

Curriculum Vitae



Dr Paul Loh Ruen Chze

Senior Lecturer

School of Science and Technology

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Education Qualifications

2020	Specialist Diploma in Teaching and Learning (Higher Education), NIE-NYP
2011	PhD (Computing), Curtin University of Technology, Australia
1995	BEng (Computing), University of Sheffield, U.K.

Academic and Professional Experience

2024 – Present	Senior Lecturer, School of Science and Technology
2011 – 2023	Senior Specialist (IoT) and Senior Lecturer, School of Engineering, NYP
2001 – 2006	Senior Network and Security Engineer, Hewlett-Packard (HP)
1998 – 2001	Network Engineer, Compaq Computers
1996 – 1998	Systems and Network Engineer, Digital Equipment Corporation (DEC)
1990 – 1993	Customer Engineer, Automated Systems Pte. Ltd.
1989 – 1989	Engineering Assistant, National Semiconductor Pte. Ltd.

Memberships and Professional Activities

- Member of Certified Information Systems Security Professional (CISSP) since 2003
- Delivered public talks on Internet-of-Things and Blockchain under the “Future of Work” series in collaboration with the National Library Board, 2022 – 2023
- Serving as a reviewer for Sensors Journal, International Journal of Communication Systems, International Symposium on Sensor Science, International Conference on Information, Communications and Signal Processing

Patents

Co-inventor of the following patents:

- 2017, "Method and System in Dynamic Self-Localisation for Non-Stationary IoT Networks and Nodes"; Singapore No. 10201702675T
- 2015, "Method and System for Collaborative Security Key Generation for Ad-hoc Internet of Things (IoT) Nodes"; Singapore No. 102015081905
- 2011, "Method and System for an Adaptive Universal Network Engine for Mobile Ad-hoc Network (MANET) Nodes"; SG 187998

Research Interests

- Internet-of-Things
- Artificial Intelligence
- Blockchain
- Wireless Mesh Network
- Network Security

Awards

- 2023, IP Award – Contribution towards Intellectual Property Development, Nanyang Polytechnic
- 2020, Innovation and Quality Team Award (Gold), Nanyang Polytechnic
- 2018, Innovation and Quality Team Award (Gold), Nanyang Polytechnic
- 2018, Certificate of Merit, Innovation and Quality Project, Nanyang Polytechnic
- 2014, IP Award – Contribution towards Intellectual Property Development, Nanyang Polytechnic
- 2006 – 2009, Curtin University Postgraduate Scholarship
- 2009, Curtin Research Scholarship

Selected Publications

- R.C. Loh, S.L. Kan, K.W. Ang, A.L. Ong, "Next-Generation "EXIT" Signs to Save Lives", The 5th IEEE International Conference of Smart Internet-of-Things, 2021
- R.C. Loh, S.L. Kan, K.W. Ang, E. Sim, E.M. Kan, J.J. Yong, S.W. Hing, "Secured IoT Gateway For Smart Nation Applications", 14th International Wireless Communications and Mobile Computing Conference, 2018
- R.C. Loh, S.L. Kan, K.P. Ng, K.W. Ang, J.J. Yong, S.W. Hing, "A Localization Algorithm Using Unique Performance Reference Profiles for Internet-of-Things", 2nd International Conference on Computer, Network Security and Communication Engineering, 2017
- S.L. Kan, R.C. Loh, K.W. Ang, E. Sim, E.M. Kan, "A Multi-Factors Security Key Generation Mechanism for IoT", 9th International Conference on Ubiquitous and Future Networks, 2017
- R.C. Loh, S. L. Kan, K. W. Ang, E. Sim, E. M. Kan, S. W. Hing (2014) "Cross-Layer Secured IoT Network

- and Devices", 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES 2014)
- R.C. Loh, S. L. Kan (2014) "A Secure Multi-Hop Routing for IoT Communication", IEEE World Forum on Internet of Things (WF-IoT).
- R.C. Loh, W.Y. Kan, S. L. Kan, (2012) "A User-Controllable Multi-Layer Secure Algorithm for MANET", IEEE 8th International Wireless Communications and Mobile Computing Conference (IWCMC).
- R.C. Loh, S. Soh, M. Lazarescu, (2011) "Addressing the Most Reliable Edge-Disjoint Paths with Delay Constraint Problem", IEEE Transactions on Reliability, March 2011.
- R.C. Loh, S. Soh, M. Lazarescu, (2010) "Maximizing Bandwidth Using Disjoint Paths", 24th IEEE Advanced Information Networking and Applications (AINA).
- R.C. Loh, S. Soh, M. Lazarescu, (2009) "Edge Disjoint Paths with Minimum Delay Subject to Reliability Constraint", 15th IEEE Asia-Pacific Conference on Communications (APCC).
- R.C. Loh, S. Soh, M. Lazarescu, (2009) "An Approach to Find Maximal Disjoint Paths with Reliability and Delay Constraints", 23rd IEEE Advanced Information Networking and Applications (AINA).
- R.C. Loh, S. Soh, M. Lazarescu, S. Rai, (2008)"A Greedy Technique for Finding the Most Reliable Edge-disjoint-path-set in a Network", 14th IEEE Pacific Rim International Symposium on Dependable Computing (PRDC).
- R.C. Loh, (2009) "Evaluating Reliability in Computer Communications". Poster, Curtin Engineering & Computing Research Colloquium, (CECRC).
- R.C. Loh, S. Soh, M. Lazarescu, (2008) "Finding the Best Approximate Multi-Constrained QoS Edge-disjoint-path-set", 9th Postgraduate Elec. Eng. and Comp. Symp., (PEECS).
- R.C. Loh, S. Soh, M. Lazarescu, (2007) "Finding the most reliable edge-disjoint-path-set in a communication network", 8th Postgraduate Elec. Eng. and Comp. Symp., (PEECS).

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