

## RestTestGen: a Fully Automated Black-box Approach to Automatically Generate Test Scenarios for RESTful APIs

*Folien:*

Englisch

*Vortragssprache:*

Englisch

*Umfang (mit Diskussion):*

30 min.



*Abstract:* RESTful APIs (or REST APIs for short) represent a mainstream approach to design & develop Web APIs using the REpresentational State Transfer architectural style. Black-box testing, which assumes only the access to the system under test with a specific interface, is the only viable option when white-box testing is impracticable. This is the case for REST APIs: their source code is usually not (or just partially) available. This talk presents RestTestGen, a novel black-box approach to automatically generate test cases for REST APIs, based on their interface definition (an OpenAPI specification). Input values & requests are generated for each operation of the API under test with the twofold objective of testing nominal execution scenarios & error scenarios.

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Dr. Mariano Ceccato is tenure-track assistant professor in the Computer Science department in University of Verona (IT). Until 2019, he was tenured researcher in the Security & Trust and in the Software Engineering research units in Fondazione Bruno Kessler, Trento (IT), where he was principal investigator of several publicly funded research projects. He received his PhD in Computer Science from the University of Trento (IT) in 2006 with the thesis "Migrating Object Oriented code to Aspect Oriented Programming". He is author or coauthor of more than 70 research papers published in international journals and conferences/workshops. He was recently visiting research scientist in the Software Verification & Validation Laboratory Centre for ICT Security, Reliability, and Trust (SnT), University of Luxembourg (LU). His research interests include security testing, penetration testing, code hardening & empirical studies.