
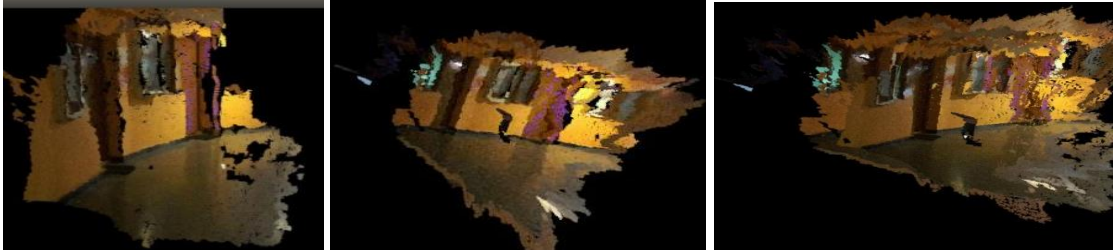


<p align="center"><b>Dr. Kanagachidambaresan G R Ph.D. (Anna University, Chennai)</b>  IoT and Expert systems laboratory  Associate Professor/Department of CSE</p>							
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<b>Research Areas</b>							
Internet of Things, Expert System design, Machine Learning, Self-Healing system design							
<b>Projects &amp; Publications Summary</b>							
<b>Project</b>		<b>Publication Count</b>		<b>Citation Count</b>			<b>Impact Factor</b>
Completed	00	SCI	028	Citations	Google	SCOPUS	54
Ongoing	04	SCOPUS	071	h-index	565	317	
Submitted	00	Books	12	i10index	13	12	
		Books chapters	30		20	19	
<b>National/International Collaboration</b>							
<ul style="list-style-type: none"> <li>• Ontario- Tech Canada, - E-mobility</li> <li>• Delhi University - Seaweed mapping and expert system design</li> <li>• CIBA-ICAR – Shrimp monitoring and Precision aquaculture</li> <li>• NESAC- ISRO- Monitoring and 3dimensional Mapping</li> <li>• Johannesburg – Visiting Professor</li> </ul>							
<b>Research snippets</b>							
							
<b>Research facility</b>							
<ul style="list-style-type: none"> <li>• Digital sensors</li> <li>• Portable digital meters</li> <li>• Water quality kits</li> </ul>							
<b>Outline of Research Works</b>							
<ul style="list-style-type: none"> <li>• The ZED and LIDAR sensors are mounted on a UAV swarm to indigenously avoid obstacles and gather 3d terrain information. The gathered information is is matched with the KNN and ransac algorithm approach to avoid outliers and reduce noise</li> <li>• On-board Image processing with Drone technology for mapping, image stiching and survelliance is done through Wireless Personal Area Networks</li> <li>• The 3dimensional cloud mosaic is created with the Iterative Closest Point (ICP) through GPU and rendered to the Ground Control Station (GCS)</li> <li>• Single Board Computer based measurements of water and air quality parameters for agriculture, Industrial and environmental monitoirng is done through Internet of things devices</li> <li>• Water qualities such as pH, Turbidity, Temperature, salinity, TDS, Chlorophyll are monitoried for efficient prawn growth management. Machine learning based sensor data cleansing and accurate prognosits is achieved for better advisories</li> </ul>							

**Details of Funded Projects**

S.No	Project Title	Funding agency	Amount (Rs.)	Duration	Collaboration
1.	“Energy efficient and optimal path planning strategies for SWARM of UAVs in real time localization using deep learning based stereo vision system”, ISRO – Respond.	ISRO-RESPOND	18,30,000/-	2019-22 (Ongoing)	NESAC-ISRO Meghalaya
2.	Drone Assisted Mapping of Seaweeds of Odisha coast including Chilika Lake especially for Gracilaria sp. and Enteromorpha sp. and Development of Value Added Seaweeds Products”, DBT.	DBT	79.63 Lakhs	2021-2024 (Ongoing)	Delhi University
3.	Optimization of High-Speed Vessel and Evaluation of the Hydrodynamic Performance”, DRDO-NSTL.	DRDO	10.00 Lakhs	2019 (Completed)	DRDO-NSTL
4.	Precision Brackish water Aquaculture Technology using Machine Intelligence”, DBT, Principal Coordinator/Investigator	DBT	1.53 Crores	2021-2024	ICAR-CIBA

**Recent Best 5 SCI Publications**

- V Dhillip Kumar, **GR Kanagachidambaresan**, P Chyne, D Kandar, "Extended Communication Range for Autonomous Vehicles using Hybrid DSRC/WiMAX Technology", Wireless Personal Communication, Springer 2021. IF 1.671.
- R Maheswar, P Jayarajan, A Sampathkumar, **GR Kanagachidambaresan**, "CBPR: A cluster-based backpressure routing for the internet of things", Wireless Personal Communication, Springer 2021. IF 1.671.
- Rajkumar Rajavel, Sathish Kumar Ravichandran, Karthikeyan Harimoorthy, Partheeban Nagappan, **Kanagachidambaresan Ramasubramanian**, "IoT-based smart healthcare video surveillance system using edge computing", Journal of Ambient Intelligence and Humanized Computing, Springer, 2021, IF 7.104.
- Arunkumar Kathiravan\*, Themmila Khamrang, Namasivayam Dhenadhayalan, King-Chuen Lin, **Kanagachidambaresan Ramasubramanian**, Madhavan Jaccob, and Marappan Velusamy, "Internet of Things-Enabled Aggregation-Induced Emission Probe for Cu2+ Ions: Comprehensive Investigations and Three-Dimensional Printed Portable Device Design", ACS Omega 2020, 5, 50, 32761–32768, 2020. IF – 3.512.
- **G. R. Kanagachidambaresan** and A. Chitra, “Fail Safe Fault Tolerant Mechanism for Wireless Body Sensor Network (WBSN),” Wirel. Pers. Commun., vol. 80, no. 1, pp. 247–260, Jan. 2015, doi: 10.1007/s11277- 014-2006-6. IF-1.061

**Books**

- Role of Single Board Computers in rapid IoT Prototyping, Springer 2021, Internet of Things Series.
- Internet of Things using Single Board Computer, Apress 2022.
- Internet of Things for Industry 4.0, Springer- EAI series
- Body Area Network Challenges and Solutions”, Springer – EAI series
- Internet of Things in Smart Technologies for Sustainable Urban Development – EAI series Integration of WSN and IoT for Smart Cities– EAI series
- Cognitive Engineering for next generation computing - Edited- Wiley,
- Role of Edge Analytics on Sustainable Smart City Development challenges and solutions, Wiley. Integration of renewable energy resources with smart grid, Wiley.

**Patents**

- 201941050307 - AN AI BASED FRUIT RIPENING SYSTEM / 05/12/2019 / Published
- 201941006600 - RASPBERRY PI BASED SAFETY SYSTEM FOR INDUSTRIAL WORKERS USING DEEP LEARNING / 20/02/2019 / Published
- 201941006567 - PLC INTEGRABLE IOT DEVICE FOR AUTOMATED TESTING DEVICE / 19/02/2019/ Published
- 201841038781 - AUTOMATED MEDICINE BOX 12/10/2018 / Published
- 201741045739 - PRIORITY QUEUE BASED WATER MANAGEMENT SYSTEM USING IOT/ 20/12/2017 / Published

**Fellowships/Awards/Recognitions**

- ASEM –DUO FELLOW, Visiting professor in UC Louvain Belgium
- Visiting Professor in University of Johannesburg.

**PhD Thesis Guidance**

Scholar Name	Thesis Title	University	Status	Year
1. Sellat Quasay	ADAS- modelling and system design	Vel Tech, Avadi	Ongoing	2019
2. Ebisa	Natural Language Processing, Afron to English	Vel Tech, Avadi	Ongoing	2020
3. Sowmiya V	Self Healing Precision Aquaculture system	Vel Tech, Avadi	Ongoing	2022
4. Ashok Kumar	Security in Industry 4.0	Vel Tech Avadi	Ongoing	2021
5. Arivu Bragan	RPL Routing strategy in IoT environment	Vel Tech, Avadi	Ongoing	2020
6. J. Vivek	Prognostics in Industry 4.0	Vel Tech, Avadi	Ongoing	2019
7. Vijayaraj J	Cloud sharing strategies	Vel Tech, Avadi	Completed	2021

**Editorial/Review Activities**

- Editor in Chief, Next Generation Computing and Communication Engineering Series, Wiley. Associate Editor, Wireless Networks Springer IF- 2.405
- Associate Editor, Electronics Bosnia, Scopus – Indexed
- Reviewer, IEEE Access, Wireless Personal Communication, IEEE Sensors, and other reputed journals.