I Seminari su "Information Technology Outlook" – Dottorato di Ricerca in Informatica e Matematica

Dr. Sašo Džeroski

Jozef Stefan Institute, Department of Knowledge Technologies, Lubiana (Slovenia)

Giovedì 14 maggio 2015 ore 10.00, Sala Consiglio, Dipartimento di Informatica

MACHINE LEARNIN FOR SYTEM SCIENCES

Systems sciences study complex systems in nature and society, focusing on system dynamics, i.e., on how the state of a system changes with time. To this aim, they use models, which play a central role in the systems science tasks of analysis, identification, design, and control. A major bottleneck in systems sciences is the manual construction of models. The talk will present ambitious research plans (on which work has already started) to alleviate this bottleneck by developing novel approaches in artificial intelligence and machine learning that will support the four main tasks in systems science (analysis, control, identification and design). The methods will be applicable to many practical problems coming from different systems sciences, such as systems biology and medicine and synthetic biology.

Sašo Džeroski is a scientific councillor at the Jozef Stefan Institute and associate professor at the Jozef Stefan Intenational Postgraduate School, both in Ljubljana, Slovenia. His work is mainly in the area of machine learning and data mining (constrained based data mining, data mining query languages, inductive logic programming, relational data mining, equation discovery and inductive databases) and their applications (mainly in environmental and life sciences). He has participated in and lead a number of national and international projects. His projects involving environmental applications of machine learning/data mining include: Processing Lidar Data (2004-2006), A GIS Model for Natural Environment Fire Hazards (2004-2006), Semantical GRID for Ecological Modeling (2004-2006), Methodology for Producing a Digital Map of Forest Stand Height and Canopy Cover(2006-2010),ECOGEN: Soil ecological and economic evaluation of genetically modified crops (FP 5) 2002-2006,SIGMEA: Sustainable Introduction of GMOs into European Agriculture (FP 6) 2004-2007, MAESTRA: Learning from Massive, Incompletely annotated, and Structured Data (FP 7).