IEEE Ottawa Section

The IEEE Ottawa EMBS Chapter, TM, PCS, & SSIT Joint Chapter, ComSoc/BTS/CES Joint Chapter, CI and SMC Joint Chapter, LM Affinity Group, and Algonquin College Student Branch

are inviting all interested IEEE members and nonmembers to a seminar on

Large-Scale Industrial Software Systems: Research Opportunities and Challenges
by
Dr. Srini Ramaswamy

DATE: Thursday, October 20, 2011.
TIME: Refreshments, Registration and Networking: 06:00 p.m.; Seminar: 06:30 p.m. – 07:30 p.m.
PLACE: Algonquin College, 1385 Woodroffe Ave., Advanced Technology Building (T), Room T129.
PARKING: No fee at the parking lots 8 and 9 at the time of seminar. Please respect restricted areas.
ADMISSION: Free. Registration required.

Please register by e-mail contacting: Sreeraman Rajan.

Abstract

Software systems development is fast becoming a globalized activity and this is an increasingly major trend within all industrial sectors. Due to the many benefits of globalization, from the integration of multiple ethnic / market perspectives driven idea generation to development cost structuring, middle and small-sized software companies are now beginning to establish worldwide development campuses / partners. Thus, globalization has become an overwhelming phenomenon in the software industry and is rapidly defining the nature of software development for the 21st century. For Industrial Automation companies like ABB in emerging markets such as India, these opportunities are both exciting we well as immensely challenging. They present problems that are incredibly different from similar-sized western markets and require a significant amount of innovation and creativity to develop robust, sustainable, yet significantly low-cost solutions for such markets. In this talk, I will present an overview of ABB in India and its research activities, specifically in the areas of Industrial Communications and Industrial Software Systems.

Bio

Dr. Srini Ramaswamy transitioned from an academic to a corporate research career in 2010, as the head for Industrial Software Systems research at ABB India Corporate Research Center, in Bangalore, India. His primary role is in research team building and leadership, developing university relationships and engaging in applied research for the creation and execution of projects with transformative value for the company's power technologies and process automation business units. On the academic front, he also serves as a visiting professor at the University of Arkansas at Little Rock and a honorary adjunct professor at the Indian Institute of Information Technology – Bangalore.

His research interests are on intelligent and flexible control, behavior modeling, analysis and simulation, software stability and scalability; particularly in the design and development of complex software systems. Specific applications include real-time control issues in automation and manufacturing, data mining and distributed real-time applications. His work is motivated by the desire to understand the various requirements to build scalable, intelligent software systems with the inherent ability to successfully respond to observed and reported behavioral changes in their environment.

Earlier he was in academia for 16 years (1994-2010),. In his last academic job at the University of Arkansas at Little Rock, he was a tenured professor and chairperson of the Computer Science Department, where he helped the development of an applied PhD program in Integrated Computing, served as the statewide program manager for WiNS (Wireless Nano-sensors and Systems) center (2007-2009), the principle investigator for a UALR-wide High Performance Computing initiative, and the research coordinator for collaboration on Engineering Innovative Software Systems for Marine Transportation Logistics with the National Institute of Applied Sciences (INSA) in Rouen, France. In Arkansas, he also initiated a very successful High School Research Program (HSRP) that brought talented high school students to campus and engaged them through an on-campus 3-week STEM-related 'embedded' research experience and mentorship with faculty-student research groups across various science and engineering disciplines. Previously, he was the chairperson of the Computer Science Department at Tennessee Tech.

Dr. Ramaswamy has held multiple visiting research appointments (9 total) at INSA de Rouen in France, the Institute of Software Integrated Systems (ISIS) at Vanderbilt University and the University of Texas at Austin. He was also a successful software consultant for 10 years in the US He built his company Resilient Systems, LLC as a customized software development and managed outsourcing company. From a business perspective, his interests are in the design, development and delivery of large scale software systems, ensuring timely planning, coordination, execution and alignment of a set of sub-services while understanding issues of prioritization, perception and performance in order to deliver value-added services to address a specific business need. He actively consulted on a National Institute of Standards and Technology (NIST) sponsored advanced technology project on intelligent document analysis for aligning timely research with business needs of organizations using technology roadmaps. He also served widely as an expert witness on global software development, outsourcing, database and algorithmic design for arbitrations and litigations. He served on the board of several start-up software companies in the US and India.

Dr. Ramaswamy has over 150 publications including over 30 peer-reviewed journal articles in IEEE, Elsevier, Journal of Systems and Software, etc. Additionally he is also an active reviewer for the ACM Computing Surveys. Dr. Ramaswamy has actively participated in over 50 M.S student project and thesis works in Computer Science, Applied Sciences, Electrical and Computer Engineering, Industrial and Manufacturing Engineering and Information Systems. He has additionally participated in over 5 PhD student dissertations in Applied Computing, served as external co-advisor for 3 PhD students in France and served as evaluator for several PhD students in India.

Dr. Ramaswamy earned his Ph.D. degree in Computer Science from the Center for Advanced Computer Studies (CACS) at the University of Louisiana at Lafayette in 1994. He is a Senior member of the IEEE and a Senior member of the Association of Computing Machinery (ACM). He is an active member of the IEEE SMCS Technical Committee on Distributed Intelligent Systems and also serves as an Associate Editor for the IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews.