Keynote I

Goal-Oriented Requirements Engineering and Software Architecting

Lawrence Chung
Department of Computer Science
University of Texas at Dallas
chung@utdallas.edu

Abstract
Do software systems really help people? More specifically, do software systems really help people solve the real-world problems they are suffering from? Do software systems really help people achieve their objectives? As software systems become more pervasive in every walk of life, so does our concern for their value, utility and adequacy. In this talk, I describe a goal-oriented approach to requirements engineering and software architectural design, which is intended to answer just those questions and develop desirable software systems. Key benefits of a goal-oriented approach in general include systematic exploration of alternatives and selection among the alternatives, in a rational, justifiable and traceable manner. In the context of software development, a goal-oriented approach leads to a requirements specification and a software architectural design as a solution to real-world problems and as a means to real-world goals. A goal-oriented approach complements and extends object-oriented approaches, where the notions of goal and soft-goal introduce a new paradigm for software system development. In this talk, I also outline some of the challenges that arise in this setting.

Speaker Biography
Lawrence Chung is the principle author of the book “Non-Functional Requirements in Software Engineering”, and his work has been widely cited and applied by other researchers in the areas of requirements engineering, software architecture, performance engineering, agent modeling, risk management, etc. He has been working on a variety of applications, including collaborative, ubiquitous computing, augmentative and alternative communication for elderly people, and home appliance control systems, using a conceptual modeling approach. He has been an editorial board member for the Requirements Engineering Journal and the ETRI journal, and involved in organizing various international events. He received his Ph.D. in Computer Science in 1993 from the University of Toronto, and is currently an Associate Professor of Computer Science at the University of Texas at Dallas.
Keynote II

The Maturation of Software Engineering as a Discipline and Recognized Profession

Pierre Bourque
École de technologie supérieure
Université du Québec, Canada
pierre.bourque@etsmtl.ca

Abstract

In spite of the millions of software professionals worldwide and the ubiquitous presence of software in our society, software engineering has only recently begun to reach the status of a legitimate engineering discipline and a recognized profession. This is due notably to the concerted effort of the international software engineering community over the past 10 years or so. The speaker has participated very actively in some of these efforts.

In this talk, the speaker will seek to answer some fundamental questions such as what is discipline, what are the components of a recognized profession, how does software engineering stand in regard to the components of a recognized profession, is software engineering truly an engineering discipline, how does software engineering relate to computer science, to computer engineering, to project management, and is licensing necessary to be recognized profession. The talk will then provide an overview of the Guide to the Software Engineering Body of Knowledge (SWEBOK) and notably its ongoing revision and show its role in regard to the maturation of software engineering as a discipline and a recognized profession.

Speaker Biography

Pierre Bourque is an associate professor and the director of a professional master’s degree program in software engineering at École de technologie supérieure, Université du Québec, Canada. He is coeditor of the 2001 and 2004 versions of the Guide to the Software Engineering Body of Knowledge (SWEBOK) project, sponsored by the IEEE Computer Society and funded by numerous industrial partners. The SWEBOK Guide is recognized as an ISO Technical Report. He is also lead coeditor of the current revision of the SWEBOK Guide. He is a member of the Professional Activities Board and the Board of the Governors of the IEEE Computer Society (2010).

Pierre Bourque received a PhD from the University of Ulster (Northern Ireland) on the topic of the maturation of the software engineering discipline and profession. Prior to his academic appointment, he worked in software engineering, data modeling, and database design at the National Bank of Canada from 1987 to 1995.