informatik-Kolloquium

The Department of Computer Science of Johannes Kepler University Linz [1] together with the Austrian Society of Computer Science (ÖGI) invites to the following talk:

Radu Mardare
Aalborg University, Denmark

Quantitative Equational Reasoning

January 18th, 2018, 10:15 – 11:00
Johannes Kepler Universitity Linz, Science Park 3 **0218**

Abstract: We develop a quantitative analogue of equational reasoning which we call quantitative algebra. The intention is to develop a metric-based semantics for systems and programs that should replace the classic congruence (bisimulation)-based semantics. A metric space of behaviours is meant to be used for approximating computational phenomena, especially where we handle undecidable or very expensive computation. In relation to logic, this approach provides quantitative reasoning principles to replace the classic Boolean principles. This is joint work with Gordon Plotkin (Univ. of Edinburgh, UK) and Prakash Panangaden (McGill Univ., Canada).

About the Speaker: Radu Mardare is **Associate Professor** at the Department of Computer Science, Aalborg University, Denmark, within the Distributed and Embedded Systems Unit.
Prior to this, he was a **Spere Aude Fellow** at the Department of Computer Science, Aalborg University (Oct. 2010 - Sep. 2012), **Researcher** at the Microsoft Research CoSBi Centre in Trento, Italy (Oct. 2006 - Sep. 2010) and **postdoctoral researcher** at the Department of Information Technology, University of Trento, Italy (April 2006 - Sep. 2006).
Radu Mardare received his **PhD in Computer Science** in March 2006, from University of Trento (Italy), with a thesis on Modal Logics for concurrent-distributed systems. Mardare holds a **MPhil (equiv.) in Logic** with a thesis on Model Theory (2002, Bucharest University, Romania). He holds two **BSc (equiv.) degrees**: one in **Mathematics** (1997, "Al.I. Cuza" University, Iasi, Romania) with a thesis on Foundations of Mathematics, and one in **Philosophy** (2001, Bucharest University, Romania) with a thesis on Ontology of Mathematics.

Host: *Prof. Dr. Armin Biere*

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