

NTU: Academic Profile: Prof Er Meng Joo

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Academic Profile

[Prof Er Meng Joo](#)



Professor

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Education

- PhD Australian National University 1992
- MEng National University of Singapore 1988
- BEng(Hons) National University of Singapore 1985

Biography

Professor Er Meng Joo is currently a Full Professor in Electrical and Electronic Engineering, Nanyang Technological University, Singapore. He served as the Founding Director of Renaissance Engineering Programme and an elected member of the NTU Advisory Board and from 2009 to 2012. He served as a member of the NTU Senate Steering Committee from 2010 to 2012.

He has authored five books entitled “Dynamic Fuzzy Neural Networks: Architectures, Algorithms and Applications” and “Engineering Mathematics with Real-World Applications” published by McGraw Hill in 2003 and 2005 respectively, and “Theory and Novel Applications of Machine Learning” published by In-Tech in 2009, “New Trends in Technology: Control, Management, Computational Intelligence and Network Systems” and “New Trends in Technology: Devices, Computer, Communication and Industrial Systems”, both published by SCIYO, 18 book chapters and more than 500 refereed journal and conference papers in his research areas of interest.

Professor Er was bestowed the Web of Science Top 1 % Best Cited Paper and the Elsevier Top 20 Best Cited Paper Award in 2007 and 2008 respectively. In recognition of the significant and impactful contributions to Singapore's development by his research projects, Professor Er won the Institution of Engineers, Singapore (IES) Prestigious Engineering Achievement Award twice (2011 and 2015). He is also the only dual winner in Singapore IES Prestigious Publication Award in Application (1996) and IES Prestigious Publication Award in Theory (2001). Under his leadership, the NTU Team emerged first runner-up in the Freescale Technology Forum Design Challenge 2008. He received the Teacher of the Year Award for the School of EEE in 1999, School of EEE Year 2 Teaching Excellence Award in 2008, the Most Zealous Professor of the Year Award in 2009 and the Outstanding Mentor Award in 2014. He also received the Best Session Presentation Award at the World Congress on Computational Intelligence in 2006, Best Paper Award (First Prize) at the International Automatic Control Conference 2016 and Best Presentation Award at the IEEE International Conference on Intelligent Control, Power and Instrumentation (ICICPI) 2016. On top of this, he has more than 60 awards received at international and local competitions.

Currently, Professor Er serves as the Editor-in-Chief of 3 international journals, namely International Journal of Intelligent Autonomous Systems, Transactions on Machine Learning and Artificial Intelligence and the International Journal of Electrical and Electronic Engineering and Telecommunications. He also serves an Area Editor of International Journal of Intelligent Systems Science and an Associate Editor of 14 refereed international journals, namely IEEE Transaction on Cybernetics, Information Sciences, Neurocomputing, Asian Journal of Control, International Journal of Fuzzy Systems, ETRI Journal, International Journal of Humanoid Robots, International Journal of Modelling, Simulation and Scientific Computing, International Journal of Applied Computational Intelligence and Soft Computing, International Journal of Business Intelligence and Data Mining, International Journal of Fuzzy and Uncertain Systems, International Journal of Automation and Smart Technology, International Journal of Intelligent Information Processing and an editorial board member of the Open Automation and Control Systems Journal and the EE Times.

Professor Er has been invited to deliver more than 60 keynote speeches and invited talks overseas. He has also been active in professional bodies. Under his leadership, the IEEE CIS Singapore Chapter won the CIS Outstanding Chapter Award in 2012 (The Singapore Chapter is the first chapter in Asia to win the award). He was bestowed the IEEE Outstanding Volunteer Award (Singapore Section) and the IES Silver Medal in 2011. He is listed in Who's Who in Engineering, Singapore, Edition 2013.

Research Interests

Professor Er Meng Joo's areas of expertise are intelligent control theory and applications, fuzzy logic and neural networks and robotics and automation. His current works focus on control theory and applications, fuzzy logic and neural networks, computational intelligence, cognitive systems, robotics and automation, sensor networks and biomedical engineering.

Research Grant

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- Academic Research Fund Tier 1 (2014-2017) [by Nanyang Technological University]
 - Academic Research Fund Tier 1 (2015-2017) [by Ministry of Education (MOE)]
 - Academic Research Fund Tier 2 (2014-) [by MOE]
 - NTU Internal Funding (2016-2017) [by Nanyang Technological University]
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Current Projects

- An Integrated Approach Towards Effective Learning
 - Design and Development of Human-intelligence-inspired Experiential Learning Techniques
 - Experimental Learning Theory In The Framework Of Fuzzy Inferene System
 - Fuzzy Cellular Automata Model for Vehicle Conflicts at Signalised Road Junctions
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Selected Publications

- N. Wang, M.J. Er and W. Meng. (2009). A Fast and Accurate Online Self-organizing Scheme for Parsimonious Fuzzy Neural Networks. *Neurocomputing*, 72(16-18), 3818-3829.
 - M.J. Er and Y. Zhou. (2008). Automatic Generation of Fuzzy Inference Systems via Unsupervised Learning Neural Networks. *Neural Networks*, 21(10), 1556-1566.
 - M.J. Er, S.Q. Wu, J.W. Lu and H.L. Toh. (2002). Face Recognition Using Radial Basis Function (RBD) Neural Networks. *IEEE Transactions on Neural Networks*, 13(3), 697-710.
 - S.Q. Wu, M. J. Er and Y. Gao. (2001). A Fast Approach for Automatic Generation of Fuzzy Rules by Generalized Dynamic Fuzzy Neural Networks. *IEEE Transactions on Fuzzy Systems*, 5(4), 578-594.
 - S.Q. Wu and M.J. Er. (2000). Dynamic Fuzzy Neural Networks: A Novel Approach to Function Approximation. *IEEE Transactions on Systems, Man and Cybernetics, Part B*, 30(2), 358-364.
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