



## **Kolloquiums-Reihe des Instituts für Informatik**

Donnerstag, 19.09.2019, 10:00 Uhr  
Institut für Informatik (D8), Am Regenbogen 15, Seminarraum 210

### **Prof. Dr. Rafael H. Bordini**

Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS),  
Porto Alegre, Brasil

### **Developing Intelligent Interactive Systems with Multi-Agent Oriented Programming Combined with Ontologies and Argumentation**

In this talk, I briefly overview the work recently conducted by my research group on extending a platform for the development of multi-agent systems named JaCaMo so it incorporates various AI techniques. In particular, work on the integration of Argumentation Theory into that programming platform is presented. Previous work on using Ontological Reasoning in the context of that platform will also be presented. I also mention in this talk some of the applications of interest, including a chatbot that supports hospital staff in doing bed allocation and coalition formation for disaster rescue. To conclude, I discuss future directions on the combination of various AI techniques into multi-agent oriented programming and the impact they could have on the development of intelligent interactive systems.

Rafael Bordini is an associate professor at PUCRS, a post he has held since March 2012, and is currently on a sabbatical period at the Universities of Genoa and Oxford funded by CAPES. He obtained a PhD in Computer Science from University College London in 1999. Rafael Bordini is an emeritus member of the Board of Directors of the International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS) and emeritus member of the board of directors of the European Association for Multi-Agent Systems (EURAMAS). He was programme co-chair for the main Agents conference (AAMAS) in 2015, and has served as SPC or PC for all top AI and Agents conferences (including IJCAI, AAMAS, AAI, ECAI). He has published over 100 conference papers and 25 journal papers; according to Google Scholar his h-index is 37. His main research interests are in programming languages and verification techniques for autonomous software systems, particularly multi-agent systems, as well as the integration of AI techniques such as multi-agent planning, argumentation, and ontologies into multi-agent programming. The main target applications are in the use of AI for the social good and sustainability, in particular human-robot teamwork in disaster rescue scenarios and healthcare.