

# OPENING SESSION SPEAKERS INFORMATION



# **Anders Malmberg**

Anders Malmberg is Professor of Economic Geography since 1999. Bewteen 2003 and 2011 he was Director of the Centre for Research on innovation and Industrial Dynamics (CIND). He was Vice Dean of the Faculty of Social Science 2005-2008 and Dean 2008-2011. Since January 1, 2012, he is Deputy Vice Chancellor of Uppsala University.

Anders Malmberg earned his PhD in 1989 at Uppsala University, and was the research co-ordinator of the European Science Foundation Scientific Programme on Regional and Urban Restructuring in Europe between 1990 and 1994. He was the Director of the PhD programme in social and economic geography between 1996 and 2005. He has held visiting research positions at Durham University, UK and at the Swedish Collegium for Advanced Study in the Social Sciences. Director of the Centre for Research on Innovation and Industrial Dynamics (CIND), Uppsala University 2003-2011. His research focuses on industrial dynamics and local and regional economic development, with an emphasis on the study of innovation and transformation processes in clusters and innovation systems.

### **Speech Abstract**

#### TITLE: A research university's collaboration with industry

Two main reasons for a research university to collaborate with industry and other organizations are:

- It is a main mean for contributing to the solution of societal challenges and economical growth

- Research and education develop through exposure to challenging problems in industry and society

A challenge in this context is to realize the synergistic potential of the academic and industrial complimentary skills and to unify their different missions and roles. As an attempt to meet this challenge we have developed AIMday at Uppsala University. Since 2008 about 50 AIMday events have been organized at Uppsala University, other Swedish universities, University of Edinburgh, Nelson Mandela Metropolitan University in South Africa, and next month at Oxford University. It is a general tool that has been used in a variety of scientific disciplines, science&technology, medicine&pharmacy, and humanities&social sciences, and it has likewise attracted different organizations like companies, public organizations, and associations. Collaborative projects, joint grant applications, contract research, industrial PhDs, student graduation projects, and new contacts and networks are examples of AIMday results.



# Fernando Gomide

Prof. Fernando Gomide received the B.Sc. degree in electrical engineering from the Polytechnic Institute of the Pontifical Catholic University of Minas Gerais (PUC/MG) Belo Horizonte, Brazil, the M.Sc. degree in electrical engineering from the University of Campinas (Unicamp), Campinas, Brazil, and the Ph.D. degree in systems engineering from Case Western Reserve University (CWRU), Cleveland, Ohio, USA.

He is a professor of the Department of Computer Engineering and Automation (DCA), School of Electrical and Computer Engineering (FEEC) of the University of Campinas since 1983. His interest areas include fuzzy systems, neural, granular, and evolutionary computation, intelligent data analysis, modeling, control and optimization, decision-making and applications. He is past vice-president of IFSA (International Fuzzy systems Association), was IFSA Secretary and member of the board of NAFIPS (North American Fuzzy Information Processing Society), and is former associate editor of IEEE Transactions on SMC-B and SMC-A, Fuzzy Sets and Systems, and IEEE Transactions on Fuzzy Systems. Currently he serves the editorial boards of Fuzzy Sets and Systems, Evolving Systems, Fuzzy Optimization and Decision Making, International Journal of Fuzzy Systems, Soft Computing, and Granular Computation. He also is a past associate editor of Controle & Automação, the journal of the Brazilian Society of Automatics (SBA), the Brazilian National Member Organization of IFAC and IFSA. He is on the Advisory Board of the International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, Journal of Advanced Computational Intelligence, and Intelligent Automation and Soft Computing. He is IEEE Fellow Class 2016, member of NAFIPS, EUSFLAT, IFSA Fellow Class 2009, and NAFIPS K. S. Fu Award 2011. He serves the IEEE Task Forces on Adaptive Fuzzy Systems, Machine Learning, and the Fuzzy Technical Council of the IEEE Computational Intelligence Society.

### **Speech Abstract**

#### TITLE: Smart Industry - An Outline

Smart Industry aims at integrating academia and industry to develop smart communication, control, computation, and data-driven decision-making technology to increase production efficiency, innovation, competitiveness, economic growth, and social welfare. Data-driven automation and decision-making, keyed to the flow of digital data throughout an enterprise, has triggered considerable industrial awakening in the past decades. The paradigm was to transform enterprise knowledge into digital data that can be stored in data bases of the product enterprise system. Smart Industry idea is to develop ways to transform enterprise data into knowledge that can be stored in knowledge bases accessible to all with a need to know. The talk summarizes the purpose and goals of Smart Industry and its quest to smart data-driven automation and decision-making.

# Alf J. Isaksson



Alf Isaksson received his MSc and PhD from Linköping University, Sweden in 1983 and 1988 respectively. After graduating he stayed at Linköping University until 1991 as an Assistant Professor. From 1991 to 1992 he spent one year as a Research Associate at The University of Newcastle, Australia. Returning to Sweden in 1992 he moved to the Royal Institute of Technology (KTH) in Stockholm, where eventually in 1999 he was promoted to full Professor.

In 2001 he made the shift from academic to industrial research and joined ABB Corporate Research in Västerås, Sweden. After a specialist career culminating in an appointment to Corporate Research Fellow 2009, he is now since January 2014 Global Research Area Manager with the responsibility of internally funding all research in Control at all ABB's research centers world-wide. At the same time he still kept a connection to the academic world as Adjunct Professor at Linköping University for 10 years 2006-2015.

### **Speech Abstract**

#### TITLE: Smart industries from an ABB perspective

The notion of Internet of Things, as well as related topics like Cyber-Physical Systems, is currently attracting quite a lot of attention also in manufacturing and process industries. As a major supplier of automation systems to these industries, ABB has long been at the forefront of technology that connects devices to each other, helping lead the revolution that began with the Intranet of Things. Having the communication in place, the next challenge is to determine what services to offer using this infrastructure. Hence, the paradigm shifts to the Internet of Things and Services, as ABB increase our offering including remote monitoring of energy installations and condition-based maintenance for mining and other industrial equipment.

We now stand at the brink of the next evolution, to the Internet of Things, Services and People, or the IoTSP, where technology is enhancing the role people play in the world of power and automation by giving them powerful new decision-making tools that will result in lower costs and higher profits for our customers. This talk will focus on the challenges – technical as well as commercial – of this on-going digitalization of industry. The focus will of course be confined to the application areas where ABB is active. This still means that the presentation will contain examples in such diverse applications as process industry (pulp & paper industry, mining), power generation and marine & cranes.

#### TIME AND VENUE: Escola de Engenharia da UFMG'S Auditorium at 9:50