IRIT

Informatics Research Institute of Toulouse

Seminar

Wednesday 18 July 2018
14h00 – 15h00
UT3 Paul Sabatier, IRIT, Salle des Thèses

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The Evolution of Belief Rule Based Expert Systems: A New Paradigm of Computing

Abstract: Belief Rule Base Expert Systems (BRBESs) are widely used in the diverse domains, especially where uncertainty is considered as a critical issue. This talk will present the evolution of BRBESs methodology starting from knowledge representation, inference and learning by taking account of the complexity of the problems of diverse domains, especially the medical domain. This will demonstrate the scope and challenges of developing BRB based deep learning and evolutionary optimization algorithms as well as the integration of BRBESs methodology within the Big Data environment in the light of our current research. The developed approaches of integrating pervasive computing with the BRBESs will also be presented.

Short bio: Pr Mohammad Shahadat Hossain is serving as the Professor of Computer Science and Engineering at the University of Chittagong, Bangladesh since 2007. He worked as the chairman of the Department of Computer Science and Engineering of Chittagong University, starting from 2005 to 2011 for six years. He received both his MPhil and PhD in Computation from the University of Manchester Institute of Science and Technology (UMIST), UK in 1999 and 2002 respectively. He is an internationally renowned scholar holding many prestigious scholarships and visiting professorships in abroad. He awarded prestigious Commonwealth Academic Staff Fellowship in 2009 through a rigorous academic evaluation. He also awarded prestigious Tyndall Visiting Fellowship in 2006. In 2011 and 2013, Professor Hossain awarded prestigious European Commission sponsored Erasmus Mundus Academic Staff Fellowship at the University of Aalborg, Denmark. He is also the holder of PERCCOM's (Pervasive Computing and Mobile Communication for Sustainable Development) Scholar Scholarship as a Visiting Professor, which is sponsored by the European Commission, starting from 2014 to till-to-date. Recently, he awarded prestigious Swedish Research Council grant for the project entitled "A Belief Rule Based DSS to Assess Flood Risks using Wireless Sensor Networks", where he is working as a Foreign Node Leader. His current research area includes the novel idea of sustainable computing which combines pervasive computing with belief rule based expert systems. Investigation of pragmatic software development tools and methods for Information Systems in general and for GIS, in particular is also his area of research. He is continuing his research in other adventurous areas of computing such as health informatics, affective computing, deep learning, Internet of Things (IoT), Big data, e-government and philosophy of computing. He has published about hundred scholarly articles in the reputed international journals (such as IEEE Transactions on Sustainable Computing, Soft Computing, Expert Systems, Journal of Medical Systems) and conferences (such as IEEE INFOCOM, IEEE LCN, IEEE CCNC).

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