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**St. JOSEPH'S INSTITUTE OF TECHNOLOGY**  
(An Autonomous Institution)  
**St. Joseph's Group of Institutions**  
OMR, Chennai - 119



## Department of Artificial Intelligence and Datascience

### FACULTY DETAILS

<b>Staff Name</b>	: <b>Dr. M.K.Kirubakaran</b>
<b>Date of Birth</b>	: 18/11/1980
<b>Educational Qualification</b>	: B.Tech., M.E., Ph.D
<b>Area of Interest</b>	: Wireless Sensor Networks, Cyber security, Cloud computing
<b>Years of Experience</b>	: 18 Years 9 Months
<b>Area of Research</b>	: Wireless Sensor Networks
<b>No of Student Projects Guided</b>	: 25
<b>Supervisor</b>	: -
<b>FDP &amp; Workshop Funding</b>	: -
<b>Research Projects (Granted)</b>	: -
<b>R &amp; D Activities</b>	:
<b>Publication Details</b>	: <b>Journal</b> 1. M. K. Kirubakaran, N.Sankarram, "RR-MAC: Receiver Reservation MAC protocol with time-division for wireless sensor networks", IOSR Journal of Electronics and Communication Engineering (IOSRJECE) ISSN: 2278-2834, ISBN No. : 2278-8735 Volume 3, Issue1 (Sep-Oct 2012), PP 26-32 2. M. K. Kirubakaran, N.Sankarram, "Performance of a wireless Sensor Network MAC protocol with a short sleep interval", Research Journal of Applied Sciences, Engineering and Technology, Maxwell Science Publication, ISSN: 2040-7459; e-ISSN: 2040-7467, Volume 7, Issue 6(February 2014), PP

952-958

3. M. K. Kirubakaran, N.Sankarram, “A Self-Adaptive Duty Cycle Receiver Reservation MAC Protocol for Power Efficient Wireless Sensor Networks”, Indian Journal of Science and Technology, Vol 9(40) ISSN (Print): 0974-6846, (October 2016).
4. M. K. Kirubakaran, N.Sankarram, “IW-MAC: A invite and wait MAC protocol for power efficient wireless sensor networks”, Journal of Ambient Intelligence and Humanized Computing (Springer Publication) – 2018
5. M. K. Kirubakaran, N.Sankarram, “ Stimulated RR MAC Protocol for power efficient wireless sensor networks”, International journal of Reasoning based Intelligent Systems, Volume 11, Issue no 2, 2019.
6. M. K. Kirubakaran, G.Annapoorni, G.Lathaselvi,” A Survey on Application of Hyperspectral Imaging Techniques in Assessing Fruit Quality “,The Journal of Research on the Lepidoptera, Volume 51 (2): 303-318, May 2020.
7. M.K.Kirubakaran,” Design And Monitoring Of A Wireless Sensor Network Based Environmental Security System Using Iot”, International journal of Biology, Pharmacy and Allied Sciences, IJBPAS, November, Special Issue, 2021, 10(11): 896-903.
8. M.K.Kirubakaran,” Bio-Applications Of Industry 4.0 Machine Learning High-Quality Control And Predictive Environment Maintenance”, International journal of Biology, Pharmacy and Allied Sciences, IJBPAS, November, Special Issue, 2021, 10(11): 964-975.
9. M.K.Kirubakaran, Vijayakumar, Rajinikanth, “Automatic detection of breast cancer in ultrasound images using Mayfly algorithm optimized handcrafted features”, Journal of X-Ray Science and Technology, vol. 30, no. 4, pp. 751-766, 2022.
10. M.K. Kirubakaran,” A novel security framework for

healthcare data through IOT sensors”, Measurement: Sensors, Volume 24, December 2022.

### Conferences

1. M. K. Kirubakaran, N.Sankarram, “Split – forward RR-MAC protocol for energy efficient wireless sensor networks” in 2 nd International Conference on Advanced Computing and communication Systems. (ICACCS 2015) Sri Eshwar College of Engineering. Jan’15 Technical co-sponsors: IEEE.
2. M. K. Kirubakaran, M.P.Rajakumar, “Real time social distancing and mask detection using convolutional neural networks”, 12th International Conference on Advances in Computing, Control, and Telecommunication Technologies, ACT 2021, 2021, 2021-August, pp. 121–126.
3. M. K. Kirubakaran, Sakthi, U, “Blockchain-Enabled Precision Agricultural System Using IoT and Edge Computing”, Lecture Notes in Networks and Systems 2023, 645 LNNS, pp. 397–405
4. M. K. Kirubakaran, Raj, A.T, “An Improved Large Scale Data Analytics for Smart Cities with Multimodal Data Fusion”, Proceedings of the 2023 2nd International Conference on Augmented Intelligence and Sustainable Systems, ICAISS 2023, 2023, pp. 1128–1133.

### Patent Publication

- : 1. Patent Published for “IoT based smart device” application no. 202141029973A; 09/07/2021.
2. Patent Published for “Intelligent household energy related IoT System” application no. 202141014005A; 09/07/2021.
3. Patent Published for “Enhancing Accuracy and speed through designing at the early stages Robotic process automation using machine learning” application no. 202241035928 A; 22/7/2022.
4. Patent Published for “Finance Future Patterns in the market

	<p>using artificial intelligence” application no. 202221052876 A; 23/9/2022.</p> <p>5. Patent Published for “Machine Learning and Artificial Intelligence for intrusion detection in network security” application no. 202241057922 A; 14/10/2022.</p> <p>6. Patent Published for “A hybrid approach using deep learning and statistical methods for accurate forecasting of solar power generation” application no. 202321041365 A; 01/09/2023.</p>
<p><b>Book Chapters</b></p>	<p>1. M. K. Kirubakaran, Sakthi, U,” Blockchain-Based Internet of Vehicles for Intelligent Transportation System Using Fog Computing”, Lecture Notes on Data Engineering and Communications Technologies, 2022, 117, pp. 827–835.</p>
<p><b>FDP &amp; Workshop Attended Details</b></p>	<p>: 1. Attended Faculty Development Programme on Data science with Python in Dhanalakshmi College of Engineering, Chennai 26-12-2019 to 28-12-2019</p> <p>2. Attended Faculty Development Programme on Internet of Things in NITTTR, Chandigarh 10-04-2020 to 14-05-2020</p> <p>3. Attended Faculty Development Programme on HTML in Crescent institute of science of technology 20-4-2020 to 24-04-2020</p> <p>4. Attended Faculty Development Programme on Linux Applications in Engineering Education in NITTTR, Chandigarh 27-04-2020 to 01-05-2020</p> <p>5. Attended Faculty Development Programme on Data science using R in Engineering Education in NITTTR, Chandigarh 11-05-2020 to 15-05-2020</p> <p>6. Attended Faculty Development Programme on Robotics process automation in Jeppiaar Institue of Technology 04-05-2020 to 06-05-2020</p> <p>7. Attended Faculty Development Programme on Open source cyber security tools in NITTTR, Chandigarh 18-05-2020 to 22-05-2020</p> <p>8. Attended Faculty Development Programme on PYTHON 3.4.3 in</p>

Sri visvesvaraya Institute of Technology with Spoken tutorial  
IIT Bombay 25-05-2020 to 30-05-2020

9. Attended Faculty Development Programme on Machine Learning in J.B. Institute of Engineering and Technology 01-06-2020 to 05-06-2020
10. Attended Faculty Development Programme on PYTHON 3.4.3 in Pragati Engineering College 08-06-2020 to 13-06-2020
11. Attended Faculty Development Programme on PHP and MySQL in V.K.R, V.N.B & A.G.K College of Engineering 18-06-2020 to 24-06-2020
12. Attended Faculty Development Programme on Pedagogical Paradigm for Education during the Pandemic Period in Gandhigram Rural Institute (Deemed to be University), Gandhigram, Tamil Nadu 19-08-2020 to 26-08-2020
13. Attended Faculty Development Programme on Salesforce Trailhead in Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur 16-09-2020 to 20-09-2020
14. Attended Faculty Development Programme on Internet of Things (IoT) in Institute of Engineering & Technology, Dr. B. R. Ambedkar University, Khandari, Agra. 12-10-2020 to 16-10-2020
15. Attended Faculty Development Programme on Internet of Research Methodology in Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik. 15-10-2020 to 17-10-2020
16. Attended Faculty Development Programme Flutter UI Design in ICT Academy. 23-11-2020 to 30-11-2020
17. Attended Short-Term Training Programs (STTP) on "Computer Forensics & Cyber Crime in JSS Academy of Technical Education, Noida. 23.11.2020 – 28.11.2020.
18. Attended Faculty Development Programme Cyber Security for Internet of Things in IIT, Jabalpur. 21-06-2021 to 25-06-2021

19. Attended Faculty Development Programme Parallel and Distributed Deep Learning in IIT, Nagpur. 28-06-2021 to 02-07-2021
20. Attended Faculty Development Programme Cyber security in SRM Vallimmai Engineering College . 8-11-2021 to 12-11-2021
21. Attended Faculty Development Programme Microsoft Azure AI in ICT Academy. 25 April 2022 to 29 April 2022.
22. Attended Faculty Development Programme Insights and Open Challenges in Computing Technologies in Sri Sai ram Engineering College. 11-07-22 to 15-07-22.
23. Attended Faculty Development Programme Foundations of Data Science in St. Joseph's Institute of Technology. 4-08-2022 to 6-08-2022.
24. Attended Faculty Development Programme on outcome based curriculum design in NITTTR, Chandigarh  
05-09-2022 to 09-09-2022
25. Attended Faculty Development Programme on Data Science using python in NITTTR, Chandigarh  
10-10-2022 to 14-10-2022
26. Attended Faculty Development Programme Internet of Things and cloud interface in St. Joseph's Institute of Technology. 21-11-2022 to 23-11-2022.
27. Attended Faculty Development Programme on Block chain revolutionizing artificial intelligence in Apex institute of Technology, Chandigarh University 21-08-2023 to 25-08-2023.

**Nptel Certification/  
Other courses**

1. NPTEL Online Certification course on Cryptography and network security, Jan-Apr 2019.
2. NPTEL Online Certification course on Database Management System, Jan-Mar 2020.
3. NPTEL Online Certification course on Introduction to cyber security, 28-08-2021.
4. UDEMY online course on Introduction to cyber security, 28-12-22(1.5 total hours)

	<ol style="list-style-type: none"> <li>5. UDEMY online course on cyber security for beginners v 2023,11-01-23(21 total hours)</li> <li>6. UDEMY online course on cyber security Bootcamp 2023: Become IT PRO,20-01-23(33.5 total hours)</li> </ol>
<b>Reviewer</b>	<ol style="list-style-type: none"> <li>1. Acted as a reviewer in Computational Intelligence and Neuroscience, Hindawi.</li> <li>2. Acted as a reviewer in IEEE Madras Section Technically Sponsored “2022 First international conference on Computer, Power and Communication (ICCPC’22)</li> <li>3. Acted as a reviewer in 7<sup>th</sup> international conference on Computer, communication and signal Processing(ICCCSP’23)</li> </ol>
<b>Professional Membership</b>	-