



informatik-Kolloquium

The Department of Computer Science of Johannes Kepler University Linz¹ together with the Austrian Society of Computer Science (ÖGI) invites to the following talk:

Cristian Cadar,
Imperial College London

Dynamic Symbolic Execution for Software Analysis

Thursday, Dec 6th, 2018, 15:00-16:00

Johannes Kepler University Linz, Science Park 3 room 218

Abstract:

Symbolic execution is a program analysis technique that can automatically explore and analyse paths through a program. While symbolic execution was initially introduced in the seventies, it has only received significant attention during the last decade, due to tremendous advances in constraint solving technology and effective blending of symbolic and concrete execution into what is often called dynamic symbolic execution. Dynamic symbolic execution is now a key ingredient in many computer science areas, such as software engineering, computer security, and software systems, to name just a few.

In this talk, I will discuss recent advances and ongoing challenges in the area of dynamic symbolic execution, drawing upon our experience developing several symbolic execution tools for many different scenarios, such as high-coverage test input generation, bug and security vulnerability detection, patch testing and bounded verification, among many others

About the Speaker:

Cristian Cadar is a Reader in the Department of Computing at Imperial College London, where he leads the Software Reliability Group (<http://srg.doc.ic.ac.uk/>). His research interests span the areas of software engineering, computer systems and security, with an emphasis on building practical techniques and tools for improving the reliability and security of software systems. He received the HVC Award in 2017, the ACM Computer and Communications Security (CCS) Test of Time Award in 2016, the EuroSys Jochen Liedtke Young Researcher Award in 2015 and an EPSRC Early-Career Fellowship in 2013. Cristian received a PhD in Computer Science from Stanford University, and undergraduate and Master's degrees from the Massachusetts Institute of Technology.

Host: o.Univ.-Prof. Dr. Dr. h.c. Hanspeter Mössenböck
Institute of Systems Software

¹The department consists of the following institutes:

Anwendungsorientierte Wissensverarbeitung (FAW), Bioinformatik, Computational Perception, Computer-Architektur, Computergrafik, Formale Modelle und Verifikation, Informationsverarbeitung und Mikroprozessortechnik (FIM), Integrierte Schaltungen, Pervasive Computing, Systems Engineering and Automation, Systemsoftware, Telekooperation