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Keynote Speaker

“Sentic Computing”

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Bio
Erik Cambria received his BEng and MEng with honours in Electronic Engineering from the University of Genova, in 2005 and 2008 respectively. In 2011, he was awarded his PhD in Computing Science and Mathematics, following the completion of an industrial Cooperative Awards in Science and Engineering (CASE) research project, funded by the UK Engineering and Physical Sciences Research Council (EPSRC), which was born from the collaboration between the University of Stirling, the MIT Media Laboratory, and Sitekit Solutions Ltd. Today, Erik is a research scientist at the National University of Singapore (Cognitive Science Programme, Temasek Laboratories) and an associate researcher at the Massachusetts Institute of Technology (Synthetic Intelligence Project, Media Laboratory). His interests include AI, Semantic Web, KR, NLP, big social data analysis, affective and cognitive modelling, intention awareness, HCI, and e-health. Erik is invited speaker/tutor in many international venues, e.g., IEEE SSCI and WWW, associate editor of Springer Cognitive Computation, and guest editor of leading AI journals, e.g., IEEE Intelligent Systems and Elsevier Neural Networks. He is also chair of several international conferences, e.g., Brain Inspired Cognitive Systems (BICS), symposia, e.g., Extreme Learning Machines (ELM), and workshop series, e.g., ICDM SENTIRE, KDD WISDOM, and WWW MABSDA. Additionally, he is a fellow of the Brain Sciences Foundation, the National Laboratory of Pattern Recognition (NLPR - Institute of Automation, Chinese Academy of Sciences), the National Taiwan University, Microsoft Research Asia, and HP Labs India.

Abstract
Sentic computing is a multi-disciplinary approach to sentiment analysis at the crossroads between affective computing and common sense computing, which exploits both computer and social sciences to better recognise, interpret, and process opinions and sentiments over the Web. In sentic computing, whose term derives from the Latin sentire (root of words such as sentiment and sentience) and sensus (intended both as capability of feeling and as common sense), the analysis of natural language is based on affective ontologies and common sense reasoning tools, which enable the analysis of text not only at document-, page- or paragraph-level, but also at sentence-, clause-, and concept-level. In particular, sentic computing involves the use of AI and Semantic Web techniques, for knowledge representation and inference; mathematics, for carrying out tasks such as graph mining and multi-dimensionality reduction; linguistics, for discourse analysis and pragmatics; psychology, for cognitive and affective modeling; sociology, for understanding social network dynamics and social influence; finally ethics, for understanding related issues about the nature of mind and the creation of emotional machines.