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SSG Seminar

Engineering Distributed Data-intensive Applications

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University of St Gallen

Date: Nov 25th, 2020

Time: 13:00 – 14:00

Teams Link: [Join Seminar](#) (We'd appreciate if you could optionally [register](#) to join our mailing list)

Abstract:

Over the last few years, ubiquitous connectivity has led to data being constantly generated at an unprecedented rate. As a result, large amounts of data are constantly being processed in a heterogeneous infrastructure which stems from the convergence of edge (IoT, Mobile) and Cloud computing. This poses fundamental engineering challenges on software design, especially with respect to fault tolerance, data consistency, and privacy.

In this presentation, we discuss recent research results we achieved in this context at various levels. We describe an innovative programming framework that improves and simplifies the design of data-intensive applications. We also present the use of our programming framework on real-world case studies, emphasizing how to achieve fault tolerance and data consistency. Finally, we propose how to account for privacy in the software engineering process for data-intensive distributed applications.

Bio:

Guido Salvaneschi is an Associate Professor at the School of Computer Science at the University of St. Gallen (Switzerland). He completed his PhD in the Dipartimento di Elettronica e Informazione at Politecnico di Milano, under the supervision of Prof. Carlo Ghezzi with a doctoral dissertation on language-level techniques for adaptive software. He has been a visiting PhD student at MIT CSAL supervised by Prof. Barbara Liskov. He has been a postdoc at the Technical University of Darmstadt, Computer Science Department, in Prof. Mira Mezini's group. He has been an Assistant Professor at TU Darmstadt from 2016 to 2020. His research interests focus on programming language design and software engineering, in particular for reactive/event-based applications and for distributed systems. His most recent publications appeared at OOPSLA, ECOOP, PLDI, ICFP, ICSE, FSE, TSE and ASE.

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