Keynotes

Internetware: A New Paradigm for Internet-Based Software Engineering

Hong Mei, Professor, Member of Chinese Academy of Science
Vice President of Shanghai Jiaotong University, China

Abstract:
Today’s Internet is becoming an open, global, ubiquitous and smart computer for synergizing our society and planet with information technology. Such Internet Computer needs new software paradigms for explaining or showing what the model of software systems running on Internet is and how to support their running and development on Internet. Internetware is proposed as such a software paradigm for Internet as a computer, where software is architected as the Internet, developed with the Internet, executed on the Internet, and provided as service via Internet. Furthermore, the success of Internetware depends upon collective and collaborative efforts from developers and users across Internet. In this talk, we review what software paradigm is and the history of paradigm shift at first. Then we analyze the challenges to today’s software paradigms and related technologies, recognize fundamentals of Internetware, design and prototype a systematic solution for Internetware, including autonomous component, adaptive middleware, architecture-driven engineering methodology, and globally collaborative development environment. The research on Internetware is supported by the National Basic Research Program of China (973) and the National High-Tech Program of China (863).

Bio:
Hong MEI is a professor at Shanghai Jiao Tong University and Peking University. He is the director of Key Laboratory of High Confidence Software Technologies of Ministry of Education (@PKU), a vice president of Shanghai Jiao Tong University. He is a member of Chinese Academy of Sciences, and a Fellow of TWAS (The World Academy of Sciences for the advancement of science in developing countries). His current research is on Software Engineering and System Software.

Hong Mei is the chief scientist of the Expert Committee for Computing Technology of State 863 High-Tech Program, a chief scientist of the National Basic Research Program of China (973), a member of the Expert Committee of Grand Science and Technology Program “Core Electronic Devices, High-end General Chips, and infrastructure Software Products”, Vice President of Chinese Software Industry Association (CSIA), Chief Scientist of the Working Group for Software Component Standards of Ministry of Industry and Informationization, Member of Science and Technology Committee of Ministry of Education.
Achieving Excellence at the Frontiers of Global Software Engineering in the 21st Century

Gerd Hoefner
MD & CEO, Siemens Technology and Services Pvt. Ltd.
CEO, Siemens CT DC

Abstract:
In the 21st century, we are seeing software transform entire industries like automotive and healthcare. While doing so, software itself is getting more complex, more connected, and more life-critical. At the same time, globalization requires managing software projects that span geographic boundaries, which makes software development even more challenging. To overcome these challenges which are shaping the frontiers of software engineering, two topics have to be addressed: creating a software engineering culture as well as a people oriented culture. At the Siemens Corporate Development Center we defined our 4 C approach to address these topics. On the one hand, the approach balances culture, content, career, and compensation for better people orientation. On the other hand, it focuses on enhancing cooperation, competence, community, and code quality to establish an effective software engineering culture. The talk will give an overview on how software is changing the world and how we implemented our 4C approach in order to progress at the frontiers of global software engineering in the 21st century.

Bio:
Gerd Hoefner holds a master degree in Computer Science with Business Economics from the Friedrich-Alexander-University in Erlangen-Nuremberg, Germany.

Gerd Hoefner presently holds the position of the Managing Director and Chief Executive Officer of Siemens Technology and Services Private Limited (STS) based in Bangalore, India, since 2002.

He is also responsible for Siemens’ global Corporate Development Center (CT DC). CT DC is an in-house development center with about 4,500 engineers, providing product development services for Siemens businesses out of 20 locations across 9 countries.

Gerd Hoefner is also a member of the board of Directors of Method Park Holding AG and Method Park Software AG, a co-chair of the Indian Council on Competitiveness, a member of the NASSCOM Global In-house Center council, the Advisory Board of the Fraunhofer Institute for Experimental Software Engineering, the South Western Region Council of the Indo-German Chamber of Commerce, the European Business Group Bangalore, the Bangalore Forum for IT and a member of the Siemens Software Strategy Board.

In addition, Gerd Hoefner was a guest lecturer for Software Engineering at the Johannes-Kepler University in Linz, Austria and the Friedrich-Alexander University in Erlangen-Nuremberg.
From Silo to Social Network — Experiences from Forging a Distributed Team

Martin Naedele, VP, Global Head of Architecture
ABB, Business Unit Network Management

Abstract:
While some organizations consciously and systematically build globally distributed organizations for reasons of cost, time zone distribution, or geographic footprint optimizations, other organizations arrive at that situation more by historic accident, and then have to go from there and cope. This keynote reports on experiences and lessons learned from two multi-year change management initiatives to turn an organization with many independent sites into a single team, which just happens to be geographically distributed.

Bio:
Martin Naedele is the Global Head of Architecture for the business unit Network Management of the global power and automation technology company ABB. Previously, he was globally responsible for software research in ABB Corporate Research. Dr. Naedele has published more than 50 conference and journal papers, and holds three patents. He obtained a MSEE from Ruhr-University Bochum in Germany and a doctorate in Computer Engineering from ETH Zurich in Switzerland.