

AVVISO DI SEMINARIO

Fabio Patrizi

Data-aware System Verification via Faithful Abstraction

Lunedì 10 ottobre 2016 - 15:30, Aula Magna

Descrizione

Fabio Patrizi, vincitore di procedura valutativa di chiamata per un posto RTDB per il SSD ING-INF/05, terrà presso questo dipartimento un seminario su attività di ricerca svolte e in corso di svolgimento. Il seminario avrà luogo lunedì 10 ottobre 2016 alle 15:30 in Aula Magna, DIAG, via Ariosto 25.

Abstract: In this talk I will describe the results of a research line I have been following in the recent years. The research concerns formal verification of data-aware systems, a class of infinite systems whose states consist of database instances and whose evolution depends on parametric actions that can query and update the current state. Formal verification is the task of establishing whether a system satisfies certain properties, typically expressed in a first-order variant of some temporal logics. The research challenge is dealing with state-infiniteness, a feature that makes the case addressed fundamentally different from the well-studied standard verification of propositional finite-state systems. I will introduce the problem and discuss a technique, based on building a finite-state propositional faithful abstraction of the system under analysis, that solves the problem for a large and practically relevant class of data-aware systems.

Short Bio: Fabio Patrizi has recently finished his appointment as a Research Fellow at the Free University of Bozen-Bolzano, where he has been from Oct 2014 to Sep 2016 as the principal investigator of a project, funded by the Provincia Autonoma di Bolzano, about verification and synthesis of data-aware processes. Before he has been an RTDA (Oct 2011 - Sep 2014) at DIAG - Sapienza, a Research Associate (Sep 2010 - Aug 2011) at Imperial College London, UK, and a Research Associate (Feb 2009 - Sep 2010) at DIAG - Sapienza, where he earned a PhD in Computer Science and Engineering, in 2009. He 2008, he has been a visiting scholar at the University of California, San Diego (CA, USA). Fabio Patrizi has received the 2011 Visiting Researcher's Award from RMIT University, Melbourne (Vic, AU) and the RR'13 Best Paper Award. He authored over 50 scientific papers, appeared in the proceedings of top-level international conferences and journals, and is regularly invited as a PC member to the top-level conferences in his areas of interest. He serves as a moderator for the AI section of the well-known Computing Research Repository (CoRR). He regularly teaches various courses at academic level.