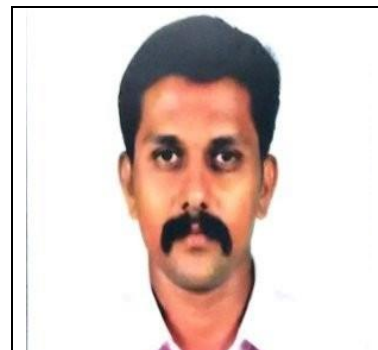




Faculty Profile



| | | |
|-----|--------------------------|--|
| 1. | Name of the Faculty : | Dr. T.S.MURUGESH |
| 2. | Designation : | Associate Professor (CAS) |
| 3. | Department: | Electronics and Communication Engineering |
| 4. | Date of Joining : | 02-08-2000 (22-07-2019 @ GCE Srirangam) |
| 5. | Faculty ID: | AICTE ID: 7488985509 |
| | | ANNA UNIVERSITY ID: 8301133 |
| 6. | E-Mail Address : | tsmuruges@gmail.com / tsmuruges@gces.edu.in / tsmuruges@yahoo.com |
| 7. | Date of Birth : | 23-12-1977 |
| 8. | Qualification : | B.E, M.E, PhD |
| 9. | Specialization : | Analog and Digital Electronics, System Design, Circuits, Computational Bioengineering, Control System, IoT, Process Control & Instrumentation |
| 10. | Professional Experience: | 23 Years 01 Month 12 days (as on 14-09-2023) |
| 11. | Research Guidance: | Two PhD Scholars (Pursuing) |
| 12. | Awards and Honors : | M.E (First Class with Distinction) |

| | | |
|-----|---|---------------|
| 13. | Sponsored Projects: | 01 |
| 14. | Patents: | NIL |
| 15. | Publications(Proof to be Enclosed – First page only) | |
| | (i) International Referred Journals : | 21 |
| | (ii) National Journals: | 01 |
| | (iii) International Conferences: | 02 |
| | (iv) National Conferences: | 03 |
| | (v) Poster Presentations | 02 |
| | (vi) Book Chapters | 05 |
| | (vii) Books Published With ISBN Number/ ISSN Number: | 05 + 03 |
| 16. | Conferences/Workshops/Seminar/ Short Term Refresher Courses Attended (Proof to be Enclosed) | List Enclosed |
| 17. | Conferences/Workshops/Seminars Organized | 02 |
| 18. | Other Contribution (If any) | List Enclosed |

15. i. International Referred Journals

1. **Murugesh T S**, Krishnan J and Malathi R, Effects of Gap Junction Conductance in Synchronizing Cardiac Oscillators. CiiT International Journal of Biometrics and Bioinformatics Vol.4, No.10, pp. 454-458, 2012.
2. **T.S. Murugesh** and B. Balraj, Secured Data Transmission by Blowfish Algorithm using OFDM, CiiT International Journal of Networking and Communication Engineering Vol.4, No.14, pp. 831-836, 2012.
3. **Murugesh T S**, Krishnan J and Malathi R, Certain investigations on the gap junction conductance in synchronization issues. International Journal of Research and Reviews in Applied Sciences Vol.15, Issue 3, pp. 312-321, 2013.
4. **Murugesh T S**, Krishnan J and Malathi R, Investigations on the intrinsic frequency of the cardiac cells in effecting synchronization. International Journal of Current Research Vol.5, Issue 10, pp. 3140-3148, 2013.
5. R.Narmatha, **T.S.Murugesh** and J.Krishnan, Design of an Intelligent Control Scheme for Synchronizing Two Coupled Van Der Pol Oscillators. International Journal of ChemTech Research Vol.6, No.12, pp. 5033-5048, 2014. (Scopus Indexed)
6. **T S Murugesh**, Assessment of Gap Junctional Conductance Magnitude in Cardiac Synchronization - A Computational Study. Journal of Emerging Technologies and Innovative Research Vol.2, Issue 12, pp. 258-266, 2015. (UGC Approved)
7. **T S Murugesh**, Achieving Synchronization in Cardiac Oscillators with Suitable Neural Input. Asian Journal of Electrical Sciences Vol.5, No.1, pp. 43-53, 2016. (UGC Approved)
8. **T. S. Murugesh** and M. Senthilkumar, Control Techniques for Synchronizing the States of Two Coupled Van der Pol Oscillators. Asian Journal of Engineering and Applied Technology Vol.5 No.2, 2016, pp. 44-50, 2016. (UGC Approved)
9. M.Senthilkumar and **T.S.Murugesh**, Design of Decentralized Controller Using RNGA for a Coupled Tank Process, Asian Journal of Electrical Sciences, Volume 5, Number 2, 2016, pp. 62-66. 2016. (UGC Approved)
10. **T S Murugesh**, M Senthilkumar and S Anbu, The Analogy of Coupled Oscillators. Journal of Emerging Technologies and Innovative Research Vol.5, Issue 8, pp. 811-816, August 2018, ISSN: 2349-5162. (UGC Approved)

11. Seshu Kumar Chegu, **T.S.Murugesh** and V. Rajeswari, Design of ZN Controller for Coupled Tank System. Journal of Advanced Research in Dynamical and Control Systems Vol. 11, 03-Special Issue, pp. 1643-1650, 2019. ISSN: 1943-023X (Scopus Indexed)
12. S.Mohanraj, **T.S.Murugesh**, M.Senthilkumar, "Design of decentralized controller for coupled tank system using BLT method.", Elsevier, Materials Today: Proceedings, Volume 46, Number 20, Mar 2021, pp. 11198-11201. (Scopus Indexed) <https://doi.org/10.1016/j.matpr.2021.02.410>
13. P.L.Arunkumar, M.Ramaswamy, **T.S.Murugesh**, IoT based Speed Control for Semi-Autonomous Electric On-Road Cargo Vehicle. International Journal of Advanced Computer Science and Applications (IJACSA). Vol.13, No.3, pp. 263-272. 2022. ISSN: 2156-5570 (Online) ISSN: 2158-107X (Print) (Indexed in Web of Science & Scopus)
14. Arunkumar Palaniappan, Ramaswamy Muthiah, **Murugesh Tiruchi Sundaram**, ZigBee enabled IoT based intelligent lane control system for autonomous agricultural electric vehicle application. Volume 23, July 2023, Article 101512. **SoftwareX Elsevier**. Online [ISSN: 2352-7110 \(Indexed in Scopus/Science Citation Index Expanded\)](https://doi.org/10.1016/j.softx.2023.101512) <https://doi.org/10.1016/j.softx.2023.101512>
15. Juluru Anudeep, Shriram K Vasudevan and **Murugesh T S**, Machine Learning based wearable sensor module for human fall detection - A Fully Functional Solution. International Journal of Medical Engineering and Informatics, Inderscience. 2022. (Accepted) (Scopus Indexed) DOI: [10.1504/IJMEI.2022.10048147](https://doi.org/10.1504/IJMEI.2022.10048147)
16. S Anbu, M Senthilkumar and **T S Murugesh**, Design of a Multiloop Controller for a Nonlinear Process. International Journal of Advanced Computer Science and Applications (IJACSA). Vol.13, No.4, pp. 290-299. 2022. ISSN: 2156-5570 (Online) ISSN: 2158-107X (Print) (Indexed in Web of Science & Scopus)
17. S.Mohanraj, **T.S.Murugesh** and E Sivaraman, A novel meta-heuristic Grey Wolf Optimization Algorithm for a coupled tank system. Journal of Data Acquisition and Processing. Vol. 38 (1), pp. 925-935. 2023. ISSN: 1004-9037 (Scopus Indexed)
18. Seshu Kumar Chegu, **T.S.Murugesh** and E Sivaraman, Grey Wolf Optimization based Controller Design for a Two Tank System. European Chemical Bulletin. Vol. 12 (Issue 7), pp.4019-4028, 2023. E-ISSN:2063-5346. doi: [10.48047/ecb/2023.12.7.338](https://doi.org/10.48047/ecb/2023.12.7.338) (**Scopus Indexed**)
19. Akshay B R, **T.S. Murugesh**, Shriram Kris Vasudevan & Sini Raj Pulari. Enhancing Multiclass Classification of Knee Osteoarthritis Severity Grades Using oneDNN. International Journal of Bioinformatics Research and Applications. Inderscience. ISSN online: 1744-5493. ISSN print: 1744-5485. (Accepted, Article entered Publication Schedule) DOI: [10.1504/IJBRA.2023.10058695](https://doi.org/10.1504/IJBRA.2023.10058695)

20. P.L.Arunkumar, M.Ramaswamy, **T.S.Murugesh**. IoT Based Speed Controller for an Off-Road Electric Vehicle Using ARM. International Journal of Systems Assurance Engineering and Management (IJSA), Springer Nature. Electronic ISSN: 0976-4348 Print ISSN: 0975-6809 (Accepted)

21. Malaisamy K, V Kavitha, **T S Murugesh** & M Senthilkumar. Design and Development of Jeans Textile Antenna for Wireless Broadband Applications. Journal of Industrial Textiles. ISSN: 1528-0837. E-ISSN: 1530-8057. (**Indexed in Scopus/Science Citation Index Expanded**) (Accepted)

ii. National Referred Journals

1. **T.S.Murugesh**, Implication of Synchronization in Coupled Cardiac Cell Array, pp. 140-152, in the Proceedings of National Conference on Process Automation, Control and Computing (NCPACC) A Department of Science and Technology - Promotion of University Research and Scientific Excellence (DST-PURSE) sponsored conference, 2018. ISBN 978-93-87862-36-4.

iii. International Conferences

1. S.Mohanraj, **T.S.Murugesh**, J.Krishnan and R.Malathi, Synchronization of Cardiac Oscillators - A study based on Gap Junction Conductance in Rabbit SA Node Cell, International Conference on “Biomaterials, Implant Devices and Tissue Engineering (BIDTE 2012) 6-8 January 2012.” , Organized by Rajalakshmi Engineering College Chennai, Society for Biomaterials and Artificial Organs (India), STERMI, India.

2. **T.S.Murugesh**, Ranjan Piyush, J.Krishnan and R.Malathi, Synchronization of Cardiac Oscillators, 3rd International Conference on Bioinformatics and Systems Biology (INCOBS 2012) 16th-18th February 2012, Sponsored by Department of Biotechnology, DRDO, CSIR, ICMR, Organized by Department of Bioinformatics, Annamalai University, India.

iv. National Conferences

1. R.Narmatha, **T.S.Murugesh** and J.Krishnan, Design of an Intelligent Control Scheme for Synchronizing Two Van Der Pol Oscillators, National conference on “Challenges in Biochemical Engineering and Biotechnology for Sustainable Environment” (CBSE2014), 2nd and 3rd April, 2014, Organized by the Department of Chemical Engineering, Annamalai University, Annamalai Nagar, Tamilnadu, India. 608002.

2. **T.S.Murugesh**, Implication of Synchronization in Coupled Cardiac Cell Array, Proceedings of National Conference on Process Automation, Control and Computing (NCPACC 2018) A **DST-PURSE** sponsored conference, Nov 9-10, 2018, Department of Electronics and Instrumentation Engineering, Annamalai University, pp. 140-152. Annamalai University, Annamalai Nagar, Bonfring, Coimbatore.

3. **T S Murugesh**, M Senthilkumar and S Anbu, Analyzing Coupling Efficacies in Synchronization of Coupled Van Der Pol Oscillators, in the **SERB - DST** Sponsored National Symposium on “Impending Mathematical Techniques for Nonlinear PDEs in Collective Dynamics”, during 24.01.2023 & 25.01.2023. Organized by the Department of Mathematics (SF) & Mathematics with Computer Applications, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India.

v. Poster Presentations

1. **T.S.Murugesh**, J.Krishnan and R.Malathi, Certain Investigations on the Synchronization issues in Cardiac Oscillators. Indo-Japan Symposium on Advances in Biomedicine and Bioinformatics, jointly organized by Indian Institute of Technology, Delhi and National Institute of Advanced Industrial Science and Technology, Japan on February 23, 2015 @**IIT Delhi**.

2. Krishnan J, **Murugesh T S** and Malathi R, Neural Influence on Synchronization of Cardiac Oscillators – A Computational Study, New Biological Frontiers Illuminated by Molecular Sensors and Actuators, June 28 – July 1, 2015, Biophysical Society Thematic Meeting, GIS Convention Center at **National Taiwan University, Taipei, Taiwan**.

vi. Book Chapters

1. Vasudevan, S. K., **Murugesh, T. S.**, Narassima, M. S., Dantu, N. V., Pulari, S., & Muralidharan, S. (2023). A Deep Learning Approach for the Sales Prediction in Retail Stores: An End-to-End Analysis and Implementation. In Internet of Everything for Smart City and Smart Healthcare Applications (pp. 17-34). Signals and Communication Technology book series. Cham: **Springer Nature** Switzerland. Electronic ISSN:1860-4870, Print ISSN:1860-4862. https://doi.org/10.1007/978-3-031-34601-9_2

2. Shriram Kris Vasudevan, **T.S. Murugesh**, Nitin Vamsi Dantu and Sini Raj Pulari, AI based real time Melanoma skin cancer detection to aid clinical decision making. **Wiley** Book Chapter: NGSWS 2023 (AI for Next Generation Smart Wearable Systems: Trends and Applications). (Accepted)

3. Shriram Kris Vasudevan, **T.S. Murugesh**, Sini Raj Pulari, Nitin Vamsi Dantu and Sunandhini Muralidharan. Smart Multi-Layer Architecture for Cyber-Physical Agricultural Systems with Intel oneAPI. **Elsevier** Book Chapter: ACPS2022 Agri 4.0 and the Future of Cyber-Physical Agricultural Systems. (Accepted)

4. Sini Raj Pulari, **T S Murugesh**, Shriram K Vasudevan & Akshay Bhuvanewari Ramakrishnan. Reinforcement learning for demand forecasting and customized services. **Wiley-Scrivener** Publishing Book Chapter: Cognitive Analytics and Reinforcement Learning: Theories, Techniques and Applications. 2023. (Scopus Indexed) (Accepted)

5. Akshay Bhuvanewari Ramakrishnan, **T S Murugesh**, Sini Raj Pulari & Shriram K Vasudevan. Cognitive computing Applications in smart cities. **Wiley-Scrivener**

vii. Books Published @ International level with ISBN Number

1. Juluru Anudeep, Shriram K Vasudevan and **T S Murugesh**, *Let's Get IoT-fied! 30 IoT Projects for All Levels*. 2022. CRC Press, Taylor & Francis Group (U.K). **ISBN # 9780367706067**. <https://doi.org/10.1201/9781003147169>
2. Juluru Anudeep, Shriram K Vasudevan and **T. S. Murugesh**, *Let's Get IoT-fied! 30 IoT Projects for All Levels*. 2022. CRC Press, Taylor & Francis Group (U.K). **ISBN # 9780367706074**. <https://doi.org/10.1201/9781003147169-1>
3. A Baskar, R. Muthaiah, Shriram K Vasudevan and **T S Murugesh**, *Digital Image Processing*, 2023. CRC Press, Taylor & Francis Group (U.K). **ISBN # 9781032108575 DOI: 10.1201/9781003217428 eBook ISBN: 9781003217428**
4. Shriram K Vasudevan, Nitin Vamsi Dantu, Sini Raj Pulari and **T. S. Murugesh** *Machine Learning with oneAPI*. 2023. CRC Press, Taylor & Francis Group (U.K). CRC Press. **ISBN # 9781032493107. DOI: 10.1201/9781003393122**.
5. Shriram K Vasudevan, Nitin Vamsi Dantu, Sini Raj Pulari and **T. S. Murugesh** *Machine Learning with oneAPI*. 2023. CRC Press, Taylor & Francis Group (U.K). CRC Press. **ISBN # 9781032493114. DOI: 10.1201/9781003393122**.
6. Akshay Ramachandran, Sini Raj Pulari, **T S Murugesh** and Shriram K Vasudevan. *Machine Learning: A Comprehensive Beginner's Guide*. 2024. CRC Press, Taylor & Francis Group (U.K). CRC Press. (Formal Contract Agreement Signed, Article in Proof) **ISBN # 9781032676654 (HB), 9781032676661 (PB), 9781032676685 (EB)**
7. **T. S. Murugesh**, Shriram K Vasudevan and Sini Raj Pulari. *Python – A practical learning approach*. 2024. CRC Press, Taylor & Francis Group (U.K). CRC Press. (Formal Contract Agreement Signed) **ISBN # 9781032712642 (HB), 9781032712666 (PB), 9781032712673 (EB)**
8. Dr. **T. S. Murugesh** and Dr. Shriram K Vasudevan, *An Insight to Biomedical Engineering - Making the Difference*. 2023. **Nova Science Publishers, Inc.**, a New York corporation located at 415 Oser Avenue, Suite N, Hauppauge, NY 11788-3619, **USA**. (Formal Contract Agreement Signed - Book ID 23889)

16. Conferences/Workshops/Seminar/ Short Term Refresher Courses Attended (Proof Enclosed)

| S.No | Name of the Programme Attended | Duration | Organized by |
|------|--|---|--|
| 1. | UGC Sponsored "Orientation Course" | 01 st - 28 th June 2002 | UGC - Academic Staff College, Bharathiar University, Coimbatore. 641 046 |
| 2. | One day workshop on "Electronic Circuit Design and Simulation" | April 10, 2004 | Department of Electrical Engineering, Faculty of Engineering and Technology, Annamalai University, AMDL, Bangalore and Vi Microsystems, Chennai. |
| 3. | Nanoscience & Nanotechnology | One Week, 06 th - 10 th November 2006 | Applied Science Department, National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh, Ministry of Human Resource Development, Government of India. |
| 4. | Digital Signal Processing | One Week, 21 st - 25 th May 2007 | Computer Science Department, National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh, Ministry of Human Resource Development, Government of India. |
| 5. | AICTE Sponsored STTP on "Design and Simulation in Control Systems Engineering" | 15 days, 01 st - 15 th June 2007 | Department of Electronics and Instrumentation Engineering, Pondicherry Engineering College, Puducherry |
| 6. | MATLAB | One Week, 19 th - 23 rd November 2007 | Electrical Engineering Department, National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh, Ministry of Human Resource Development, Government of India. |
| 7. | UGC Sponsored National Workshop on "Programming Approach and Industrial Applications on PLC (PAIA'10)" | 2 days, 15-16 March 2010 | Department of Electronics and Instrumentation Engineering, Faculty of Engineering and Technology, Annamalai University. |
| 8. | AICTE Sponsored Staff Development Programme on "Computational Biology" | 2 Weeks, 21 st Nov - 03 rd Dec 2011 | Department of Electronics and Instrumentation Engineering, Annamalai University. |

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| 9. | CSIR (Council of Scientific and Industrial Research) Sponsored ISTE - STTP on “Industrial Pollution - Advanced Technologies in Control and Safety (IPATICS 2013)” | One Week, 10 th - 14 th June 2013 | Department of Chemical Engineering, Annamalai University. |
| 10. | International Workshop on Emerging Trends in Energy Systems Management (IWETESM-2014) | 3 days, 14 th – 16 th March 2014 | Faculty of Engineering and Technology, Annamalai University and Center for Energy Systems Research, Tennessee Technological University, USA |
| 11. | One day Training Programme on “Preparation of Research Project Proposal” | 14 th March 2016 | Staff Training and Development Centre & Department of Botany, Annamalai University, Tamil Nadu |
| 12. | 2 days hands-on IoT Boot Camp | 17 th & 18 th December 2016 | Vmoksha Technologies Pvt. Ltd, Bangalore. 560 102. |
| 13. | HANDS ON PRACTICES IN Lab VIEW | One Week, 20 th - 24 th November 2017 | Electrical Engineering Department, National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh, Ministry of Human Resource Development, Government of India. |
| 14. | National workshop on “Emerging Challenges in the Operation and Control of Solar Power Plants (ECOCSPP’18)” | March 24th & 25th, 2018 | Centre for Renewable Energy, Faculty of Engineering and Technology, Annamalai University |
| 15. | Recent Advances in Signal Processing, RF & Wireless Communication | 23 rd - 27 th September 2019 | AICTE (All India Council for Technical Education) Training And Learning (ATAL) Academy at Government College of Engineering, Srirangam, Trichy. |
| 16. | Cyber Security | 21 st - 25 th October 2019 | Department of Computer Science and Engineering, Government College of Engineering Srirangam, Trichy sponsored by AICTE (All India Council for Technical Education) Training And Learning (ATAL) Academy |
| 17. | Internet of Things (IoT) | 04 th - 08 th | AICTE (All India Council for |

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| | | November 2019 | Technical Education) Training And Learning (ATAL) Academy at Government College of Engineering, Srirangam, Trichy. |
| 18. | Robotics | 25 th - 29 th November 2019 | AICTE (All India Council for Technical Education) Training And Learning (ATAL) Academy at Government College of Engineering, Srirangam, Trichy. |
| 19. | TEQIP-III Sponsored Two day Faculty Development Programme on “Design, Develop and Deliver online courses through MOODLE platform”. | 2 days, 23 rd & 24 th April, 2020. | Department of Technical Education, State Project Implementation Unit – Tamil Nadu & Coimbatore Institute of Technology, Coimbatore. |
| 20. | One Week AICTE Training And Learning (ATAL) Academy Online FDP on "Internet of Things (IoT)". | 11 th - 15 th May 2020 | AICTE (All India Council for Technical Education) Training And Learning (ATAL) Academy at Government College of Engineering, Srirangam, Trichy. |
| 21. | One Week Faculty Development Programme (FDP) on “Yoga at Home and Yoga with Family”. | One Week, 15 th - 21 st June 2020 | Department of Physical Education in association with National Service Scheme, Dr. M.G.R. Educational and Research Institute, Chennai. |
| 22. | TEQIP-III Sponsored Faculty Development Programme under twinning activity with NIT, Arunachal Pradesh and GEC, Jabalpur on “AI – The World of Prediction Machines”. | One Week, 24 th - 30 th June 2020 | Department of Electronics and Instrumentation Engineering, Government College of Technology, Coimbatore. |
| 23. | One week Faculty Development Programme titled "A Hands on Practice of Software Tools in Mechanical Engineering”. | 29 th June - 04 th July 2020 | Department of Mechanical Engineering, Vaageswari College of Engineering, Karimnagar, Telangana. |
| 24. | Tamil Nadu State Council for Higher Education, Chennai – 05 sponsored Two days State Level Online Faculty Development Programme (FDP) on “Virtual Teaching and Learning”. | June 30 th to July 01 st 2020. | Directorate of Technical Education, Guindy, Chennai – 25 & Government Polytechnic College – Srirangam, Sethurappatti, Trichy. |
| 25. | A Technical webinar on “Product Lifecycle Management” | 27 th July 2020 | Department of Mechanical Engineering, SCAD College of |

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| | | | Engineering and Technology, Tirunelveli. |
| 26. | National Level Social Awareness Programme on “Yoga and Natural Way of Living”. | 02 nd August 2020 | University College of Engineering, BIT Campus, Anna University, Tiruchirappalli in association with Rotaract Club of Anna University, Tiruchirappalli. |
| 27. | AICTE-ISTE sponsored one week Online Faculty Development Programme on “Internet of Things (IoT) and its Applications”. | One Week, 16 th - 22 nd November 2020 | Department of Computer Science and Engineering, Faculty of Engineering and Technology, Annamalai University, Annamalainagar, Tamil Nadu. |
| 28. | AICTE sponsored one week STTP on “Modeling and Simulation of Industrial Processes (MOSCHEMA 2021)” | One Week, 20 th - 25 th September 2021 | Department of Chemical Engineering, Faculty of Engineering & Technology, Annamalai University, Annamalainagar, Tamil Nadu. |
| 29. | AICTE sponsored one week STTP on “Optimization Modelling and Simulation for Process Industries (MOSCHEMA III – 2021)” | One Week, 04 th - 09 th October 2021 | Department of Chemical Engineering, Faculty of Engineering & Technology, Annamalai University, Annamalainagar, Tamil Nadu. |
| 30. | SERB - DST Sponsored National Symposium on “Impending Mathematical Techniques for Nonlinear PDEs in Collective Dynamics” | 2 days, 24.01.2023 & 25.01.2023 | Department of Mathematics (SF) & Mathematics with Computer Applications, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India. |

17. List of Conferences/Workshops/Seminar/Short Term Refresher Courses/ Faculty Development Programme Organized in sequential order

| S. No. | Name of the Programme Organized | Nature of the Programme | Venue | Period |
|--------|--|--|---|---|
| 1. | “cRIO for Renewable Energy Applications” | National Level Workshop | Centre for Renewable Energy, Faculty of Engineering & Technology, Annamalai University jointly with National Instruments, Bengaluru | 2 nd and 3 rd December 2017 |
| 2. | Trends and Issues in Control System | One Week Online (All India Council for Technical | Online mode | 17 th to 21 st August |

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|--|---------------------|---|--|------|
| | Analysis and Design | Education) AICTE Training And Learning (ATAL) Academy Programme (in Control Systems & Sensors Technology) | | 2020 |
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18. INVITED TALKS DELIVERED AT INTERNATIONAL LEVEL

| S. No. | Topic of the Oral Presentation | Name of the Programme | Organized by | Date |
|---------------|--|--|---|-------------------------|
| 1. | Design of a smart wearable for human fall detection | Scopus Indexed “3rd Edition of International Conference on Materials Science and Engineering (MAT 2022)” (online conference) | Magnus Group LLC, 150 South Wacker Drive #2400, Chicago, Illinois. 60606, USA, 2022 | September 21 - 22, 2022 |
| 2. | Design of a wearable for suppression of hand tremors | Scopus Indexed “3rd Edition of International Conference on Materials Science and Engineering (MAT 2022)” (online conference) | Magnus Group LLC, 150 South Wacker Drive #2400, Chicago, Illinois. 60606, USA, 2022 | September 21 - 22, 2022 |
| 3. | Building a Smart Ventilator! | 5th Virtual Congress on Materials Science and Engineering, “Materials Info 2022” | Mind Authors, Inc. 9450 SW Gemini Dr, Suite 71868, Beaverton, Oregon 97008 USA | September 26 - 29, 2022 |
| 4. | AI based skin cancer detection to aid clinical decision making | 5th Virtual Congress on Materials Science and Engineering, “Materials Info 2022” | Mind Authors, Inc. 9450 SW Gemini Dr, Suite 71868, Beaverton, Oregon 97008 USA | September 26 - 29, 2022 |

ii. INVITED TALKS DELIVERED AT NATIONAL LEVEL

| S. No. | Topic of the Presentation | Name of the Programme | Organized by | Date |
|---------------|--|---|---|--------------------------------|
| 1. | Programming in MATLAB for Computational Modeling | National Level Technical Symposium | Department of Electronics and Communication Engineering, Madurai Institute of Engineering & Technology, Sivagangai (Dt) | 19 th December 2015 |
| 2. | Controllers for Engineering Applications | ISTE (Indian Society for Technical Education), Students Chapter | Srinivasa Ramanujan Center, SASTRA University, Kumbakonam. | 28 th March 2016 |

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| 3. | Design of Nonlinear Controllers and Nonlinear Controllers in MATLAB | ISTE Approved Short Term Training Programme on “Advances in MATLAB for Engineering Applications (AMEA 2016)” | Department of Electrical Engineering, Faculty of Engineering and Technology, Annamalai University | 07 th June 2016 |
| 4. | Oscillator Model in MATLAB | ISTE Approved Short Term Training Programme on “Advances in MATLAB for Engineering Applications (AMEA 2016)” | Department of Electrical Engineering, Faculty of Engineering and Technology, Annamalai University | 08 th June 2016 |
| 5. | Optimization Techniques for MPPT in Solar Energy System | National Level Workshop on “Embedded Controllers for Solar Energy System” | Manakula Vinayagar Institute of Technology, Puducherry jointly with Centre for Renewable Energy, Faculty of Engineering and Technology, Annamalai University | 15 th September 2018 |
| 6. | Control Systems in Robotics | AICTE sponsored One week ATAL Faculty Development Programme on “Industrial Robotics and Automation” | Department of Mechanical Engineering, Government College of Engineering Srirangam, Sethurappatti, Tiruchirappalli. 620 012. Tamil Nadu | 26 th November 2019 |
| 7. | Dissemination of information on National Education Policy (NEP) 2020 | One Day National Level ONLINE Webinar conducted on behalf of “Unnat Bharat Abhiyan (UBA)” | Government College of Engineering Srirangam, Sethurappatti, Tiruchirappalli on behalf of “Unnat Bharat Abhiyan (UBA)” a flagship program of Ministry of Education (Previously MHRD - Ministry of Human Resource Development), Government of India | September 23, 2020 |
| 8. | AI in Bio Control Systems | Tamil Nadu State Government Sponsored Five Day Online Faculty Development Programme on “Artificial Intelligence - Applications” | Faculty Training Centre, Government College of Technology, Coimbatore 641 013, in association with Government College of Engineering, Thanjavur, 613 402. Tamil Nadu | February 16, 2021 |

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|-----|--|---|--|-----------------|
| 9. | Artificial Intelligence in Health Care | Tamil Nadu State Government Sponsored Five Day Online Faculty Development Programme on “Emerging Biomedical Technologies for Smarter Healthcare Applications” | Faculty Training Centre, Government College of Technology, Coimbatore 641 013, in association with Government College of Engineering, Salem, 636 011. Tamil Nadu | July 06, 2022 |
| 10. | Design of a Smart Healthcare System | Tamil Nadu State Government Sponsored Five Day Online Faculty Development Programme on “Emerging Biomedical Technologies for Smarter Healthcare Applications” | Faculty Training Centre, Government College of Technology, Coimbatore 641 013, in association with Government College of Engineering, Salem, 636 011. Tamil Nadu | July 06, 2022 |
| 11. | AI, Machine Learning, Data Analytics | CSIR Sponsored, Two Day National Seminar on "Advancements in IIoT (Industrial Internet of Things) for Engineering Applications" | Department of Computer Science and Engineering on 04.08.2022 at P.A. College of Engineering and Technology, Pollachi, 642 002, Tamil Nadu | August 04, 2022 |
| 12. | IoT Healthcare and Cloud Computing Integration | CSIR Sponsored, Two Day National Seminar on "Advancements in IIoT (Industrial Internet of Things) for Engineering Applications" | Department of Computer Science and Engineering on 04.08.2022 at P.A. College of Engineering and Technology, Pollachi, 642 002, Tamil Nadu | August 04, 2022 |
| 13. | Data Analytics to aid Decision Making | Faculty Development Programme sponsored by APJ Abdul Kalam Technological University Trivandrum, Kerala on “Data Analytics for Decision Making” | Department of Mechanical Engineering, VISWAJYOTHI College of Engineering and Technology, Vazhakulam P.O, Muvattupuzha, Ernakulam Dist. 686 670, Kerala | March 02, 2023 |
| 14. | Data Analytics in Health Care | Faculty Development Programme sponsored by APJ Abdul Kalam Technological University Trivandrum, Kerala on “Data | Department of Mechanical Engineering, VISWAJYOTHI College of Engineering and Technology, Vazhakulam P.O, Muvattupuzha, | March 02, 2023 |

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|-----|---|--|--|----------------------------|
| | | Analytics for Decision Making” | Ernakulam Dist. 686 670, Kerala. | |
| 15. | Investigations on a dual supply based Highly Stable and Low Power 6T CNTFET SRAM Cell | International Hybrid Conference on Nano Structured Materials and Polymers (ICNP 2023) | Mahatma Gandhi University, Kottayam, Kerala, India. | 12-14 May, 2023 |
| 16. | Sensors for Automobiles, Factors influencing selection of sensors, Microcontrollers for Automobiles | TiHAN (Technology Innovation Hub on Autonomous Navigation) IIT Hyderabad Sponsored Five Day National Level Workshop” on “Advanced Driving Assistance, Monitoring Systems with Hands-on Training” | National Institute of Technology, Tiruchirappalli, 620 015 @ NIT Trichy | 08 th June 2023 |
| 17. | Hands-on: Collision warning, Forward departure alert | TiHAN (Technology Innovation Hub on Autonomous Navigation) IIT Hyderabad Sponsored Five Day National Level Workshop” on “Advanced Driving Assistance, Monitoring Systems with Hands-on Training” | National Institute of Technology, Tiruchirappalli, 620 015 @ NIT Trichy | 08 th June 2023 |
| 18. | Introduction to IoT and Embedded Processors for IoT | Five Day FDP on "Embedded Systems and IoT with Hands-on Training in Arduino and Raspberry Pi" | Saranathan College of Engineering, Venkateswara Nagar, Trichy - Madurai Highway, Panjappur, Tiruchirappalli, Tamil Nadu 620012 | 24 th July 2023 |
| 19. | Case Studies of IoT | Five Day FDP on "Embedded Systems and IoT with Hands-on Training in Arduino and Raspberry Pi" | Saranathan College of Engineering, Venkateswara Nagar, Trichy - Madurai Highway, Panjappur, Tiruchirappalli, Tamil Nadu 620012 | 25 th July 2023 |

iii. OTHER NOTABLE CONTRIBUTIONS

1. Appointed and Served as **NTA** (National Testing Agency) **Representative** for the Conduct of **NEET** (National Eligibility Cum Entrance Test) (UG)-2019 exam during May, 2019; Place of Duty: Cuddalore. Tamil Nadu.
2. Acted as **Primary Evaluator** for the Government of India's **Toycathon 2021** an inter-ministerial initiative organized by Ministry of Education's Innovation Cell with support from All India Council for Technical Education during January - February 2021.
3. Appointed and Served as the **Team Head, Additional Static Surveillance Team I** for Election Expenditure Monitoring for the General Elections to Tamil Nadu Legislative Assembly 2021, during March - April 2021.
4. Served as a **Judge** in the Grand Finale for the Government of India's **Toycathon 2021** an inter-ministerial initiative organized by Ministry of Education's Innovation Cell with support from All India Council for Technical Education conducted during June 2021.
5. Acted as **Primary Evaluator** for the Government of India's **Smart India Hackathon 2022** (Software & Hardware Edition) an inter-ministerial initiative organized by Ministry of Education's Innovation Cell with support from All India Council for Technical Education during April - June 2022.
6. Acted as the **Chairman** for Zone XVIII, Phase II, **Anna University Central Valuation** during April / May 2022 Semester Examinations.
7. Appreciated by **Huawei** for the academic collaboration and was issued Huawei developers certification.
8. **Certified Mentor Registration No: 7488985509**. Successfully completed the Mentor Orientation Training Programme, under "National initiative for Technical Teachers Training", Conducted by All India Council for Technical Education (AICTE), New Delhi & National Institute of Technical Teachers Training and Research, Chennai from August 22 to 26, 2022.
9. **Mentored** the "SHORTLISTED" teams, for the Grand Finale of Smart India Hackathon 2022 conducted on August 25th and 26th, 2022.
10. **Certified** Microsoft Educator Academy Professional, 2022.
11. **Reviewer** of Technical Books in Regional Language scheme of **AICTE** for 2nd Year B.E / B.Tech courses coordinated by the Centre for Development of Tamil in Engineering and Technology, Anna University, Chennai - 600 025.
12. **Master Assessor** for the Naan Mudalvan Program devised by the Government of Tamil Nadu, 2023.
13. **Chairperson** for a Plenary Session in the International Hybrid Conference on Nano Structured Materials and Polymers (ICNP 2023) at Mahatma Gandhi University, Kottayam, Kerala, India, 2023.
14. **Evaluator** for "**The Kavach2023**" Cybersecurity Hackathon, organized by the Ministry of Home Affairs (MHA) in collaboration with the Ministry of Education's (MoE) Innovation Cell, AICTE along with Bureau of Police Research and Development (BPR&D) and Indian Cybercrime Coordination Centre (I4C) (MHA), Government of India.
15. **Chief Superintendent** for the April/May 2023 Anna University Theory Examinations.
16. **Exam Cell Coordinator** at GCE Srirangam from May 2023.

17. **Mentor** for the academic year 2023-2024 in MIT Art, Design and Technology University, Rajbaug, Loni Kalbhor, Pune, India – 412 201.
18. **Jury/Evaluator** for the Internal Hackathon held on behalf of “Smart India Hackathon 2023” conducted at Anna University, Regional Campus, Madurai. 625 019.

iv. REVIEWER FOR

- IEEE Control and System Graduate Research Colloquium, Malaysia
- IEEE International Conference on Automatic Control and Intelligent Systems, Malaysia
- International Symposium of Engineering Technologies 2016 (ISET2016), Terengganu, Malaysia
- International Symposium on Computational Intelligence & Applications (ISCIA2017), Malacca City, Malaysia
- IEEE Symposium on Computer Applications & Industrial Electronics, Malaysia
- IEEE International Colloquium on Signal Processing & Applications, Malaysia
- IEEE Conference on Systems, Process & Control, Malaysia
- IEEE Conference on System Engineering & Technology, Malaysia
- IEEE Symposium on Industrial Electronics & Applications, Malaysia
- IEEE International Conference on Automatic Control & Intelligent Systems, Malaysia
- International Conference on Engineering, Life Sciences and Social Sciences (ICEL3S2018), Malacca, Malaysia
- IEEE Symposium on Wireless Technology & Applications, Malaysia
- IEEE International Conference on recent trends in Microelectronics, Automation, Computing and Communications Systems (ICMACC-22) in association with IEEE Hyderabad Section, India.
- DST-PURSE (A Department of Science and Technology - Promotion of University Research and Scientific Excellence) sponsored National Conference on Process Automation, Control and Computing (NCPACC), 2018.
- IEEE International Conference on Electrical, Computer, and Energy Technologies (ICECET'22), Prague, Czech Republic.
- IEEE International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME 2022). Male, Maldives.
- 2nd International Conference on Digital Management, Information Systems and Technologies, (DMIST2022) Shenyang, China.
- International Journal of Medical Engineering and Informatics, **Inderscience**.
- IEEE Symposium on Computers & Informatics, Shah Alam, Malaysia
- IEEE International Conference on Mechanical, Automotive and Mechatronics Engineering (ICMAME 2023), Dubai. UAE.
- IEEE International Conference on Agrosystem Engineering, Technology & Applications - AGRETA 2023, Malaysia.

- 3rd IEEE International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), Canary Islands, Tenerife, Spain.
- 3rd IEEE International Conference on Electrical, Computer, and Energy Technologies (ICECET'23), Cape Town, South Africa.
- 3rd IEEE International Conference on Technological Advancements in Computational Sciences (ICTACS - 2023), Technically sponsored by IEEE region 8 (Europe, Middle East, and Africa) and IEEE Kazakhstan, Amity University, Tashkent City, Uzbekistan.
- IEEE International Conference on Computing, Communication, and Intelligent Systems (ICCCIS-2023), Sharda University, Greater Noida, India.
- Scopus indexed “International Conference on Recent Developments in Cyber Security (ReDCySec-2023)”
- Asian Journal of Engineering and Applied Technology (AJEAT) Peer-Reviewed Journal (ISSN: 2249-068X), India.
- Asian Journal of Electrical Sciences (AJES) Peer-Reviewed Journal (ISSN: 2249-6297), India etc.,

v. EXAMINERSHIP

1. Anna University, Chennai. 600 025. Tamil Nadu.
2. Annamalai University, Annamalai Nagar. Chidambaram. 608 002, Tamil Nadu.
3. Kongu Engineering College, Perundurai, Erode - 638 060. Tamil Nadu.
4. University of Kerala, Senate House Campus, Palayam, Thiruvananthapuram, Kerala 695 034.
5. Alagappa Chettiar Government College of Engineering and Technology, Karaikudi 630 003. Tamil Nadu.
6. Pondicherry University, Chinna Kalapet, Kalapet, Puducherry State. 605 014.
7. Pondicherry Engineering College, Pillaichavady, Puducherry, 605 014.
8. Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry - 605 107.
9. K.Ramakrishnan College of Technology, Kariyamanikam Road, Samayapuram, Tiruchirappalli – 621 112. Tamil Nadu.
10. Inter Departmental Expert member & Research Advisory Committee member in Annamalai University. Tamil Nadu.
11. PhD research supervisor in Annamalai University. Tamil Nadu. India.
12. Doctoral Committee (DC) ECE Panel member in Centre for Research (CFR), Anna University. Tamil Nadu. India.
13. Doctoral Committee (DC) Panel member in CFR for ECE department in Saranathan College of Engineering, Tiruchirappalli. Tamil Nadu. India.

vi. COMMITTEE MEMBERSHIP

1. Conference Committee Member in International Association of Applied Science and Technology (IAAST)
2. Publishing Committee Member in International Association of Applied Science and Technology (IAAST)
3. Editorial board member of *American Journal of Embedded Systems and Applications*

4. Technical Program Committee (TPC) member for the **Springer** Sponsored, **Scopus** indexed “International Conference on Recent Developments in Cyber Security (ReDCySec-2023)” conducted by Center for Cyber Security and Cryptology (CCSC), Sharda University, Greater Noida, Uttar Pradesh, India – 201 310 during 16-17 June, 2023.

vii. **HACKATHON PARTICIPATION**

1. Participated in the “India Automobile Hackathon” by NEC and Mitsubishi Corporation India Pvt. Ltd. 2022. Part of *The U-Team*.
2. Participated in the IEEE Smart Sensing Hackathon “The Blue Sky Challenge” by IEEE Sensors Council Young Professionals Hackathon 2021, IEEE Advancing Technology for Humanity. 2022. Part of *The U-Team*.
3. 1 idea “*Aqua Right*” **Shortlisted** for the Prototype phase in **Cloud Fest Hackathon 1**, 2022, Part of *The U-Team*.
4. 2 ideas “*Say “NO” to Money Laundering with AI!*” and “*An AI based Organizational and Employee Exploitation Risk Analysis Engine*” **Shortlisted** for **International Fraud Group Hackathon** by IFG, 2022, Part of *The U-Team*.



“Won the 2nd Prize in the IFG x TA Hub Hackathon from a pool of (1008 registered) 967 participant Teams @ International Level” for the idea “An AI Based Organizational and Employee Exploitation Risk Analysis” Under the Theme, Risk Analyzer in Palm Oil Sector.

5. 2 ideas “*Aqua Chain*” and “*Or'gone*” **Shortlisted** for **Sire – Hackathon**, 2022, Part of *The Hacksters* Team.
6. Participated in the “ICTs for Indigenous Languages” by WSIS Forum 2022. Part of *The U-Team*.
7. Participated in the “KardiaChain Pioneer Program 2.0” by aws Vietnam 2022. Part of *The U-Team*.
8. Participated in the “Breaking the Bottleneck: Shortened Supply Chains” by GS1 US Hackathon 2022. Part of *The U-Team*.
9. Participated in the “2022 Circle Hackathon”, Circle - a global financial technology firm at the center of digital currency innovation and open financial infrastructure. Part of *The U-Team*.
10. **Shortlisted** for the Prototype phase in **Hack the Normal 2022: Sustainability Program**, Part of *The U-Team*.
11. 2 ideas “*Fit-O-Train*” and “*Ex.Cautio Opportunitas*” **Shortlisted** for **Hack For Sport** by Sporjo, India’s First Sports Ecosystem & Gaming Hackathon, 2022, Part of *The U-Team*.
12. Participated in the “HackForGood: Grab Hackathon 2022” by Grab. Part of *The U-Team*.

13. 2 ideas “Aicare - Skin Cancer Diagnosis Tool” and “Ret “AI” Iz” **Shortlisted** for **Cloud Fest Hackathon 2** Presented by **Google Cloud**, 2022, Part of **The U-Team**.



“Won the 1st Prize” in the Cloud Fest Hackathon 2 from a pool of 8364 registered participant Teams @ International Level Presented by **Google Cloud**, 2022, for the idea “AICare - Skinno!” under Healthcare Theme.

14. Participated in the **Rakathon’22**, Rakuten’s flagship hackathon event, a 24 hours long coding competition by Rakuten India on 22nd & 23rd July 2022, Part of **The U Team**.

15. 1 idea “Learn ‘o’ Sys” **Shortlisted** for Prototype Building Phase in **Reinvent Chegg Hackathon’22**, Part of **2.0 - Reborn Team**.

16. Participated in the “HackZurich 2022” Europe's most renowned hybrid hackathon. Part of **The U-Team**.

17. **Shortlisted** in the “Road Safety Hackathon” by Centre for Excellence for Road Safety (CoERS) IIT Madras, 2022.

18. **“Won the 1st Prize”** in the **DigitalGov Hack**, the Hackathon by WSIS Forum 2023, and Digital Government Authority, Saudi Arabia in the Empowering young talent category, among 1170 registered participants and 894 teams @ International Level. Part of **2.0 - Reborn Team**.



19. Participated in the “Tata Crucible Hackathon 2022” by Tata InnoVerse Team, 2022. Part of **The U Team**.

20. **Shortlisted** in the “MSME Idea Hackathon 2.0” under the Ministry of MSME Innovative scheme, 2022. Part of **The U Team**.



MSME Idea Hackathon 2.0 Winners - 15 Lakhs funding for idea development for Incubation component under MSME (Ministry of Micro, Small and Medium Enterprises) Innovative Scheme, Government of India. Reference No. IDEATN007116.


21. Participated in the “Build a Climate Fintech App” by Rapyd Hackathons, 2022. Part of **2.0 Reborn Team**.

22. **Shortlisted** for Round 2 Prototype submission phase in **airtel iQ Edtech** hackathon from a pool of 609 participant teams, 2023. Part of **The U Team**.

23. **Shortlisted** for the Prototype submission phase for **bobWorld hAAckathon by Bank of Baroda** 2023. Part of **2.0 - Reborn Team**.

24. Participated in the “Smartathon” by SDAIA (Saudi Data and Artificial Intelligence Authority), 2023. Part of **2.0 Reborn Team**.

25. Participated in the “Rolls Royce Hackathon” R² Data Labs Responsible Growth Hack by R² Data Labs, 2023. Part of **2.0 Reborn Team**.

26. **Shortlisted** for the Prototype submission phase for **Skill-A-Thon^{1.0}** [NDEAR](#) (National Digital Education Architecture) – ONDC (Open Network for Digital Commerce) Education & Skilling Hackathon under Open Innovation **Challenge** by EkStep Foundation from a pool of 4058 registered participants and 2960 teams, 2023. Part of **2.0 - Reborn** Team.
27. Participated in the “NuHarbor Hackathon” by The Cybersecurity Polyglot Project, 2023. Part of **2.0 Reborn Team**.
28. **Shortlisted** and **Finalist** for the idea Submission round at PLEDGE TO PROGRESS Sustainability Hackathon sponsored by Microsoft., 2023. Part of 2.0 - Reborn Team.
29. One idea submitted to ODS23 “oneAPI Dev Summit and Hackathon 2023”.
30. One idea submitted to “ROAD SAFETY HACKATHON 2023- INDIA SPECIFIC ‘ADAS’ DEVELOPMENT” conducted by Centre of Excellence for Road Safety (CoERS), **IIT Madras**.
31. **Finalist** in the AutoTech Hackathon conducted by KIIT (Kalinga Institute of Industrial Technology) TBI (Technology Business Incubator) in association with Ashok Leyland. July 2023.
32.  **Won the 2nd Prize (Runner Up) in the “inCode Hackathon 2023 - Challenging injustice”** for the idea *VoiceRa* under the Theme “Safety” from a pool of 2496 registered Teams. Part of **2.0 - Reborn** Team.
33. **Finalist** in the Catalyse Tech, A SELCO Foundation Initiative, On Farm Technologies Innovation Challenge. In collaboration with ATAL Incubation Centre. 2023.

FUNDING/GRANT SANCTIONED



15 Lakhs funding for idea development for Incubation component under MSME (Ministry of Micro, Small and Medium Enterprises) Innovative Scheme, Government of India. Reference No. IDEATN007116, **Idea/Innovation: Aqua Chain**. For nurturing & development of Ideas approved in 4th PMAC (Project Monitoring and Advisory Committee) of MSME Innovative Scheme held on 26.06.2023. Part of **The U Team**.

MEMBERSHIP IN PROFESSIONAL BODIES

The Institution of Engineers (India) - M-1626390