of Activity  | Level of Event<br>(International/<br>National/ Local) | Date (s)  | Role                        | Venue               |
|--|---|---|-----------------------------|---------------------|
| 5 <sup>th</sup> International Conference TIMA-07   | International Conference                              |   | Secretary                   | NIT, Trichy         |
| 1 <sup>st</sup> National Conference on Instrumentation and Control (ICECON 03)   | National Conference                                   | December 2003                                     | Convener                    | NIT, Trichy         |
| 2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , National Conference on Instrumentation and Control (ICECON 05, ICECON 07, ICECON 09) | National Conference                                   | December 2005,<br>December 2007,<br>December 2009 | Organizing committee member | NIT, Trichy         |
| AICTE-MHRD sponsored faculty development programme on MEMS and its CAD Tools   |   | 26 <sup>th</sup> -30 <sup>th</sup> July 2010      | Coordinator                 |                     |
| International Conference ICECON - 2019   | International   | 19 - 21 December 2019                             | General Co-Chair            | NIT Tiruchirappalli |

### 18. Invited Talks delivered

| Topic   | Date                       | Inviting Organization   |
|---|----------------------------|---|
| National Conference on Emerging Trends in Instrumentation Systems- 2011 | March 11-12, 2011          | Sri Ramakrishna Engineering College   |
|   | 24 <sup>th</sup> July 2010 | Institute of Smart Structures and Systems (ISSS), AGM at Indian Institute of Science        |
|   | Nov 2009                   | 6 <sup>th</sup> National Control and Instrumentation Conference (CISCON-2009), MIT, Manipal |
| Modern Trends in Instrumentation and Control                            | 25-26, Feb 2008            | PSG College of Technology   |
|   | 5 <sup>th</sup> April 2007 | Institute of Smart Structures and Systems (ISSS), AGM at NAL                                |

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|--|--------------------|---|
|  | 9-10 December 2011 | 3 <sup>rd</sup> Karpagam University Annual Congress-2011 organized by Karpagam University, Coimbatore |
|--|--------------------|---|

19. Membership of Learned Societies

| Type of Membership (Ordinary Member/ Honorary Member / Life Member ) | Organization   | Membership No. with date |
|--|--|--------------------------|
| Member   | Institute of Electrical and Electronics Engineers (IEEE) | (#91294274)              |
| Member   | International Society of Automation (ISA)                | (000033715957)           |
| Life Member  | Indian Society of Technical Education                    | (LM-31314)               |
| Life Member  | Institute of Smart Structures and Systems                | (LM-174)                 |
| Life Member  | Instrument Society of India                              | (LM-1471)                |
| Life Member  | System Society of India                                  | (LM-31630)               |
| Life Member  | Fellow of Institution of Engineers (India)               | (F-114890-3)             |

20. Academic Foreign Visits

| Country   | Duration of Visit    | Programme                |
|-----------|----------------------|--------------------------|
| USA       | Mar17th -21st, 2002  | SPIE Conference          |
| USA       | Feb 19th -21st, 2013 | IEEE Conference          |
| Singapore | Sep 25th -27th, 2002 | Asian Control Conference |
|           |                      |                          |

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21. Publications

(A) Refereed Research Journals:

| Author(s)   | Title of Paper   | Journal     | Volume (No.)   | Page numbers | Year        | Impact Factor of the Journal (Optional) |
|---|--|-------------|--|--------------|-------------|---|
| Gilbert Chandra D., Vinoth B., Srinivasulu Reddy U., Uma G., <b>Umapathy M.</b> | "Recurrent Neural Network based Soft Sensor for flow estimation in Liquid Rocket Engine Injector calibration, Flow Measurement and Instrumentation", |             | Volume 83, 2022, 102105, ISSN 0955-5986, <a href="https://doi.org/10.1016/j.flowmeasinst.2021.102105">https://doi.org/10.1016/j.flowmeasinst.2021.102105</a> . |              | <b>2022</b> |   |
| Ramya Anandanatarajan, <b>Umapathy Mangalanathan</b> , Uma Gandhi               | "Performance enhancement and fault identification using Kalman filter in a resistive temperature sensor interface"                                   | Measurement | Volume 183, 2021, 109836, ISSN 0263-2241, <a href="https://doi.org/10.1016/j.measurement.2021.109836">https://doi.org/10.1016/j.measurement.2021.109836</a> .  |              | <b>2021</b> |   |
| TN Satish, A Vivek, SN Anagha, ANV Rao, G Uma, <b>M</b>                         | "Novel resistor-capacitor (RC) network-based capacitance   |             | Volume: 234 issue: 2,  |              | <b>2020</b> |   |

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|--|--|--|--|--|------|--|
| Umapathy, Chandrasekhar, G Kiran,                                    | signal conditioning circuit for tip clearance measurement on gas turbine engine”                                   |  | page(s): 342-360, February 1, 2020. DOI: <a href="https://doi.org/10.1177/0954410019865853">https://doi.org/10.1177/0954410019865853</a> . |  |      |  |
| S. Raghavendran, M. Umapathy, G. Uma & L.R. Karlmarx,                | “Piezoelectric energy harvesting from DC-DC converters”  | Ferroelectrics                           | 558:1, 207-213, 2020. DOI: 10.1080/00150193.2020.1735904.  |  | 2020 |  |
| V. Raja, M. Umapathy, G. Uma, B. Praveen Kumar, S. Premkumar,        | Design, analysis and experimental investigation of a rotational piezoelectric energy harvester with storage system | J. Mech. Sci. Technol.                   | 34 (2020) 4475–4487. <a href="https://doi.org/10.1007/s12206-020-1008-4">https://doi.org/10.1007/s12206-020-1008-4</a> .                   |  | 2020 |  |
| Geerthy Thambiraj, Uma Gandhi, Umapathy Mangalanathan, V. Jeya Maria | “Investigation on the effect of Womersley number, ECG and PPG features for cuff less blood pressure                | Biomedical Signal Processing and Control | Volume 60, DOI: <a href="https://doi.org/10.1016/j.bsp">https://doi.org/10.1016/j.bsp</a>  |  | 2020 |  |

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|--|---|--|--|---------------|-------------|--|
| Jose, Manjunath Anand  | estimation using machine learning”,   |  | bspc.2<br>020.10<br>1942.                      |               |             |  |
| Ramya Anandanatarajan, <b>Umapathy Mangalanathan</b> and Uma Gandhi,                               | "Enhanced Microcontroller Interface of Resistive Sensors Through Resistance-to-Time Converter”                                | IEEE Transactions on Instrumentation and Measurement | vol. 69, no. 6, doi: 10.1109/TIM.2019.2928348. | pp. 2698-2706 | <b>2020</b> |  |
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