Technical Collection   Researcher Profile

Winter 10-1-2022

Hybrid sensors

KV Santhosh

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Carrier summary:
Strong background in instrumentation, control systems, automation, embedded, and intelligent systems.

EDUCATION

Year	Course	Institute
2013	Ph.D in Electrical Engineering	NIT Silchar, Assam, India
2006	M.Tech (Electronics)	Visvesvaraya Technological University, India
2004	B.E (Instrumentation Technology)	Visvesvaraya Technological University, India
2000	PUC	Karnataka Pre-University Board
1999	X	Karnataka Secondary School Education Board

PROFESSIONAL EXPERIENCE

Deputy Director Research (Technical), Manipal Academy of Higher Education, Manipal
Associate Prof., Dept. of Instrumentation & Control Eng., Manipal Institute of Technology,
July 2013 – till date
Coordinator – Centre for Excellence in Cyber Physical System

Dayanadasagar College of Engineering, Bangalore
Lecturer, *Dept. of Instrumentation Technology*
July 2007-December 2010

City engineering College, Bangalore
Lecturer, *Dept. of Electronics and Communication Engineering*
December 2006 – June 2007

GE Power Controls LTD.
Project Trainee
July 2005 – September 2006

SKILLSET

Programming Languages: Matlab, LabVIEW, VHDL, Verilog, C, C++, Embedded programming, PLC

Subject taught: Instrumentation, Sensors, Sensor fusion, Smart sensors, Control systems, Modern Control Systems, Process Control, Microprocessors & Microcontrollers, Signal and Systems, Electrical Circuits, Integrated Circuits

Area of interest/research: Intelligent Instruments, Wireless sensor Network, Virtual Instrumentation, Application of Image Processing and Computer Vision in Industrial Systems Automation, Control Systems, Multi-Senor Data Fusion, Cyber Physical Systems, and Embedded system systems based Measurement.

PhD Thesis:
Title: Design and Implementation of Adaptive Calibration Techniques using Optimal ANN for Intelligent Measurements

Guide: Prof. B K Roy, Professor, Dept of EE, NIT Silchar, Silchar, Assam.

PG Thesis:
    Title: Implementation of Controller cards for Electronic Breakers
    Guide: Smt. M N Suma, Associate Professor, Dept of E&C, BMS College of Engineering, Bangalore.

PUBLICATIONS

Sl. No.	Nature	Published
1.	**Chapters in Book**	Ten (10)
2.	**Refereed Journals**	Seventy Six (76)
3.	**Presentations (Proceedings)**	Eighty nine (89)

IPR filed : 13

PROFESSIONAL MEMBERSHIP

- Life member - Instrumentation Society of India (ISOI)
- Member - International Association of Computer Science and Information Technology (IACSIT)
- Life member - Indian Society of Technical Education (ISTE)
- Life member - Institute of Engineers (India)
- Life member - Indian Society of Systems for Science and Engineering (ISSE)

DETAILS OF PUBLICATIONS

Book Chapter

1. **Santhosh K V**, "Self-calibrating Thermocouple Using Neural Network Algorithm for Improved Sensitivity and Fault Identification", Lecture notes in Smart Computing Paradigms: New Progresses and Challenges, Vol. 767, pp. 141-147, Springer Verlag, 2020.
2. **Santhosh K V**, Sneha Nayak, "Design of an adaptive soft sensor for measurement of liquid level independent of liquid", Lecture Notes in Electrical Engineering, Vol. 478, pp. 523-535, Springer Verlag, 2019
3. V Sravani, **Santhosh K V**, "Analysis of a flow process for variation of orifice dimensions with design of adaptive instrumentation", Lecture Notes in Electrical Engineering, Vol. 478, pp. 561-573, Springer Verlag, 2019
4. **Santhosh K V**, Preeti Mohanty, "Smart Calibration technique for auto ranging of LVDT using support vector machine", Lecture Notes in Electrical Engineering, Vol. 478, pp. 549-560, Springer Verlag, 2019
5. **Santhosh K V**, Noronha E'silva Nathan, "Performance optimization of self-exited piezoelectric vibration sensor", Lecture Notes in Electrical Engineering, Vol. 478, pp. 587-5971-573, Springer Verlag, 2019
6. **Santhosh KV**, Bhagya R Navada, "Design of an Adaptive Calibration technique using data fusion for Pressure Measurement", *Advances in Communication, Devices, and Networking* (ISBN 978-981-10-7901-6), Lecture notes in Electrical Engineering, Vol. 462, Chapter No. 88, Springer 2018.
7. **Santhosh K V**, B K Roy, "Soft Calibration Technique with SVM for Intelligent Flow Measurement," *Systems Thinking Approach for Social Problems*, Lecture Notes in Electrical Engineering (ISBN 978-81-322-2140-1), Vol. 327, Chapter No. 6, Springer Publication, 2015.
8. **Santhosh K V**, B K Roy, "A soft Calibration Technique for Thermistor using Support Vector Machine," *Advances in Intelligent Systems and Computing* (ISBN 978-81-322-1770-1), vol. 258, Chapter No. 26, Springer Publication, 2014.
9. **Santhosh K V**, B K Roy, "Design of an Adaptive Calibration Technique using Support Vector Machine for LVDT," *Advances in Signal Processing and Intelligent Recognition Systems*, Advances in Intelligent Systems and Computing (ISBN 978-22-170-4960-1), Vol. 264, Chapter No. 13, Springer Publication, 2014.
10. **Santhosh K V**, B K Roy, "An Intelligent Flow Measurement Technique by Venturi Flow meter using Optimized ANN", *IAENG Transactions on Engineering Technologies* (ISBN 978-94-007-5651-9), Chapter No. 25, Springer Publication, 2012.

Journal

1. Sravani V, **Santhosh K V**, "Soft sensor for an orifice flowmeter in presence of disturbances", Flow Measurement and Instrumentation, Vol. 86, pp. 102178, 2022. (WoS-JIF: 2.037)
2. Soumya J. Bhat, **Santhosh K V**, "A localization and deployment model for wireless sensor networks using arithmetic optimization algorithm", Peer-to-Peer Networking and Applications, Vol. 15, pp. 1473-1485, 2022. (WOS-JIF: 3.3)
3. Soumya J. Bhat, **Santhosh K V**, "Localization of isotropic and anisotropic wireless sensor networks in 2D and 3D fields", Telecommunication Systems, Vol. 79, pp. 309–321, 2022 (WOS-JIF: 2.3)
4. Sravani V, **Santhosh K V**, "Parametric analysis of orifice plates on measurement of flow: A review", Ain Shams engineering Journal, Vol. 13, No. 3, pp. 101639, 2022. (WOS-JIF: 3.18)
5. Anirudh Ameya Kashyap, Shravan Raviraj, Ananya Devarakonda, Shamanth R Nayak K, **Santhosh K V**, Soumya J Bhat, "Traffic flow prediction models – A review of deep learning techniques", Cogent Engineering, Vol. 9, No. 1, pp. 2010510, 2022.
6. Bhagya R Navada, **Santhosh K V**, "Fusion-Based Online Identification Technique for Pneumatic Actuator Faults", Engineered Science, Vol. 17, pp. 56-59, 2022.
7. Manthan Janodia, Aparna I N, **Santhosh K V**, Bharti Chogtu, "Publication analysis in Bay for Bengal Initiative for MultiSectoral Technical and Economic Cooperation Nations," F1000 Research, vol. 10, 510, 2021.
8. Sravani V, **Santhosh K V**, "An improved capacitance pressure sensor with a novel electrode design" Sensors & Actuators: A. Physical, Vol. 332, No. 1, pp. 113112, 2021. (WOS-JIF: 3.5)
9. Sravani V, **Santhosh K V**, "Prediction of flow by linear parameter varying model under disturbance," Measurement, Vol. 186, pp. 110124, 2021. (WOS-JIF: 3.9)
10. Sneha Nayak, Sravani Vemulapalli, **Santhosh K V**, Meghana Shankar, "Design of a soft sensing technique for measuring pitch and yaw angular positions for a Twin Rotor MIMO System," F1000 Research, vol. 10, 342, 2021.

11. Aparna I N, Bharti Chogtu, Manthan Janodia, **Santhosh K V**, "A bibliometric study on the research outcome of Brazil, Russia, India, China, and South Africa," F1000 Research, vol. 10, 213, 2021.

12. **Santhosh K V**, Swetha Rao, "Capacitance pressure sensor with S-type electrode for improved sensitivity," Transactions of the Institute of Measurement and Control, vol. 43, No. 11, pp. 2577-2586, 2021 (WOS-JIF: 1.649).

13. Soumya J Bhat, **Santhosh K V**, "A Method for Fault Tolerant Localization of Heterogeneous Wireless Sensor Networks," IEEE Access, Vol. 9, pp. 37054 – 37063, 2021 (WOS-JIF: 3.745).

14. Bhagya R Navada, **Santhosh K V**, "Filter Design Using Data Fusion for a Pneumatic Control Valve," Serbian Journal of Electrical Engineering, Vol. 18, No. 1, pp. 49-61, 2021.

15. Vidya S Rao, Praveen Shenoy K, **Santhosh K V**, "Design of PLC Based Automated Food Processing Machine," International Journal of Mechanics, Vol. 15, No. 1, pp. 22-29, 2021.

16. Bhagya R Navada, **Santhosh K V**, "Is Fault Detection and Diagnosis in Pneumatic Actuator A Topic of Concern?", Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, Vol. 77, No. 2, pp. 102-129, 2021.

17. **Santhosh K V**, Nathan Noronha E Silva & Nanditha Nair, "Design of an optimal observer for making liquid level control loop robust to variations in transmission parameters", Cogent Engineering, Vol. 7, No. 1, pp. 18406881-17, 2020.

18. Jayalaxmi R Hanni, **Santhosh KV**, "A novel helical electrode type capacitance level sensor for liquid level measurement", Sensors and Actuators-Physical, Vol. 315, pp. 1122831-14, 2020.

19. **Santhosh K V**, Preeti Mohanty, "Design of Estimator for Computing Yaw and Pitch for a Twin Rotor MIMO system," International Journal of Mechanics, Vol. 14, pp. 79- 86, 2020.

20. Soumya J Bhat, **Santhosh KV**, "An optimization based localization with area minimization for heterogeneous wireless sensor networks in anisotropic fields", Computer Networks, Vol. 179, pp. 107371-107380, 2020.

21. Jayalaxmi R Hanni, **Santhosh KV**, "Does the existing liquid level measurement system cater the requirement of future generation?", Measurement, Vol. 156, pp. 107594, 2020.

22. **Santhosh K V**, Blessy Jacob, Swetha Rao, "Design of an Instrument for Liquid Level Measurement and Concentration Analysis Using Multisensor Data Fusion," *Journal of Sensors*, Article ID: 4259509, 2020.

23. Bhagya R Navada, **Santhosh K V**, Swetha Rao, "A Soft Sensor for Estimation of In-Flow Rate in a Flow Process Using Pole Placement and Kalman Filter Methods," *Machines,* vol. 7, No. 4, pp. 631-14, 2019.

24. Nanditha Nair, **Santhosh K V**, "Sensor Fault Isolation in a Liquid Flow Process Using Kalman Filter," *Automatic Control and Computer Sciences*, vol. 53, No. 4, pp. 310-319, 2019.

25. **Santhosh K V**, Swetha Rao, "Fault Detection of a Flow Control Valve Using Vibration Analysis and Support Vector Machine," *Electronics,* vol. 8, No. 10, pp. 10621-15, 2019.

26. **Santhosh K V,** "A Technique for Measuring Quantity of Oil in a Flowing Water-Oil Mixture", *Journal of Engineering Science and Technology*, vol. 14, No. 1, pp. 059-072, 2019.

27. **Santhosh K V**, Bhagya R Navada, "Estimation of flow rate through analysis of pipe vibration", *Acta mechanica et automatic*, vol. 12, No. 4, pp. 294-300, 2018.

28. **Santhosh KV**, Bhagya R Navada, "An adaptive liquid level controller using multi sensor data fusion", *Telkomnika*, vol. 16, No. 5, pp. 2465-2473, 2018.

29. V Sravani, **Santhosh K V**, Sanjay Bhargava, Verina D'Almeida, "Design and Implementation of a Smart Controller in Agriculture for Improved Productivity", *Electrica*, vol. 18, No. 1, pp. 45-51, 2018.

30. Bhagya R Navada, **Santhosh K V**, "Design of Mobile Application for Assisting Color Blind People to Identify Information on Sign Boards", *Journal of Engineering and Technological Sciences*, Vol. 49, No. 5, pp. 671-688, 2017.

31. **Santhosh K V**, Preeti Mohanty, "Sensor Fusion based Safe Fire Evacuation System", *Journal of Advanced Research in Dynamical and Control Systems,* Vol. 9, No. 3, pp. 7-13, 2017.

32. **Santhosh K V**, Sneha Nayak, "A non-contact Intelligent Viscosity Measurement Technique", *Journal of Advanced Research in Dynamical and Control Systems,* Vol. 9, No. 2, pp. 143-155, 2017.

33. **Santhosh K V**, Bhagya R Navada, "Design of an adaptive flow measurement technique to filter effect of liquid temperature", *Journal of Advanced Research in Dynamical and Control Systems,* Vol. 9, No. 2, pp. 156-166, 2017.

34. **Santhosh K V**, B K Roy, "Online Implementation of an adaptive calibration Technique for Displacement Measurement using LVDT", *Applied Soft Computing Journal*, Vol. 53, pp. 19-26, 2017.

35. Bhagya R Navada, **Santhosh K V**, "Estimation of Liquid Temperature from Analysis of Liquid Level Sensor Characteristics" *International Journal of Control Theory and Application*, Vol. 9, No. 39, pp. 269-278, 2016.

36. **Santhosh K V**, Shashank Kumar, "Design of Liquid Level Measurement System using Multi Sensor Data Fusion for Improved Characteristics and Fault Detection", *Journal of Electrical and Electronics Engineering*, Vol. 9, No. 2, pp. 67-72, 2016.

37. **Santhosh K V,** Karel De Smet, "Sensor Data Fusion Framework for Improvement of Temperature Sensor Characteristics", *Measurement and Control Journal*, Vol. 49, No. 7, pp. 219-229, 2016.

38. **Santhosh K V,** Bhagya R Navada, "Detection of Quantitative Faults in Pencil Packet by Analyzing its Capacitance", *International Journal of Imaging and Robotics*, Vol. 16, No. 4, pp. 37-48, 2016.

39. **Santhosh K V**, Vighnesh Shenoy, "Analysis of Liquid Viscosity by Image Processing Techniques", *Indian Journal of Science and Technology,* Vol. 9, No. 30, August 2016.

40. **Santhosh K V**, B K Roy, "A Practically Validated Intelligent Calibration Circuit using Optimized ANN for Flow Measurement using Venturi", *Journal of The Institution of Engineers (India): Series B*, Vol. 97, No. 1, pp. 31-39, Jan 2016.

41. Deepashri K M, **Santhosh KV**, "Glaucoma Detection by Image Fusion from Fundus Color Retinal Images: A Review", International Journal of Control Theory and Application, Vol. 8, No. 3, pp. 1147-1152, 2015.

42. **Santhosh K V**, B K Roy, "A Practically Validated Adaptive Calibration Technique for Temperature Measurement using Resistance Temperature Detector", *Engineering Intelligent Systems*, Vol. 23, No. 3, pp. 153-161, Sep 2015.

43. **Santhosh KV**, B K Roy, "FPGA Implementation of Oxygen Level Monitoring in Oxygen Cylinder", *International Journal of Bio-Science and Bio-Technology*, Vol.7, No.5, pp.225-234, 2015.

44. **Santhosh KV**, Bhagya R Navada, "An Automated Technique for Classification and Quantitative Analysis in Coloured Pencil Manufacturing Process using Artificial Neural Network", *International Journal of Information Processing*, Vol. 9, No. 3, pp. 28-37, September 2015.

45. **Santhosh K V**, Bhagya R Navada "A Non-contact Technique for Qualitative analysis of Crayon Packets using Image Processing Techniques", *Indian Journal of Science and Technology,* Vol 8, No. 24, IPL0736, September 2015.

46. **Santhosh KV**, Preeti Mohanty, "Soft Computation Technique based Fire Evacuation System", *Indian Journal of Science and Technology,* Vol 8, No. 24, IPL0315, September 2015.

47. **Santhosh K V,** B K Roy, "Practically Validated Intelligent Calibration Technique using Optimized ANN for Ultrasonic Flow meter", *International Journal of Electrical Engineering and Informatics*, Vol. 7, No. 3, pp. 379-392, September 2015.

48. **Santhosh KV,** B K Roy, "A Practically Validated Adaptive Calibration Technique using Optimized Artificial Neural Network for Level Measurement by Capacitance Level Sensor", *Measurement and Control,* Vol. 48, No. 7, pp. 217-224, September 2015.

49. **Santhosh KV,** "Fusion of Venturi and Ultrasonic Flow Meter for Enhanced Flow Meter Characteristics Using Fuzzy Logic", *International Journal on Soft Computing*, Vol. 5, No. 3, pp. 937-941, 2015.

50. **Santhosh KV**, Rohit Kalyani, "Design of Observer for a Nonlinear Singular Switching System", *International Journal of Applied Engineering Research*, Vol. 10, No. 2, pp. 1827-1832, 2015.

51. Deepashri K M, **Santhosh K V,** "A Review Paper on Fire Detection", *Journal of Industrial Safety Engineering*, Vol. 1, No. 3, pp. 1-5, 2014.

52. **Santhosh K V,** Rohit Kalyani, "Dynamic Analysis of a Switched Boost Converter Singular System using Mehtod-Rachid algorithm", *Research & Review: Discrete Mathematical Structures*, Vol. 1, No. pp. 1-4, 2014.

53. **Santhosh K V,** Rachana Priyadarshini, Saloni, **"**Multisensor Data Fusion based Intelligent Temperature Measurement Technique," *Journal of Control and Instrumentation*, Vol. 5, No. 2, pp. 1-13, August 2014.

54. **Santhosh K V**, B K Roy, "Online Validation of Soft Calibration Circuit for Capacitance Pressure Sensor", *International Journal of Information Processing (ISSN: 0973-8215),* Vol. 8, No. 2, pp. 62-70, July 2014

55. **Santhosh K V**, Bhagya R Navada, "Online Classification and Measurement of Pencils using Image Processing Techniques", *International Journal of Computer Application (ISBN: 973-93-80882-24-0),* Vol. 96, No. 4, pp. 25-30, June 2014.

56. **Santhosh K V**, B K Roy, "Practically Validated Adaptive Calibration Technique for Thermocouple using Optimized ANN", *International Journal Control System and Instrumentation (ISSN: 2158-0006),* Vol. 5, No. 1, pp.1-7, Feb 2014.

57. **Santhosh K V**, J S Rajshekar, "Design and Development of an Automated Multi Axis Solar Tracker Using PLC", *Bulletion of electrical engineering and informatics (ISSN: 2089: 3191)*, Vol. 2, No. 3, September 2013.

58. **Santhosh K V**, "A Technique to Indicate the Quality of Cigarette filter Using Fuzzy Logic", *International Journal on Engineering Science and Management (ISSN: 2231-3273)*, vol. 3, No. 1, pp. 59-68, Feb 2013.

59. **Santhosh K V**, B K Roy, "An Intelligent Flow Measurement Technique using Ultrasonic Flow meter with Optimized Neural Network", *International Journal of Control and Automation (ISSN: 2005-4297),* Vol.5, No.4, pp. 185-196, Dec 2012.

60. **Santhosh K V**, B K Roy, "An Intelligent Temperature Measurement Technique Using J Type Thermocouple with an Optimal Neural Network**",** Sensors and Transducers Journal (ISSN: 1726-5479), Vol. 147, No. 12, pp. 6-14, December 2012.

61. **Santhosh K V**, B K Roy, "An Intelligent Pressure Measurement Technique by Capacitance Pressure Sensor Using Optimized ANN", *International Journal on Electrical and Power Engineering,* Vol. 3, Issue 4, pp. 16-21, Nov 2012.

62. **Santhosh K V**, B K Roy, "An Improved Intelligent Temperature Measurement by RTD using Optimal ANN", *International Journal of Advancements in Electronics and Electrical Engineering*, Vol. 1, Issue. 1, pp. 14-18, October 2012.

63. Nalin Kumar Sharma, B K Roy, **Santhosh K V**, "Advanced Optimized Cooling System For Air Cooled and Coolant Cooled IC Engines Using Fuzzy Logic", *International Journal of Advancements in Electronics and Electrical Engineerin,* Vol. 1, Issue. 1, pp. 25-28, October 2012.

64. **Santhosh K V**, Pankaj Kumar Bhowmik, "Automated Monitoring of Bottle Filling Process Using LabVIEW", *International Journal of Advancements in Electronics and Electrical Engineering*, Vol. 1, Issue. 1, pp. 56-60, October 2012.

65. **Santhosh K V**, Meharunisa SP, "LabVIEW Implementation of Cigarette Filter Quality Check Using Fuzzy logic", *International Journal of Electronics Signals and Systems*, Vol.1, no.4, pp 62-66, 2012.

66. **Santhosh K V**, Namratha S N, Anjana paura, "Inline Elasticity Measure of Textile Using ANN", *International Journal of Electrical and Electronics Engineering,* Vol.1, No.4, pp. 16-18, 2012.

67. **Santhosh K V**, Nalin Kumar Sharma, "An Intelligent Cooling Technique for Internal Combustion Engine Using Optimal ANN and Fuzzy Logic Algorithms", *International Journal of Fuzzy systems*, vol.5, No. 7, DOI: FS072012003, July, 2012.

68. **Santhosh K V**, B K Roy, "An Intelligent Displacement Measurement Technique using LVDT with an Optimized ANN", *International Journal of Artificial Intelligent Systems and Machine Learning*, vol.5, No.7, DOI: AIML072012014, July, 2012.

69. **Santhosh K. V**, B. K. Roy, "An Intelligent Flow Measurement Technique Using Orifice", *International Journal of Applied Physics and Mathematics (ISSN: 2010-362X),* vol. 2, No. 3, pp. 165-168, 2012.

70. **Santhosh K V**, B K Roy, Pankaj Kumar Bhowmik, "Inline Monitoring of Bottle filling Process Using Image Processing", *International Journal on Engineering Science and Management (ISSN: 2231-3273)*, vol. 2, No. 1, pp 33-38, July 2012.

71. **Santhosh K V**, Pankaj Kumar Bhowmik, "An Intelligent Online Vehicle Tyre Pressure Monitoring System", *International Journal of Electrical and Computer Engineering*, vol. 2, No. 3, pp. 301-308, June 2012.

72. **Santhosh K V**,B K Roy, "A Robust Level Measuring Technique using Capacitance Level Sensor", *International Journal of Instrumentation Science and Engineering(ISSN: 2278-5825)*, vol. 2, No. 1, pp. 1-12, 2012.

73. **Santhosh K V**, B K Roy, "A Smart Temperature Measuring Technique Using Thermistor", *International Journal on Engineering Science and Management (ISSN: 2231-3273)*, vol. 1, No. 2, pp 62-68, July 2011.

74. **Santhosh K V**, Tatsat Mishra, "Analysis of system model for variation of liquid density in a two phase liquid", *Journal Instrumentation Society of India*, vol. 44, No. 3, pp.180-184, September 2014.

75. **Santhosh K. V**., B. K. Roy, "An Intelligent Flow Measurement Technique using Orifice with An Optimized ANN", *The Indian Journal of Technical Education*, Vol. 36, No. 2, pp. 33-42, June 2013.

76. B K Roy, **Santhosh K V**, "An Improved Technique for Extending the Linearity Range of Thermistor Using ANN", *Journal Instrumentation Society of India*, vol. 41, No. 3, September 2011.

International Conference

1. Jaya Rajesh Hanni, **Santhosh K V**, "Optimization of Electrode Design in Capacitance Liquid Level Sensor," *International Conference on Recent Trends in Electronics, Information & Communication Technology*, India, 27th – 28th August 2021.

2. V Sravani, **Santhosh K V**, "Luenberger observer for estimation of flow under disturbed conditions," *International Conference on Communication, Control and Information Sciences*, India, 16th -18th June 2021.

3. Vighnesh Shenoy, **Santhosh K V**, "Design of estimator for level monitoring using data driven model," *International Conference on Computation, Automation and Knowledge Management*, Dubai, 19th – 21st Jan 2021.

4. Jayalaxmi Rajesh Hanni, **Santhosh K V**, "Time Response Analysis of Novel Helical Capacitance Level Sensor", *IEEE DISCOVER*, Mangalore, 30-31st Oct 2020.

5. Soumya J Bhat, **Santhosh K V**, "Priority Based Localization for Anisotropic Wireless Sensor Networks", *IEEE DISCOVER*, Mangalore, 30-31st Oct 2020.

6. Soumya J Bhat, **Santhosh K V**, "Fault Tolerant Localization Based on K-means Clustering in Wireless Sensor Networks", IEEE Connect, Bangalore, 2-4 July 2020.

7. **Santhosh K V**, "Self-calibrating thermocouple using neural network algorithm for improved sensitivity and fault identification", *International Conference on Advanced Computing, Networking, and Informatics, Silchar, 4th to 6th June 2018.*

8. **Santhosh KV**, Preeti Mohanty, "Implementation of Intelligent Auto Ranging Functionality to Capacitive Level Sensor," *International Conference on Energy, Power and Environment*, Shillong, 1 -2nd June, 2018.

9. **Santhosh KV**, Bhagya R Navada, "Soft computational technique to estimate inflow for fault detection in control valve," *International Conference on Energy, Power and Environment*, Shillong, 1 -2nd June, 2018.

10. **Santhosh KV**, Nathan Noronha E Silva, "Analysis of sampling on process timing parameters in a networked control system," *International Conference on Energy, Power and Environment*, Shillong, 1 -2nd June, 2018.

11. **Santhosh KV**, Nanditha Nair, Sneha Nayak, "Analysis of propagation of errors due to sensor faults in a flow process for design of fault isolation," *International Conference on Energy, Power and Environment*, Shillong, 1 -2nd June, 2018.

12. **Santhosh K V**, Akanksha Shetty, "Design of an adaptive soft calibration circuit for LVDT", *International Conference on Electronics, Communication, Computer Technologies and Optimization Techniques*, 15th & 16th December 2017.

13. **Santhosh K V**, Manik Gupta, "Simultaneous Measurement of Liquid Level and Temperature using Capacitance Sensor", *International Conference on Inventive Computation Technologies*, 24th & 25th August 2017.

14. **Santhosh K V**, Sneha Nayak, "Sensor-less Temperature and Humidity Estimation using Transmission Lines", *International Conference on Signal Processing and Communication*, Coimbatore, 28th & 29th July, 2017.

15. **Santhosh K V**, Kovoor Prajwal, "Non-contact Viscosity Measurement using Sensor Fusion Techniques", *International Conference on Intelligent Computing, Instrumentation and Control Technologies*, Kannur, 6th & 7th July, 2017.

16. Bhagya R Navada, **Santhosh KV,** Aadil Mazhar, Ashish Kumar Singh, "Design of Kalman Observer for Estimation of in-flow", *International Conference on Intelligent Computing, Instrumentation and Control Technologies*, Kannur, 6th & 7th July, 2017.

17. **Santhosh KV**, "Analysis of Actuator faults using Image Processing Techniques", *International Conference on Renewable Energy and Sustainable Environment: Challenges and Remedies*, Katra, 19th – 21st March 2017.

18. **Santhosh KV**, Vighnesh Shenoy, Bhagya R Navada, "Fault Identification and Isolation in Pneumatic Valve using Image Processing" International conference on Distributed Computing, VLSI, Electrical Circuits and Robotics, Surutkal, 13th & 14th August 2016.

19. Bhagya R Navada, **Santhosh KV**, "Multi Sensor Data Fusion for enhancement of Linear Range of Thermistor", *International Conference on Advancements in Automation Robotics and Sensing*, Coimbatore, 23rd and 24th June, 2016.

20. Deepashri K M, **Santhosh K V**, "Fire Detection Techniques-A Review", *International Conference on Advancements in Automation Robotics and Sensing*, Coimbatore, 23rd and 24th June, 2016.

21. Santhosh KV, Meghana Shankar, "Comparison of estimators designed using observer and neural network algorithm for TMRS", *International Conference on Developments in Science, Management and Engineering*, Thirchy, 15th and 16th April, 2016.

22. **Santhosh KV**, Vighnesh Shenoy, "An Image Processing Technique for Measurement of Liquid Viscosity", *International Conference on Engineering Technology and Science*, Rasipuram, India, 18th- 19th Mar 2016.

23. **Santhosh KV**, Meghana Shankar, "Design of Neural Network based Estimator for Pitch and Yaw in a TRMS", *3rd International Conference on Electronics and Communication Systems*, Coimbatore, India, 25th -26th Feb 2016.

24. **Santhosh K V**, Blessy "Analysis of additive in a liquid level Process using Multi sensor Data Fusion", *IEEE International Conference on Intelligent Systems and Controls (ISCO2016)*, Coimbatore, India, Jan 07-08, 2016.

25. **Santhosh K V**, B K Roy, "Adaptive Calibration of Turbine Flow Measurement using ANN", *International Symposium on Advanced Communication and Computing*, Silchar, India, 14-15th September 2015.

26. **Santhosh K V**, "*Neural Network based Multi-Sensor Data Fusion Architecture for Temperature Measurement*", *International Conference on Emerging Trends in Technology and Applied Science, Kottayam, India, 30-2nd May 2015.*

27. **Santhosh K V**, Bhagya R Navada, "*Quantitative Analysis in Packed Consumer Goods using Soft Computational Techniques*", *International Conference on Emerging Trends in Technology and Applied Science, Kottayam, India, 30-2nd May 2015.*

28. Bhagya R Navada, **Santhosh K V**, "An Image Processing Technique for Color Blind People to Classify Color and Edges", *International Conference on Knowledge Collabration in Engineering*, Coimbatore, India, 27-28th March 2015.

29. **Santhosh K V**, "Design of an Adaptive Controller for Level Process for variation in Temperature using Multi-sensor Data Fusion", *International Conference on Circuits, Control, Communications & Computing*, Bangalore, India, 20-22nd November 2014.

30. Bhagya R Navada, **Santhosh K V,** Prajwal S, Harikishan B Shetty, "An Image Processing Technique for Color Detection and Distinguish Patterns with Similar Color: An aid for Color Blind People", *International Conference on Circuits, Control, Communications & Computing,* Bangalore, India, 20-22nd November 2014.

31. **Santhosh K V,** B K Roy, "Soft Calibration Technique with SVM for Intelligent Temperature Measurement using Thermocouple", *International Conference on Advances in Electronics, Computers, and Communications*, Bangalore, India, 10-11th October 2014.

32. **Santhosh K V**, B K Roy, "Support Vector Machine based Adaptive Flow Measurement Technique using Venturi", *Second International Conference on "Emerging Research in Computing, Information, Communication and Applications*, Bangalore, India, 1-2nd August 2014.

33. **Santhosh K V**, "Multi Sensor Data Fusion based Liquid Level Measurement", *Second International Conference on "Emerging Research in Computing, Information, Communication and Applications*, Bangalore, India, 1-2nd August 2014.

34. **Santhosh K V,** Bhagya R Navada, "Quantitative Fault Analysis on Pencil Case using Image Processing", *International Conference on Information and Communication Technologies*, Shimoga, India, 5-6th May 2014.

35. **Santhosh K V**, B K Roy, "Support Vector Machine Based Adaptive Calibration Technique for Resistance Temperature Detector*", International Conference on Advances in Control and Optimization of Dynamical Systems*, Kanpur, India, 13-15 March 2014.

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IPR information

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Grants

1. AICTE Grant for Modernization of Modernisation and Removal of Obsolenscence (MODROB) on the topic "Upgradation of Existing Instrumentation lab towards Cyber Physical Systems" with 14.55 lakh funding during 2019.
2. Industry grant of 9.55 Cr to establish Centre for Excellence in Cyber Physical System by the ARK Consortium during 2022.

Additional responsibilities
1. Deputy Director Research (Tech), MAHE
2. Department Research Coordinator
3. Department NAAC Coordinator
4. Coordinator Centre for Excellence in Cyber Physical System
5. Coordinator for LabVIEW Academy