


## FACULTY PROFILE

<b>Name of Teaching Staff / RMK ID</b>	K R CHAIRMA LAKSHMI / T0767			
<b>Designation</b>	ASSOCIATE PROFESSOR			
<b>Department</b>	ELECTRONICS AND INSTRUMENTATION ENGINEERING			
<b>Date of Joining the Institution</b>	22.05.2013			
<b>Qualifications</b>	B.E., M.E., Ph.D.			
<b>Total Experience</b>	Overall :11YEARS 6 MONTHS		in RMK :11 YEARS 6 MONTHS	
<b>Papers Published in Journal</b>	Overall : 33		After Joining RMK : 32	
<b>List of Papers Published</b>	<ol style="list-style-type: none"> <li>1) Paper titled " <b>ADVANCEMENTS IN NANO ELECTRONICS FOR SOLAR ENERGY APPLICATIONS-ENHANCING EFFICIENCY AND PERFORMANCE IN PHOTOVOLTAIC SYSTEMS</b>" ICTACT JOURNAL ON MICROELECTRONICS, OCTOBER 2024, <b>Volume: 10 , Issue: 3 , Pages: 1879 – 1887 DOI : <a href="https://doi.org/10.21917/ijme.2024.0322">10.21917/ijme.2024.0322</a></b></li> <li>2) Paper titled " <b>An Experimental Assessment of the Performance of Solar Panels Using Efficiency Enhancement Techniques in India's Tropical Region</b>" <i>Global Nest Journal</i>, (August 2024). DOI: <a href="https://doi.org/10.30955/gnj.05875">https://doi.org/10.30955/gnj.05875</a>.</li> <li>3) Paper titled " <b>Enhancing Solar Photovoltaic Panel Performance in India's Tropical Climate: An Experimental Study on the Influential Effects of Optical Filters</b>" <i>Global Nest Journal</i>, (July 2024). DOI: <a href="https://doi.org/10.30955/gnj.05876">https://doi.org/10.30955/gnj.05876</a>.</li> <li>4) Paper titled " <b>Nonlinear Matlab/Simulink-Based Mathematical Modeling of Solar Photovoltaic Modules for Power Generation</b>" <i>Communications on Applied Nonlinear Analysis</i> ISSN: 1074-133X Vol 31 No. 2 (2024), DOI: <a href="https://doi.org/10.52783/cana.v31.575">https://doi.org/10.52783/cana.v31.575</a>.</li> <li>5) Paper titled " <b>Analysis of Non-Linear Dynamic Characteristics of Fuzzy-Based SRM Drive for Electric Vehicle Applications</b>" <i>Communications on Applied Nonlinear Analysis</i>, ISSN: 1074-133X, Vol 31 No. 2s (2024), <a href="https://doi.org/10.52783/cana.v31.618">https://doi.org/10.52783/cana.v31.618</a>.</li> <li>6) Paper titled " <b>DESIGN AND IMPLEMENTATION OF REAL-TIME EMBEDDED SYSTEMS FOR IOT APPLICATIONS</b>" ICTACT JOURNAL ON MICROELECTRONICS, APRIL 2024, VOLUME: 10, ISSUE: 01. DOI: <a href="https://doi.org/10.21917/ijme.2024.0304">10.21917/ijme.2024.0304</a></li> </ol>			

- 7) Paper titled **"Plant Leaf Disease Classification Based on SVM Based Densenets,"** 2023 International Conference on Advances in Computation, Communication and Information Technology (ICAICCIT), Faridabad, India, 2023, pp. 636-641, doi: 10.1109/ICAICCIT60255.2023.10465886
- 8) Paper titled **"Latency Minimization in 5G Network Backhaul Links Using Chaotic Algorithms,"** 2023 International Conference on Advances in Computation, Communication and Information Technology (ICAICCIT), Faridabad, India, 2023, pp. 630-635, doi: 10.1109/ICAICCIT60255.2023.10465936
- 9) Paper titled **"Power Quality Improvement and Harmonics Reduction Method Using Neural Fuzzy Logic Controller In Two-Stage Pv-Battery System,"** 2023 International Conference on Advances in Computation, Communication and Information Technology (ICAICCIT), Faridabad, India, 2023, pp. 537-543, doi: 10.1109/ICAICCIT60255.2023.10465700.
- 10) Paper titled **"An Early Warning System for Predicting Earthquakes."** Novel AI Applications for Advancing Earth Sciences, edited by Sudesh Yadav, et al., IGI Global, 2024, pp. 165-185. <https://doi.org/10.4018/979-8-3693-1850-8.ch011>
- 11) Paper titled **"Sensory Intelligence-Integrating MBA Touch into Earth Observation Systems for Enhanced Machine Learning."** Novel AI Applications for Advancing Earth Sciences, edited by Sudesh Yadav, et al., IGI Global, 2024, pp. 204-229. <https://doi.org/10.4018/979-8-3693-1850-8.ch013>
- 12) Paper titled **"An Innovation Development for Deep Learning Model for Smart Health Monitoring in Winter Based Diseases,"** 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE), Chennai, India, 2023, pp. 1-7, doi: 10.1109/RMKMATE59243.2023.10369677.
- 13) Paper titled **"E-Commerce Business Model Analysis and Success in Urban Areas Using AI-Distributed Machine Learning,"** 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE), Chennai, India, 2023, pp. 1-6, doi: 10.1109/RMKMATE59243.2023.10369718.
- 14) Paper titled **"Experimental investigation on the effect of nano-silica on reinforced concrete Beam-column connection subjected to Cyclic Loading"** is published in Scientific Report, Vol.13, No.1, DOI: [10.1038/s41598-023-43882-5](https://doi.org/10.1038/s41598-023-43882-5). (Annexure 1 journal, Impact Factor: 1.67)
- 15) Paper titled **"IoT based on Smart Traffic Lights and Streetlight System,"** 2023 2nd International Conference on Edge Computing and Applications (ICECAA), Namakkal, India, 2023, pp. 1311-1316, doi: 10.1109/ICECAA58104.2023.10212121.

- 16) Paper titled "**Robotic Accident Prevention and Alert System for Visually Impaired**," 2023 International Conference on Disruptive Technologies (ICDT), Greater Noida, India, 2023, pp. 672-675, doi: 10.1109/ICDT57929.2023.10150923.
- 17) Paper titled "**Augmented Reality-Based Smart Home Automation Using Dynamic Vision Sensor**" 2023 International Conference on Innovative Data Communication Technologies and Application (ICIDCA), Uttarakhand, India, 2023, pp. 884-887, doi: 10.1109/ICIDCA56705.2023.10099860.
- 18) Paper titled "**Yolo for Detecting Plant Diseases**," 2023 Third International Conference on Artificial Intelligence and Smart Energy (ICAIS), Coimbatore, India, 2023, pp. 1029-1034, doi: 10.1109/ICAIS56108.2023.10073875.
- 19) Paper titled "**A Study of the Effect of Optical Filters on the Performance of Solar Panel**," 2023 Second International Conference on Electronics and Renewable Systems (ICEARS), Tuticorin, India, 2023, pp. 319-324, doi: 10.1109/ICEARS56392.2023.10085608.
- 20) Paper titled "**Impact of Shadow or Dust on Solar Photovoltaic Power Generation System**," 2023 Second International Conference on Electronics and Renewable Systems (ICEARS), Tuticorin, India, 2023, pp. 196-200, doi: 10.1109/ICEARS56392.2023.10085410.
- 21) Paper titled "**IoT Based Water Showering Mechanism in Agriculture**" is published in IEEE, 2022 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), Chennai, India, 2022, pp. 1-3, [DOI: 10.1109/ICPECTS56089.2022.10047817](https://doi.org/10.1109/ICPECTS56089.2022.10047817)
- 22) Paper titled "**Dust Deposition's Effect on Solar Photovoltaic Module Performance: An Experimental Study in India's Tropical Region**" is published in Journal of Renewable Materials, Vol.10, No.8, pp. 2133-2153, 2022, [DOI: 10.32604/jrm.2022.019649](https://doi.org/10.32604/jrm.2022.019649). (Annexure 1 journal, Impact Factor: 1.67)
- 23) Paper titled "**Smart Mirror Information System Using IoT**" is published in the Journal of Inventive Computation and Information Technologies, Springer Singapore, 2022, DOI: [https://doi.org/10.1007/978-981-16-6723-7\\_46](https://doi.org/10.1007/978-981-16-6723-7_46).
- 24) Paper titled "**Automatic Drainage monitoring and Alert System using IoT**" is published in the Journal of Inventive Computation and Information Technologies, Springer Singapore, 2022, DOI: [https://doi.org/10.1007/978-981-16-6723-7\\_55](https://doi.org/10.1007/978-981-16-6723-7_55)
- 25) Paper titled "**Smart Waste Management Using Internet of Things**" is published in Solid State Technology, Vol. 63 No. 5 (2020).
- 26) Paper titled "**Monitoring of Transformer and Generator using IoT**" is published in the International Journal of

	<p>Advanced Science and Technology, Volume 29 No. 9s,2020 Special Issue.  <a href="http://sersc.org/journals/index.php/IJAST/article/view/16331">http://sersc.org/journals/index.php/IJAST/article/view/16331</a></p> <p>27) Paper titled “<b>Border Alert and Life Protection System for Fishermen</b>” is published in Journal of Advanced Engineering Research, Volume 6, Issue 1, 2019, pp.10-15, 2019.</p> <p>28) Paper titled “<b>Autonomous System for Detection of Defects in Rails by Image</b>” is published in the International Journal of Pure and Applied Mathematics, Volume 117 No. 16, 137-143, 2017.</p> <p>29) Paper titled “<b>Automatic Vehicle Loan Sentry using GSM</b>” is published in the International Journal of Applied Engineering Research (IJAER) , Volume 10, Number 2, 2015.</p> <p>30) Paper titled “<b>Books Detriment Detector Using Digital Image Processing</b>” is published in the International Journal of Applied Engineering Research (IJAER), Volume 10, Number 2, 2015.</p> <p>31) Paper titled “<b>Performance Analysis of Efficiency enhancement Technique for SPVPGS: A Simulation Study</b>” is published in the International Journal of Applied Engineering Research (IJAER), Volume 10, Number 2, 2015.</p> <p>32) Paper titled “<b>Performance Analysis of Efficiency Enrichment Technique for SPVPGS: an Experimental Assessment</b>” is published in Lecture Notes in Electrical Engineering, Springer, volume 326,20 November 2014.  <a href="https://doi.org/10.1007/978-81-322-2119-7_54">https://doi.org/10.1007/978-81-322-2119-7_54</a>.</p> <p>33) Paper titled “<b>Performance analysis of MPPT algorithms for Enhancing Efficiency of SPV Power Generation System</b>” is published in IEEE, on 11 April 2013. <a href="https://doi.org/10.1109/ICEVENT.2013.6496530">DOI: 10.1109/ICEVENT.2013.6496530</a></p>	
<b>Papers Presented in Conferences</b> (Scopus / WoS indexed only)	Overall : 10	After Joining RMK : 10
<b>Ph.Ds / Projects Guided</b>	Ph.Ds Guided : NIL	Student Projects Guided : 20
<b>Books Published :</b>	<p>Count : NIL</p> <p>List :</p>	
<b>Patents</b>	Published Count : 01	Granted Count : 02

	<p>List :</p> <p><b><u>Patent Granted:</u></b></p> <ul style="list-style-type: none"> <li>❖ Patent granted for the invention titled “<b><i>Border Alert and Life Protection System for Fishermen</i></b>”. <b><i>Application No.: 201741022591; Patent No: 389281</i></b></li> <li>❖ Patent applied in patent office intellectual property building; Chennai titled “<b><i>Smart Waste Management Using Credit Fetcher</i></b>”. <b><i>Application No.: 201941049420;Patent No: 508793</i></b></li> </ul> <p><b><u>Patent applied:</u></b></p> <ul style="list-style-type: none"> <li>❖ Patent applied in patent office intellectual property building, Chennai titled “Implementation of Real-time Chatbot Hardware using Android” Application No : 202341077848</li> </ul>
<p><b>Professional Memberships</b></p>	<p>Count : 03</p>
	<p>List :</p> <ul style="list-style-type: none"> <li>❖ Lifetime membership holder in Instrument Society of India-<b><i>Membership No.:2236</i></b></li> <li>❖ Lifetime membership holder in The Indian Society for Technical Education-<b><i>Membership No.:105522</i></b></li> <li>❖ Lifetime membership holder in International Society for research and Development-<b><i>Membership No.:M4150903445</i></b></li> </ul>
<p><b>Consultancy Projects Completed</b></p>	<p>Count : 05</p>
	<p>Count : 03</p>

<p><b>Awards Received</b></p>	<p>List :</p> <ul style="list-style-type: none"> <li>❖ Won the <b>third position in AICTE-ECI-ISTE Chhatra Vishwakarma Awards-2018</b> by presenting an innovative solution and prototype <b>“Smart waste management system using IoT”</b> under the theme of Empowerment of Villages through Technologies organized by All India Council for Technical Education (AICTE), in association with the Ministry of Human Resource Development, Govt. of India, Engineering Council of India (ECI), and the Indian Society for Technical Education (ISTE) from 20 – 21 January 2019.</li> <li>❖ Awarded <b>“OUTSTANDING CONTRIBUTION IN REVIEWING”</b> by <b>SOLAR ENERGY</b> in cooperation with <i>ISES (INTERNATIONAL SOLAR ENERGY SOCIETY)</i> in June 2017.</li> <li>❖ Certified as <b>“CERTIFICATE OF REVIEWING”</b> by <b>SOLAR ENERGY</b> in cooperation with <i>ISES (INTERNATIONAL SOLAR ENERGY SOCIETY)</i> on May 2016.</li> </ul>
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<p><b>Research grants Received</b></p>	<p>01</p>
<p><b>Orchid Link / ID</b></p>	<p>ID : 0000-0002-1221-8432</p>
<p><b>Google Scholar Link / ID</b></p>	<p>ID : z9X8FdMAAAAJ</p>
<p><b>Vidwan Link / ID</b></p>	<p>ID : 305230</p>
<p><b>Research Gate Link / ID</b></p>	<p><a href="https://www.researchgate.net/profile/Chairma-Lakshmi">https://www.researchgate.net/profile/Chairma-Lakshmi</a></p>
<p><b>Scopus Link / ID</b></p>	<p>ID : 55662363000</p>