You are invited to the 58th edition of the PRAGUE COMPUTER SCIENCE SEMINAR

RADIM JIROUŠEK
From Graphical to Compositional Models

The lecture will be followed by a discussion

ABSTRACT

"Bill Gates, the richest man in the world, loves Bayesian networks." This statement appeared in the titles of many newspaper and journal articles after October 28, 1996, when the Los Angeles Times published an interview with him. He said that Microsoft's competitive advantage was its expertise in Bayesian networks. This declaration indisputably contributed to the popularity of Bayesian networks, and since that time, they have become a standard technique incorporated in statistical and data-mining software packages. However, Bayesian networks are only a part of the technology developed to handle multidimensional probability distributions efficiently. The lecture will therefore also mention other, less famous, graphical models, as well as non-graphical tools, especially, compositional models. It will also show that most of the results valid for probability may be extended to other uncertainty theories, especially to belief functions. Thus, the audience will learn how to differentiate between combination and composition, and, for example, what belief functions have in common with the furniture sold by IKEA. The talk will be an author's subjective glimpse of almost 40 years of history and an opportunity to recollect some names that should be remembered.

ABOUT THE PRAGUE COMPUTER SCIENCE SEMINAR

The seminar takes place once a month on Thursdays at 4:15pm (mostly excluding June to September, and December) alternately in the buildings of Faculty of Electrical Engineering, Czech Technical University in Prague, Karlovo nám. 13, Praha 2 and Faculty of Mathematics and Physics, Charles University, Malostranské nám. 25, Praha 1. Its program typically consists of a one-hour lecture followed by a discussion. The lecture is based on an (internationally) exceptional or remarkable achievement of the lecturer, presented in a way which is comprehensible and interesting to a broad computer science community. The lectures are in English.

Radim Jiroušek is a student and follower of the distinguished scientist of Greek origin, RNDr. Albert Perez, DrSc. Jiroušek graduated from the MFF UK (1969) and received academic degrees from the Academy of Sciences: CSc. (1979) and DrSc. (1993). After completing postgraduate studies, he accepted Perez's offer and commenced a research career at the Institute of Information Theory and Automation (ÚTIA) of the Czechoslovak Academy of Sciences. After 1998, he participated in forming the Department of Mathematical Decision Theory at ÚTIA, which he afterward led for more than five years. He also started teaching at the Czech Technical University in Prague and the University of Economics, Prague, and served in different academic positions for nearly twenty years at the latter.

The international professional community knows Radim Jiroušek primarily for publications concerning the representation of multidimensional probability distributions and later for his theory of compositional models. He is the author or co-author of more than a hundred and fifty publications. His name is also connected with Workshops on Uncertainty Processing (famous WUPES), which have been organized since 1988. He also participated in the realization of several international projects. He was the local coordinator of three European projects within the fifth and sixth framework programs and the ESF EUROCORES project, The Logic of Causal and Probabilistic Reasoning in Uncertain Environments.