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ELECTRICAL AND COMPUTER
ENGINEERING PROGRAM

THE ELECTRICAL & COMPUTER ENGINEERING PROGRAM PRESENTS

Hybrid Intelligent Methods for Solving the Mobility Management Problem

Prof. Albert Zomaya, University of Sydney

Wednesday, April 14
12.30 – 1.30 p.m. light lunch will be served
Lecture Hall 144

In order to support a wide range of data transfer and user applications, mobility management becomes a crucial factor when designing infrastructure for wireless mobile networks. Mobility management requests are often initiated either by a mobile terminal movement (crossing a cell boundary) or by deterioration in the quality of a received signal on a currently allocated channel. The talk will address some of the key algorithmic and computational challenges associated with the mobility management problem. The talk will present several scenarios for static and dynamic mobility management instances incorporating a combination of metaheuristics. The studies show that hybrid approaches are more capable at producing efficient solutions. From a practical standpoint, these approaches have the potential to lead to massive savings in the number of network signal transactions made to locate users. The results provide new insights into the mobility management problem.

Albert Y. Zomaya is Chair Professor of High Performance Computing & Networking in the School of Information Technologies, The University of Sydney. Professor Zomaya received his PhD from the Department of Automatic Control and Systems Engineering, Sheffield University in the United Kingdom. Professor Zomaya's research interests are in the areas of algorithms, parallel and distributed computing, computational machine learning, biological and adaptive computing systems, networking, mobile computing and wireless networks, cluster and grid computing, cloud computing, data mining, scientific computing, bioinformatics, and systems biology. Professor Zomaya has to his credit 19 book titles and more than 350 publications in technical journals, collaborative books, and conferences. Professor Zomaya is recipient of the 1997 Edgeworth David Medal by the Royal Society of New South Wales for outstanding contributions to Australian Science. In September 2000 he also received the IEEE Computer Society's Meritorious Service Award and in 2006 was made a member of the Golden Core (also of the IEEE Computer Society's).



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