


## FACULTY PROFILE

<b>Name of Teaching Staff / RMK ID</b>	<b>Dr DARWIN NESAKUMAR A / T0824</b>			
<b>Designation</b>	ASSOCIATE PROFESSOR (GR I)			
<b>Department</b>	ECE			
<b>Date of Joining the Institution</b>	13.05.2014			
<b>Qualifications</b>	M.E.	M.B.A., PGDBA.,	Ph.D.	
<b>Total Experience</b>	Overall : 15 YEARS		in RMK : 13 YEARS	
<b>Papers Published in Journal</b>	Overall : 34		After Joining RMK : 34	
<b>List of Papers Published</b>	<ol style="list-style-type: none"> <li>1. <b>Darwin Nesakumar, A.</b>, Rukmani Devi, S., Inbamalar, T.M., Pavithra, K.N., "Byzantine Attack Detection Using Optimized Dual-Channel Capsule Generative Adversarial Network for Securing Cognitive Radio Network", <i>Transactions on Emerging Telecommunications Technologies</i>, Vol. 34, No. 8, Wiley, 2023.</li> <li>2. <b>Darwin Nesakumar A</b>, R Priyadharshini, K Pavithra, L. Sherin, K N Pavithra, P Mugilan, "Emotional Based Playback System for Autism", International Interdisciplinary Humanitarian Conference for Sustainability (IIHC), Publisher : IEEE, Volume , Year 2022, Pages 1328-1332</li> <li>3. Krishna Veni, K., Syed Ismail Abdul Lathif, Suresh Kumar, K., Subha, T.D., Agnes Shifani, S., <b>Darwin Nesakumar, A.</b>, "A Novel Emotion Recognition Model Based on Speech Processing", <i>Proceedings of the International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI 2023)</i>, IEEE, 2023, pp. 1–7.</li> <li>4. Perarasi, M., Sarala, B., Saraswathi, S., Jasmine Hephzipah, J., <b>Darwin Nesakumar, A.</b>, Sushmitha, K., "Design and Implementation of Direction Controlled Trolley for Smart Billing using IoT", <i>Proceedings of the 2nd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT 2024)</i>, IEEE, 2024, pp. 105–111.</li> <li>5. Rajalingam, A., <b>Darwin Nesakumar, A.</b>, Sathya, S., Krishnankutty, J.E., Pagunuran, J.R., "The Future of EV: Real-Time Development of an Intelligent Wireless Charging System for Electric Vehicles", <i>Proceedings of the 1st International Conference on Cognitive, Green and Ubiquitous Computing (IC-CGU 2024)</i>, IEEE, 2024, pp. 1–7.</li> </ol>			

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|  | <ol style="list-style-type: none"><li>6. <b>Darwin Nesakumar A</b>, Srinath Bhavyasri, Tanguturi Keerthana, Yelisetty Meghana, K N Pavithra, P Mugilan, <i>“Bitcoin Price Prediction Using Deep Learning and Neural Networks”</i>, International Interdisciplinary Humanitarian Conference for Sustainability (IIHC), Publisher : IEEE, Volume , Year 2022, Pages</li><li>7. <b>Darwin Nesakumar A</b>, Arthi S, Avulu Lahari, Geetha M, Pavithra K N, P Mugilan, <i>“Smart ATM Card for Multiple Bank Accounts”</i>, International Interdisciplinary Humanitarian Conference for Sustainability (IIHC), Publisher : IEEE, Volume , Year 2022, Pages 1228-1232,</li><li>8. <b>Darwin Nesakumar A</b>, M.S.Kavitha, B.Sarala, J.Jasmine Hephzipah, R.Pavaiyarkarasi, M.Perarasi, T.D.Subha, <i>“Optimal Algorithm for Power Assignments in OFDM-form of Cognitive Radio Technique”</i>, Evaluation of salivary alpha amylase as an inflammatory biomarker in chronic periodontal disease: a cross-sectional study, Special Issue 2, 1929-1937, 2023.</li><li>9. Vishnupriya S, <b>Darwin Nesakumar A</b>, Mounika S, Pavithra K N, <i>“Mysterious Action Detection by Speed and Displacement Analysis in Image Processing”</i>, International Interdisciplinary Humanitarian Conference for Sustainability (IIHC), Publisher :</li></ol> |
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IEEE, Volume , Year 2022, Pages 1085-1090

6. Suganthi P Chaaru Viswas S, **Darwin Nesakumar A**, "*Smart Social Distance Monitor through Message Intimation and Transfer*", International Journal of Advance Research and Innovative Ideas in Education, Volume-9, Issue-3, Pages 1241-1250, 2023.
7. **Darwin Nesakumar A**, A. Darwin Nesakumar, T. Suresh, P. Kanimozhi, et al., "*Vehicle seat vacancy identification using image processing technique*", AIP Conference Proceedings 2519, 050023 (2022); <https://doi.org/10.1063/5.0109641>  
Published Online: 03 October 2022, October 2022
8. Beno, A., Lanitha, B.,**Darwin Nesakumar, A.**, Prasad, V.R.R. "*Hybrid LSTM-PCA-Powered Renewable Energy-Based Battery Life Prediction and Management for IoT Applications*",Journal of Nanomaterials, 2022.
9. Bazil Wilfred, C., Beno, A., **Darwin Nesakumar, A.**, ...Bagavathy, S., Sheeba Rani, S., "*IoT enabled Framework for Wearable Medical Sensor Data*", Proceedings of the 5<sup>th</sup> International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud), I-SMAC 2021, 2021, pp. 226–230
10. **Darwin Nesakumar A**, Ranjitha L, Pavithra M, Ratnavarshaa N, "*Life Saving Smart Automobile*", Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 7 pp:13440 – 13446, ISSN 1309-6591,July 2021.
11. **Darwin Nesakumar A**, A. Swetha Reddy, K.S. Swetha, S. Vishnupriya, P.Mugilan, "*Link Recovery & Energy Efficient Based Routing for MANET*", Turkish Online Journal of Qualitative Inquiry (TOJQI) Volume 12, Issue 7 pp. 13433 – 13439, ISSN 1309-6591, July 2021.
12. **Darwin Neaskumar A**, T Suresh, Nivedha T, Nivedha S, Priyadharshini G, P Mugilan, "*Smart ATM Security Using Face Recognition*", European Journal of Molecular & Clinical Medicine, ISSN : 2515-8260, pp.1349-1354, Voulme7, Issue 4, December 2020.
13. **Darwin Neaskumar A**, T Suresh, M. Aarthi, K.Gomathi, G. Aarthi, P.Mugilan" *Accident Detection, Alert and Tracking System Based on IoT*", European Journal of Molecular & Clinical Medicine, ISSN : 2515-8260, pp.1370-1374, Voulme7, Issue 4, December 2020.
14. **Darwin Neaskumar A**, Inbamalar T M" *A Study of Cognitive Radio Sensing Techniques for Optimum Spectrum Spectrum*

*Utilization*", Recent Advances in Computer Science and Communications, ISSN : 2666-2566, December 2020. DOI : 10.2174/2666255813999200904134324.

15. **A.Darwin Nesakumar**, M.Daniel Nareshkumar, A.Swetha Reddy, P.Mugilan, "*Mobile Sink Based Data Assemblage in Wireless Sensor Networks*", International Journal of Recent Technology and Engineering (IJRTE), ISSN : 2277-3878, pp.5543-5550,Volume-8, Issue-4, November 2019.
16. M.Daniel NareshKumar, J.Janish Blessy, **A.Darwin Nesakumar**, Sadagopan Venugopal, "*Reduction of Specific Absorption Rate using Carbon Foam Inside Enclosures*", International Journal of Recent Technology and Engineering (IJRTE), ISSN : 2277-3878, Volume-8, Issue-4, November 2019.
17. Machukonda Gautham, Vinodh,Syed Vaseem, **A.Darwin Nesakumar**,"*Radio Frequency Identification Based Smart Shopping Trolley*" International Journal of Advance research and innovative Ideas in Education (IJARIIE), ISSN(O) : 2395-4396,Vol-5, Issue-2, pp. 862-868, April 2018.
18. M.Krishna Moorthy, **A.Darwin Nesakumar**,"*Cooperative Spectrum Sensing based on Cognitive Radio systems for efficient spectrum utilization*," International Journal of Emerging Technologies and Applications in Engineering, Technology and Sciences (IJ-ETA-ETS), ISSN: 0974-3588, pp.33-37, Special Issue, December 2014.
19. S. Rahul Kumar, S Naresh, A. Praveen, KM Sai Sandeep, R Rokesh kumar, **Darwin Nesakumar A**, "*Cubesats For 5g Communications*", National Conference On Communication And Signal Processing Systems, ISBN: 978-93-91662-05-9, pp.79-81, December 2021.
20. Anushree, A., **Darwin Nesakumar, A.**, Ajeet, R.J., Gopika, S., Haritha, V., Pavithra, K.N., "*PostureSense Intelligent Body Support Crutch Tool*", *Proceedings of the International Conference on Computing and Data Science (ICCDs 2024)*, IEEE, 2024, pp. 1–6.
21. Pavithra, K.N., Tarunkumar, S., **Darwin Nesakumar, A.**, Vedantamurthy, B., Vishal, P.V., Tharani, R., "*GPS-Based Power Theft Detection and Alert System Using GSM*", *Proceedings of the International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE 2023)*, IEEE, 2023, pp. 1–3.
22. **Darwin Nesakumar, A.**, Tamilselvi, M., Bhuvaneshwari, B., Nagarajan, A., Ramachandran Thandaiah Prabu, R., Aziz Mahmoud Taher, A., "*Dual Port Dual Drive/LiNb MZM*

Measured Modulators Based Light Transmitter Sources for Ultra-Long Haul Optical Wireless Systems”, *Journal of Optical Communications*, Vol. 45, Issue S1, De Gruyter, 2025, pp. S1967–S1975.

23. Janakiraman, V., Shobana, D., Aravind, A.R., **Darwin Nesakumar, A.**, Sahitya, P., “Cutting-Edge Technology: An Intelligent Channel Allocation and Spectrum Sensing Procedures Over 5G Heterogeneous Networks”, *Proceedings of the International Conference on Intelligent Systems for Cybersecurity (ISCS 2024)*, IEEE, 2024, pp. 1–6.
24. **Darwin Nesakumar, A.**, Deepak, P., Sanjay, P., Aishwarya, B., Aswini, R., Pavithra, K.N., “IoT-Powered Precision Farming and Home Gardening for Seamless Monitoring, Automation and Security”, *Proceedings of the International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2024)*, IEEE, 2024, pp. 1–5.
25. RamKumar, V., Padmavathi, N., Chandra, I., Renugadevi, R., Christo Ananth, **Darwin Nesakumar, A.**, “An Intelligent Light Assisted Wireless Vehicle Communications Using Visible Light Communication”, *Proceedings of the International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI 2023)*, IEEE, 2023, pp. 1–7.
26. Pokanati Siva Ram, P., Rakshitha, J., Kommuru Venkata Sabareesh, **Darwin Nesakumar, A.**, Pavithra, K.N., “Defence System Enhancement by Portable Drones Using Artificial General Intelligence (AGI)”, *Proceedings of the International Conference on Electronics and Computing, Communication Networking Automation Technologies (ICEC2NT 2025)*, IEEE, 2025, pp. 1–4.
27. **Darwin Nesakumar, A.**, Pavithra, K.N., Inbamalar, T.M., “Leveraging Global Channel State Information in Cognitive Radio IoT Networks: An IBSCNN and Red-Fox OPOSS”, *IETE Journal of Research*, Taylor & Francis, 2025, pp. 1–9.
28. Athi Ram, R.S., Gokulrajan, R.M., Logeshwaran, M., **Darwin Nesakumar, A.**, “IoT Based Integration of Environmental Sensors for Commercial Aquaculture”, *Proceedings of the 5th International Conference on Pervasive Computing and Social Networking (ICPCSN 2025)*, IEEE, 2025, pp. 707–712.
29. Suresh, T., **Darwin Nesakumar, A.**, Deepak, P., Praveen, G., Sanjay, P., “Intelligent Attendance System with Fake Face Prevention Using Ageitgey and Real-Time Database Integration”, *Proceedings of the 2nd International Conference*

	<p><i>on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE 2025)</i>, IEEE, 2025, pp. 1–4.</p> <p>30. Vishnupriya, S., Mahin Sultana, S., <b>Darwin Nesakumar, A.</b>, Pavithra, K.N., Tharani, R., Tarun, M.A., "Antenna Design for Dual Band Filtering With H-Shaped Slot and Symmetric OSCF", <i>Proceedings of the International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2025)</i>, IEEE, 2025, pp. 1–6.</p> <p>31. <b>Darwin Nesakumar, A.</b>, Rukmani Devi, S., Inbamalar, T.M., Pavithra, K.N., "Arithmetic Optimization Algorithm Quantization Optimized With Energy Detection Using Nonparametric Amplitude", <i>International Journal of Communication Systems</i>, Vol. 38, No. 1, Wiley, 2025.</p> <p>32. <b>Darwin Nesakumar, A.</b>, Rakshitha, J., Preethi, R., Sudhakar, C., "AI Based Health Monitoring Wearable Device in Telemedicine Application Using MEC and MFA Technology", <i>Proceedings of the International Conference on Communication, Computing, Smart Materials and Devices (ICCCSMD 2024)</i>, IEEE, 2024, pp. 1–5.</p> <p>33. <b>Darwin Nesakumar, A.</b>, Pavithra, K.N., Swetha Reddy, A., Inbamalar, T.M., "Automatic Railway Gate Control", <i>AIP Conference Proceedings</i>, Vol. 3022, No. 1, AIP Publishing LLC, 2024, Article 020013.</p> <p>34. <b>Darwin Nesakumar, A.</b>, Keerthana, P., Prathiba, N., Sakthipriya, B., Mugilan, P., "Solitary Waves Monitoring System By Using Gyro Scope Sensor", <i>Proceedings of the 2nd International Conference on Vision Towards Emerging Trends in Communication and Networking Technologies (ViTECoN 2023)</i>, IEEE, 2023, pp. 1–4.</p>	
<b>Papers Presented in Conferences</b> (Scopus / WoS indexed only)	Overall : 22	After Joining RMK : 22
<b>Ph.Ds / Projects Guided</b>	Ph.Ds Guided : NIL	Student Projects Guided : 35
<b>Books Published :</b>	<p>Count : 3</p> <p>List :</p> <ol style="list-style-type: none"> <li>1. <i>Ad hoc and Wireless Sensor Networks</i> (Alpha International Publication – AIP)</li> <li>2. <i>Wireless Networks</i> (Prime International Publication (PIP))</li> <li>3. <i>Optical Communication</i> (Sruthi Publications)</li> </ol>	
<b>Patents</b>	Published Count : 6	Granted Count :NIL

	<p>List :</p> <ol style="list-style-type: none"> <li>1. Published a patent on “ <i>Sensing and Detection of Cracks And Obstacles On The Railway Line</i>” on December 2021.</li> <li>2. Published a patent on “ <i>AI and IoT based Smart Energy and Power Management Systems by using Raspberry Pi</i> ” on 17<sup>th</sup> January 2022.</li> <li>3. Published a patent on “<i>Internet of Things, Embedded based Cloud- Agent device for Infant mortality Syndrome Observing and Investigation using ML</i> ” on 25<sup>th</sup> January 2022.</li> <li>4. Published a patent on “<i>5G Network from space using AI and Machine Learning</i>” on 27<sup>th</sup> January 2022.</li> <li>5. Published a patent on “<i>Microcontroller Controlled Robot Arm for Paint Spraying</i>” on 22<sup>nd</sup> January 2022.</li> <li>6. Published a patent on “<i>A Multi-Stage based Combining-Feature-Selection with ML method for Higher Prediction of Heart related Diagnosis</i>” on 3<sup>rd</sup> March 2022.</li> </ol>
<p><b>Professional Memberships</b></p>	<p>Count : 8</p>
	<ol style="list-style-type: none"> <li>1. Senior Member of IEEE (Institute of Electrical and Electronics Engineers)</li> <li>2. Life Member of IETE (Institution of Electronics and Telecommunication Engineers)</li> <li>3. Life Member of ISTE (Indian Society of Technical Education)</li> <li>4. Life Member of IEI (Institution of Engineers)</li> <li>5. Life Member of IAENG (International Association of Engineers)</li> <li>6. Member of CSTA (Computer Science Teachers Association)</li> <li>7. Life Member of ISSE (Indian Society For Science and Engineering)</li> <li>8. Life member of SIPH (Scientific International Public House)</li> </ol>
<p><b>Consultancy Projects Completed</b></p>	<p>Count : 3</p>
<p><b>Awards Received</b></p>	<p>Count : 4</p>
	<p>List :</p> <ol style="list-style-type: none"> <li>1. Best Teacher Award given by Scientific International Public House (SIPH)</li> </ol>

	<ol style="list-style-type: none"> <li>2. Best Faculty Advisor Award by IEL in the year 2024</li> <li>3. Academic Excellence Award by Evening Voice, English Evening Newspaper 2024</li> <li>4. Best Faculty Award 2024 by Tamil Thalai Foundation</li> </ol>
<b>Research grants Received</b>	NIL
<b>Orchid Link / ID</b>	<a href="https://orcid.org/0000-0003-3189-9381">https://orcid.org/0000-0003-3189-9381</a>
<b>Google Scholar Link / ID</b>	<a href="https://scholar.google.com/citations?user=nqifGCoAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=nqifGCoAAAAJ&amp;hl=en</a>
<b>Vidwan Link / ID</b>	<a href="https://vidwan.inflibnet.ac.in/profile/305357">https://vidwan.inflibnet.ac.in/profile/305357</a>
<b>Research Gate Link / ID</b>	<a href="https://www.researchgate.net/profile/Darwin-Nesakumar">https://www.researchgate.net/profile/Darwin-Nesakumar</a>
<b>Scopus Link / ID</b>	<a href="https://www.scopus.com/authid/detail.uri?authorId=57443117200">https://www.scopus.com/authid/detail.uri?authorId=57443117200</a>