Distinguished Lecture Series on Data Analytics and Artificial Intelligence

Prof. Ponnuthurai Nagaratnam Suganthan

CIS Distinguished Lecturer;
Editorial Board Member of the Evolutionary Computation Journal, MIT Press;
School of Electrical & Electronic Engineering,
Nanyang Technological University, Singapore

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RRS905, Sir Run Run Shaw Building, Ho Sin Hang Campus, HKBU

Non-iterative Learning Methods

Abstract

This talk will first introduce the main non-iterative learning paradigms such as the randomization based feedforward neural networks (e.g. RVFL, ELM), random forest, and kernel ridge regression. Some of these non-iterative methods have closed form solutions enabling them to be trained extremely fast. The talk will highlight the similarities and differences among these methods developed over the last 20-25 years. The talk will also present extensive benchmarking studies of these methods using classification and forecasting datasets.

Biography

Professor Ponnuthurai Nagaratnam Suganthan (or P N Suganthan) received the B.A degree, Postgraduate Certificate and M.A degree in Electrical and Information Engineering from the University of Cambridge, UK in 1990, 1992 and 1994, respectively. After completing his PhD research in 1995, he served as a pre-doctoral Research Assistant in the Dept of Electrical Engineering, University of Sydney in 1995–96 and a lecturer in the Dept of Computer Science and Electrical Engineering, University of Queensland in 1996–99. He moved to NTU in 1999. He is an Editorial Board Member of the Evolutionary Computation Journal, MIT Press. He is an associate editor of the IEEE Trans on Cybernetics (2012 -), IEEE Trans on Evolutionary Computation (2005 -), Information Sciences (Elsevier) (2009 -), Pattern Recognition (Elsevier) (2001 -) and Int. J. of Swarm Intelligence Research (2009 -) Journals. He is a founding co-editor-in-chief of Swarm and Evolutionary Computation (2010 -), an SCI Indexed Elsevier Journal. His co-authored SaDE paper (published in April 2009) won the "IEEE Trans. on Evolutionary Computation outstanding paper award" in 2012. His former PhD student, Dr Jane Jing Liang, won the IEEE CIS Outstanding PhD dissertation award, in 2014. His research interests include swarm and evolutionary algorithms, pattern recognition, big data, deep learning and applications of swarm, evolutionary & machine learning algorithms. He was selected as one of the highly cited researchers by Thomson Reuters in 2015, 2016 , and 2017 in computer science. He served as the General Chair of the IEEE SSCI 2013. He has been a member of the IEEE since 1990 and Fellow since 2015. He was an elected AdCom member of the IEEE Computational Intelligence Society (CIS) in 2014-2016.

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Enquiry

Tel: 3411-2385   Email: comp@comp.hkbu.edu.hk   Website: http://www.comp.hkbu.edu.hk/dlecture/