

Faculty Profile

Dr. G. Jasper W. Kathrine, M.E., Ph.D

Associate Professor,

Department of Computer Science and Engineering

kathrine@karunya.edu



Academic Background

Degree	University	Year
Ph.D	Karunya Institute of Technology and Sciences	2014
M.E	Anna University	2007
B.E	Bharathiar University	1998

Courses Taught

- 18EC2003 - Digital System Design
- 18CS3079 - Security and Privacy for Big Data
- 17CS2005 – Cryptography and Network Security
- 13CS3042 – Ethical Hacking
- 18CS3027 – Cyber Physical System
- 17CS3038 - Cyber Forensics
- 14CS3054 – Database Security
- 17CS3022 – Object Oriented Software Engineering

Research Interests

- Computing Security
- Cryptography
- Grid & Cloud Computing Security
- Biometrics for Security
- Cyber Security
- Soft Computing for Security

Most recent Publications

- Dr. G. Jasper W. Kathrine, Bahman Javadi, J. Dinesh Peter, G. Matthew Palmer, “An Intelligent Blockchain- based Framework for Securing Smart Grid”, “Chap:6, Industry 4.0 Interoperability, Analytics, Security, and Case studies”, CRC Press - Taylor & Francis Group. eISBN: 9781003048855, 2021. <https://doi.org/10.1201/9781003048855>. **Published**
- G. Jasper W. Kathrine, C. Willson Joseph, “Attacks, vulnerabilities and their countermeasures in Wireless Sensor Networks”, Chap. 7, Deep Learning Strategies for Security Enhancement in Wireless Sensor Networks, IGI Global publication, pp. 134-154, ISBN: 9781799850687, 2020. DOI: 10.4018/978-1-7998-5068-7.ch007 **Published**
- Shibin D., Kathrine J.W. (2018) “A Secure and Hybrid Approach for Key Escrow Problem and to Enhance Authentic Mobile Wallets” In: Satapathy S., Bhateja V., Das S. (eds) Smart Intelligent Computing and Applications. Smart Innovation, Systems and Technologies, vol. 105, pp.81-89. Springer, Singapore, **DOI:** https://doi.org/10.1007/978-981-13-1927-3_9, ISSN: 2190-3018, E-ISSN: 2190-3026, **ISBN:** 978-981-13-1927-3, SJR: 0,173. **Indexed in Scopus.**
- G. Jasper Willsie Kathrine, “Biometrics-Based Authentication Scheme for Cloud environment”, Cryptographic and Information Security – Approaches for Images and Videos, CRC Press – Taylor and Francis Group, ISBN -13: 978-1-1385-6384-1, pp.917 – 944, Chap. 31, 2019. **Published**
- Mr. J. Andrew, Dr. G. Jasper W. Kathrine, “An Intrusion Detection System using Correlation, Prioritization and Clustering Techniques to Mitigate False Alerts” Advances in Big Data and Cloud Computing, Springer Verlag Publication, Vol.645, pp. 257-268, 2018. https://doi.org/10.1007/978-981-10-7200-0_23, Print ISBN: 978-981-10-7199-7. **Indexed in Scopus.**
- Alfred Raja Melvin, G. Jasper W. Kathrine, “Dynamic Malware Attack Dataset Leveraging Virtual Machine Monitor (VMM) audit data for the detection of Intrusions in Cloud”, Transactions on Emerging Telecommunications Technologies, pp. 1-19, e4287, <https://doi.org/10.1002/ett.4287>. **Indexed in Scopus. IF: 2.638**
- Shibin David, Dr. G. Jasper W. Kathrine Kathrine, “Digital Signature Algorithm for M-Payment Applications Using Arithmetic Encoding and Factorization Algorithm”, Journal of cases on Information Technology, IGI Global Publishers, Vol. 23, Issue 3, pages 11-26, 2021. DOI: 10.4018/JCIT.20210701.0a2. **Indexed in Scopus, ESCI, SJR:0.23.**
- D. Shibin, G. Jasper W. Kathrine, “An Investigative Report On Encryption Based Security Mechanisms for E-Wallets”, International Journal of Scientific and Technology Research, 8(10), pp. 1755-1769, 2019, ISSN 2277-8616, **Indexed in Scopus.**

- D. Shibin, G. Jasper W. Kathrine, “Augmenting privacy for e-wallet applications using ranked keyword search”, *International Journal of Scientific and Technology Research*, 8(9), pp. 1835-1842, 2019, ISSN 2277-8616, 10.5281/zenodo.4550924. **Indexed in Scopus.**
- S. Jebapriya, D. Shibin, G. Jasper W. Kathrine, Naveen Sundar, “Support vector machine for classification of Autism Spectrum Disorder based on abnormal structure of Corpus Callosum”, *International Journal of Advanced Computer Science and Applications*, 10(9), pp. 489-493, Taylor and Francis, 2019. Digital Object Identifier (DOI): 10.14569/IJACSA.2019.0100965. **Indexed in Web of Science & Scopus. SJR:0.13**
- R. Venkatesan, G. Jasper W. Kathrine, K. Ramalakshmi, “Internet of Things based pest management using natural pesticides for small scale organic gardens”, *Journal of Computational and theoretical nanoscience*, Vol. 15, pp. 2742-2747, 2018. **Indexed in Scopus.**
- A. Gulzan Esther, G. Jasper Willsie Kathrine, A. Susanna, D. Shibin, "Efficient Intrusion Detection using machine learning techniques", *International Journal of Advanced Research in Dynamical and Control Systems*, Vol. 10, Special Issue 03, pp. 1045-1050, 2018. Publisher: Institute of Advanced Scientific Research, **Indexed in Scopus. SJR:0.11 10.5281/zenodo.2577634**
- A. Susanna, D. Shibin, G. Jasper Willsie Kathrine, A. Gulzan Esther, “Enhancing user authentication for mobile wallet using cryptographic mechanism”, *International Journal of Advanced Research in Dynamical and Control Systems*, Special Issue 05, pp. 891-897, 2018. Publisher: Institute of Advanced Scientific Research, **Indexed in Scopus. SJR:0.11 10.5281/zenodo.2577632**
- Allen Oommen Joseph, G. Jasper W. Kathrine, Rohit Vijayan, “Cloud Security Mechanisms for Data Protection: A Survey”, **International Journal of Multimedia and Ubiquitous Engineering, SERC publication, Vol.9, No.9, pp.81-90, 2014. Indexed by Scopus. DOI: 10.14257/ijmue.2014.9.9.09, SJR:0.14, SNIP:0.304**
- G. Jasper W. Kathrine, E. Kirubakaran, Elijah Blessing Rajsingh, “Enhancing security of electronic health records through grid-based user authentication scheme”, *International Journal of Information and Communication Technology, Inderscience Publication*, Vol. 6, No.2, pp.109-121, 2014, ISSN 1466-6642. Impact Factor – 0.536. **Indexed by Scopus. DOI: 10.1504/IJICT.2014.060379.**
- G. Jasper W. Kathrine, E. Kirubakaran, Elijah Blessing Rajsingh, “Efficient Biometric Template based Authentication Scheme for Grid Environment”, *Special Issue of International Journal of Tomography and Simulation (IJTS) [ISSN 2319-3336], CESER Publication*, Vol.26, Issue No. 2, pp.26-37, 2014. IJTS was formerly *International Journal of Tomography and Statistics [ISSN 0972-9976]. 10.5281/zenodo.1322513. Impact Factor – 0.070. Indexed by Scopus.*

- G. Jasper W. Kathrine, Dr. E. Kirubakaran, Dr. R. Elijah Blessing, “Smart Card based Time Efficient Authentication Scheme for Global Grid Computing”, *Human-Centric Computing and Information Sciences*, **Springer Publication**, Vol.3, Issue No. 16, pp. 1-14, 2013. doi:10.1186/2192-1962-3-16. **Indexed by Scopus, Science Citation Index Expanded. IF: 3.700**
- Palmer. M, Kathrine. G.J.W, Jebapriya. S, “Comprehensive Analysis of Smart grid Security with Intelligent Machine Learning based Framework”, 7th International Conference on Advanced Computing and Communication System, pp. 307-313, ICACCS, DOI: 10.1109/ICACCS51430.2021.9442000, 2021. Indexed in Scopus
- Taurshia A., Jasper W. Kathrine G. (2021) Software Defined Networks Centered Group Based Access Control Service for Internet of Things Applications. In: Anbar M., Abdullah N., Manickam S. (eds) *Advances in Cyber Security. ACeS 2020. Communications in Computer and Information Science*, pp.48-60, vol 1347. Springer, Singapore. https://doi.org/10.1007/978-981-33-6835-4_4 Indexed in Scopus
- Alfred Raja Melvin, Kathrine G.J.W. (2021) A Quest for Best: A Detailed Comparison Between Drakvuf-VMI-Based and Cuckoo Sandbox-Based Technique for Dynamic Malware Analysis. In: Peter J., Fernandes S., Alavi A. (eds) *Intelligence in Big Data Technologies—Beyond the Hype. Advances in Intelligent Systems and Computing*, pp 275-290, vol 1167. Springer, Singapore. https://doi.org/10.1007/978-981-15-5285-4_27. Indexed in Scopus.
- D. D. Ajitha, X. S. Basil, S. David and J. Kathrine, "Comparative analysis of various Machine Learning Techniques for Intrusion Detection System," 2019 2nd International Conference on Signal Processing and Communication (ICSPC), Coimbatore, India, 2019, pp. 348-351. Indexed in Scopus.
- R. Anita, Immanuel Johnraja Jebadurai, G. Jasper Willsie Kathrine, Getzi Jeba Leelipushpam, “Techniques for Reducing the Energy Consumption in Nodes of Wireless Sensor Networks: A Survey”, 2019 International Conference on Intelligent Sustainable Systems (ICISS), DOI: 10.1109/ISS1.2019.8908044. Indexed in Scopus.
- Taurshia A., Kathrine J.W., Shibin D. (2019) Prognostic Views on Software Defined Networks Based Security for Internet of Things. In: Shankar Sriram V., Subramaniaswamy V., Sasikaladevi N., Zhang L., Batten L., Li G. (eds) *Applications and Techniques in Information Security. ATIS 2019*. PP. pp 100-116, Chap 8, *Communications in Computer and Information Science*, vol. 1116. Springer, Singapore, DOI: https://doi.org/10.1007/978-981-15-0871-4_8, ISBN: 978-981-15-0871-4. Indexed in Scopus
- G. Jasper Willsie Kathrine, Paradise Mercy Praise, A. Amrutha Rose, Eligious C Kalaivani, “Variants of phishing attacks and their detection techniques” 2019 3rd International Conference on Trends in Electronics and Informatics (ICOEI), DOI: 10.1109/ICOEI.2019.8862697. Indexed in Scopus
- A. Manikandan, G. Jasper W. Kathrine, Alfred Raja Melvin, “Network Attacks and Prevention techniques - A Study”, 2019, IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), DOI: 10.1109/ICECCT.2019.8869077. Indexed in Scopus
- Shibin David, G. Jasper W. Kathrine, “A panoramic overview on fast encryption techniques for outsourced data in mobile cloud computing environment”, *Proceedings of the International Conference on Inventive Computing and Informatics (ICICI 2018)*, pp. 476-480, 2018. DOI: 10.1109/ICICI.2017.8365397. Indexed in Scopus.
- Shibin. D, Dr. G. Jasper W. Kathrine, “A comprehensive overview on secure offloading in mobile cloud computing”, *Proceeding of IEEE sponsored 4th International Conference on Electronics and Communication Systems, (ICECS 2017)*, pp.121-124, 2017, DOI: 10.1109/ECS.2017.8067851. Indexed by Scopus.

- Dr. G. Jasper Willsie Kathrine, “A secure framework for enhancing user authentication in cloud environment using Biometrics”, in proceedings of International Conference on Signal Processing and Communication, ICSPC, pp.283-287, 2017. DOI: 10.1109/CSPC.2017.8305854. Scopus indexed.
- Allen Oommen Joseph, G. Jasper W. Kathrine, “Security of real time cloud service providers: A survey”, IEEE International Conference on Electronics and Communication System, pp. 1-5, 2014, ISBN: 978-1-4799-2321-2, DOI: 10.1109/ECS.2014.6892555. Indexed by Scopus.
- G. Jasper W. Kathrine, E. Kirubakaran, Parul Prakash, “Smart card based remote user authentication schemes — Survey”, Third International Conference on Computing Communication & Networking Technologies (ICCCNT), pp. 1-5, 2012, DOI: 10.1109/ICCCNT.2012.6395882. Indexed by Scopus.
- G. Jasper W. Kathrine, Dr. E. Kirubakaran, Parul Prakash, “Smart Card Based Remote User Authentication Schemes: A Survey”, International Conference on Modelling, Optimisation and Computing (ICMOC-2012), Elsevier Procedia 38 (2012) pp. 1318-1326, <https://doi.org/10.1016/j.proeng.2012.06.162>. Indexed by Scopus.
- G. Jasper W. Kathrine, “A Novel Security Framework for Computational Grid”, 3rd International Conference on Electronics Computer Technology (ICECT 2011), IEEEExplore, Vol.1, pp.103-107, 10.1109/ICECTECH.2011.5941569, 2011. Indexed by Scopus.

Projects Guided

- UG - 28
- PG - 26

Memberships in Professional societies

- International Association of engineers (IAENG)

Life Membership No. : **110997**

- International Association of Computer Science and Information Technology

Life Membership No.: **80340479**

- Computer Society of India

Life Membership No.: **01061380**

- IFERP Professional Member

Annual Membership – May 2020 to Dec 2020

No: PM78314096

- ORCID: 0000-0003-3055-0356
- Scopus Author ID: 57130545500
- Live DNA: 91.15940

Significant achievements:

- Received “**Best Researcher**” Award for Department of Information Technology, Karunya University for the year **2014**.
- Seminar on Network Simulator 2 – NS2 in Department of Electronics and Communication Engineering, Karunya University on 23rd August 2011.
- Seminar on “Security in Grid Computing” on 23/09/2011 in Information Technology Department, Karunya University.
- Seminar on “Research Do’s and Don’ts” on 03/02/2016 in CST Seminar Hall, Karunya University.
- Resource person for one day hands on training in “**Firewall configuration**” on 06/08/2016.
- Resource Person for Faculty Development Training Program (FDTP) on CS 6703 – Grid and Cloud computing for the topics “**Grid Security Infrastructure, Cloud Infrastructure Security and IAM practices in the cloud**” on 25/5/2017 & 26/5/2017 at Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Tamil Nadu 614403. Event Date: **22.05.2017-26.5.2017**
- Seminar on “**Deep Learning Models for Cyber Security and Remote Sensing**” on 25/7/2017 in CST Seminar Hall, Karunya University.
- Resource person for one day guest lecture on "**Enhancing Security for real time applications**", on 7/8/2017 at KPR Institute of Engineering and Technology, Coimbatore 641407.
- Resource person for one day guest lecture on "**Network Security**", on 20/09/2017 at Dhanalakshmi Srinivasan College of Engineering, Coimbatore-641105.
- Handled a session on “**Security in Cloud and fog computing**” in a national level workshop on cloud and fog computing on 24th feb 2018. Event date: 23.02.2018 – 24.08.2018
- Resource person for FDP on “**Digital Technologies in Industry 4.0**” on 8-10th June 2020 on topic “Industry 4.0 & Cyber Security” Stella Maris College of Engineering, Kanyakumari. Event Dates: 06.06.2020 -10.06.2020

