5th UCAAT User Conference on Advanced Automated Testing

11–13 October 2017
Berlin, Germany

CONFERENCE PROGRAMME

Hosted by:

Fraunhofer FOKUS

5th UCAAT User Conference on Advanced Automated Testing

About UCAAT

UCAAT is dedicated to the application of aspects of automated testing including model-based testing, cloud testing, mobile testing, test methodologies, test management and standardized test specification by focusing on the practical challenges that are often faced in industry. This conference brings together researchers and industrial practitioners from different application domains such as Telecommunications, Banking, IT Services, Automotive, Robotics, Healthcare, Defense as well as tool vendors to meet, discuss and share their practical experiences in the field of software testing.

One of this year's main topics at UCAAT will be testing the Internet of Things (IoT) which has been blurring lines between verticals such as telecom, transport, enterprise IT, automotive and leading to the emergence of a unified technology platform. After years of standardization (also at ETSI) the growth of deployed solutions is rapid but still offering the diversity common to major steps in technology. That brings challenges but also new opportunities for business and testing technologies to the market place.

UCAAT gives attendees a unique opportunity to discover, share, learn challenge – modern test automation approaches, technologies and strategies.

ETSI's UCAAT Conference, now in its fifth year, is dedicated to application aspects of automated testing including model-based testing, cloud testing, mobile testing, test methodologies, test management and standardized test specification by focusing on the practical challenges that are often faced in industry.

This Conference brings together research and industry from different application domains such as telco, banking, IT services, Automotive, Robotics, Healthcare, Defense and Software Vendors.
This year's event is organized by Fraunhofer FOKUS.

5th UCAAT User Conference on Advanced Automated Testing

Agenda — Wednesday 11 October

08:30–09:00	Registration
09:00–12:30	**TUTORIALS**
09:00–10:30	**TUTORIAL: 4Test, an Agile MBT Method** Istvan Forgacs – *4Test-Plus*
	TUTORIAL: From TDL to TTCN-3: A Step by Step Tutorial P. Makedonski, G. Adamis, M. Käärik, F. Kristoffersen and G. Réthy
10:30–11:00	**Coffee Break and Networking**
11:00–12:30	**TUTORIAL: From Manual Testing to Cognitive Test Automation** Alexis Despeyroux – *Conformiq*
	TUTORIAL: Testing Big Data applications at design time and runtime with DICE M. Artac, D. A. Tamburri, V. Papanikolaou, I. Torres and G. Casale – *Horizon 2020*
13:30–14:00	**Lunch**
13:00–14:00	Registration Conference Only
14:00–14:20	**Conference Opening (TC MTS, PC Chair, OC Chair)**

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Agenda — Wednesday 11 October

14:20–15:20	**SESSION 1: Model-Based Testing in Industry I**
14:20–14:40	**Strategies for safety-relevant vehicle tests at Continental** Anne Kramer and Martin Beißer – *sepp.med*
14:40–15:00	**Introducing and adopting Model-Based-Testing for development projects** Jorge Pascal and Patrick Meuth – *TKI Automotive* Jörg Reiner and Mathias Helminger – *ASSystems*
15:00–15:20	**Reactive test of embedded systems using models** Hans-Werner Wiesbrock and Sadegh Sadeghipour – *ITPower*
15:20–16:00	**Coffee Break and Networking**
16:00–17:00	**SESSION 2: Testing and Standards**
16:00–16:20	**Using TDL in the development of standardized test specifications for IoT and other technologies** Michele Carignani and Anthony Wiles – *ETSI*
16:20–16:40	**Mapping TDL to TTCN-3** Philip Makedonski, Gusztav Adamis, Martti Käärik, Finn Kristoffersen and Gyorgy Rethy – *ETSI STF*
16:40–17:00	**Suitability of UTP and TDL for model-based testing – Checking for compliance with ES 202 951** Marc-Florian Wendland and Ina Schieferdecker – *Fraunhofer*
17:00–17:30	**Vendor Track**

5th UCAAT User Conference on Advanced Automated Testing

Agenda — Thursday 12 October

08:30–09:00	Registration
09:00–10:30	**KEYNOTE: IoT based Services** K. Moessner – *University of Surrey*
09:45–10:45	**SESSION 3: Testing Research**
09:45–10:05	**Automating Usability Testing for Prototypes of the Things in the Internet using Augmented and Virtual Reality** Patrick Harms and Jens Grabowski – *University of Göttingen*
10:05–10:25	**Framework for Constructing Context-Specific Migration Methods for Test Cases** Ivan Jovanovikj – *Paderborn University*
10:25–10:45	**Poster Introductions**
10:45–11:30	**Coffee Break and Networking**
11:30–12:30	**SESSION 4: Testing in DevOps**
11:30–11:50	**OSM DevOps: combining CI/CD and Interop Testing Best Practices** Silvia Almagia – *ETSI*
11:50–12:10	**Automated Active Assurance of Critical SLAs for Dynamic 5G Network Slices** Marcus Friman – *Netrounds*
12:10–12:30	**Automated testing model for complex and highly configurable software systems in globally distributed organization** Marcin Szczukiewicz and Lukasz Walach – *Nokia*
12:30–14:00	**Networking Lunch**

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14:00–15:00	**SESSION 5: Experiences from TTCN-3 Deployments**
14:00–14:20	**Configuring a TTCN-3 Test System in a Complex Multi-System Environment** Rafael Schirru and Anke Abromeit – *Gematik*
14:20–14:40	**Conformance Testing of Electric Vehicle Charging Communication based on TTCN-3** Sven Gröning, Jens Schmutzler and Christian Wietfeld – *TU Dortmund*
14:40–15:00	**Certification Testing for Communication in Virtual Power Plants** Jens Hempel and Dirk Reufsteck – *TÜV Rheinland*
15:00–15:40	**Coffee Break and Networking**
15:40–16:40	**SESSION 6: Test Automation Best Practices**
15:40–16:00	**On combining IaaS and configuration management into a test automation framework** Felix Elliger – *Bosch*
16:00–16:20	**Leveraging test automation to verify infrastructure** Jani Haukinen and Jouni Rajala – *Comiq*
16:20–16:40	**Ten Test Automation Pitfalls to Avoid When Introducing New Tools** Mika Katara – *Quentinel*
16:40–17:00	**90 seconds lightening talks**
18:00	**Departure Social Event**

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Agenda — Friday 13 October

08:30–09:00	Registration
09:00–09:45	**KEYNOTE: The role of interoperability in building a profitable IoT** Dr. Omar Elloumi – *oneM2M Technical Plenary Chair*
09:45–10:25	**SESSION 7: Testing Micro Services**
09:45–10:05	**Testing Micro Services** Harry Sneed – *ICS*
10:05–10:25	**Fast and Business-Focus Test Practices in IoT** Min Song – *Ericsson*
10:25–11:00	**Coffee Break and Networking**
11:00–12:00	**SESSION 8: Model-Based Testing in Industry II**
11:00–11:20	**Intelligent Cloud based environment in mobile network testing** Tian Zeng and Jingfeng Yang – *Nokia*
11:20–11:40	**The Power of visual representation for an efficient test design – feedback from an IT implementation project in an industrial company** Christophe Darçot – *STREIT* Elizabeta Fourneret – *smartesting*
11:40–12:00	**TDL for testing collaboration IT services: the NetResults experience** Sergio Borghese, Francesco Lamonica, Enrico La Vela and Francesco Oppedisano – *NetResults*
12:00–13:30	**Networking Lunch**

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13:30–14:30	**SESSION 9: Non-Functional Test Automation**
13:30–13:50	**Testing Non-Functional Quality Characteristics of Cyber-Physical Systems** Martin Schneider and Marc-Florian Wendland – *Fraunhofer*
13:50–14:10	**Automated adaptive quality and security monitoring in 5G networks** Tommi Pernila and Markku Suominen – *Nixu*
14:10–14:30	**Testing a Fault-Tolerant, Cyber-Physical System designed for Testability** Markus Lachenmayr and Florian Krautwurm – *Siemens*
14:30–15:10	**Coffee Break and Networking**
15:10–16:10	**SESSION 10: Automated Testing in BDD**
15:10–15:30	**Waiter to Assistant Cook with BDD & Cucumber** Vikram Ingleshwar – *Noa Technologies*
15:30–15:50	**Sustainable Test Automation: Collaborate within Team** Berk Dülger and Baris Sarialioglu – *Keytorc*
15:50–16:10	**Integration testing based on Behavior Driven Development** Robin Bussenot, Hervé Leblanc and Christian Percebois – *IRIT*
16:10–16:30	**Best Presentation Award, Conference Closures**

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Poster Sessions

Uncertainty-wise Model-based Testing of Industrial Cyber-Physical Systems
Man Zhang, Shaukat Ali, Tao Yue and Phu Nguyen – *Simula*

Model-based testing of 3D video games
Madis Taimre – *Elvior*
Õnne Mets – *Virtual Heritage*

Combining Model-driven Engineering and Elastic Execution for Testing Uncertainty in CPS
Luca Berardinelli and Hong-Linh Truong – *TU Wien*

Flexible approach for semantic testing in the context of Internet of Things
Hamza Baqa, Mengxuan Zhao and Philippe Cousin – *Easy Global Market*

Modernizing TTCN-3
Jens Grabowski, György Réthy, Kristof Szabados, Tomas Urban, Julien Deltour and Jacob Wieland – *ETSI / STF*

A flexible, multipurpose, open source test platform for IoT testing
Tamás Bohm, Tibor Csöndes, György Réthy and Antal Wu-Hen-Chang – *Ericsson*

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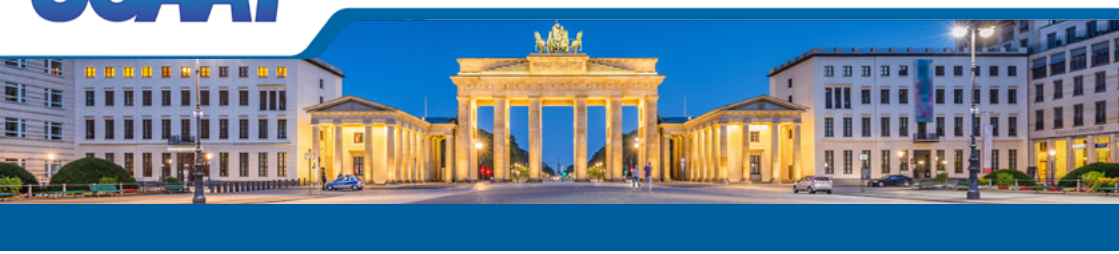

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Bruno Legeard, SmartTesting, France
Andrus Lehtmets, Elvior, Estonia
Philip Makedonski, University of Göttingen, Germany
Armin Metzger, ASQF, Germany
Michael Mlynarski, Qualityminds, Germany
Edgardo Montes De Oca, Montimage, France
Andrej Pietschker, Giesecke & Devirent, Germany
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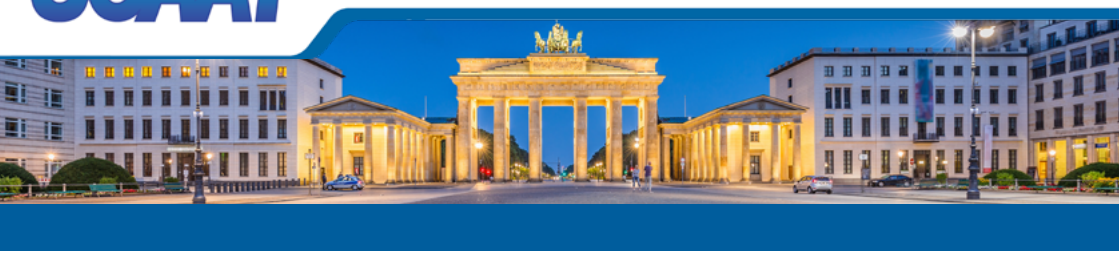

ETSI World Class Standards

ETSI is a producer of globally applicable standards for ICT, including fixed, mobile, radio, aeronautical, broadcast and Internet technologies, and a founding member of 3GPP and oneM2M.

ETSI is an independent, not-for-profit association with more than 800 member organizations worldwide, drawn from 66 countries and five continents. ETSI is officially recognised by the European Union as a European Standards Organization and our members include the world's leading companies and innovative R&D organizations.

The high quality of our work and our open approach to standardization has seen our influence extend from our European roots to impact the world. Our activities are driven by time to market and our standards help ensure the free movement of goods within the single European market and beyond.

At the forefront of emerging technologies, ETSI is addressing the technical issues that will drive the economy of the future and improve life for the next generation.

As a world-renowned organization with a solid reputation for technical excellence, we make our expertise available to our members and customers through a range of services for growing ideas and enabling technology.

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ETSI TC MTS

ETSI's Methods for Testing and Specification committee (TC MTS) creates standards for testing and specification languages and provides frameworks and methodologies to enable other ETSI committees to produce documents that are easy to understand and easy to use. Its work is therefore critical to the market success of numerous technologies.

TC MTS works very closely with ETSI's Centre for Testing and Interoperability (CTI). Much of work done by TC MTS has also been adapted and used beyond ETSI by other organizations, fora, and industry globally.

TC MTS has made significant achievements in the development and use of specification languages. Many of the well-known ETSI standards such as GSM™, UMTS™, LTE™, DECT™, ITS and IMS™ have accompanying test suites to ensure that devices can be tested for conformance to the appropriate standards as well as their interoperability. In the area of IP-based technologies TC MTS has developed test suites for SIP-based Voice over IP (VoIP) and IPv6. These test suites are normally written in TTCN (Testing and Test Control Notation), a standardized test specification language that has been developed by MTS and endorsed internationally by ITU as Recommendation Z.140.

TC MTS has developed numerous methodologies and testing frameworks and provides guidelines for standards engineering. The committee's work on interoperability testing has already been put to practice in numerous ETSI Plugtests™ interoperability events. Similarly, on the specification side TC MTS has developed guidelines which show how techniques such as the Specification and Description Language (SDL), the Unified Modelling Language™ (UML) and Message Sequence Charts (MSC) can be written in a way that is easy to read and understand.

www.etsi.org/mts

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Host

ENGINEERING A CONNECTED WORLD

Fraunhofer FOKUS

Fraunhofer FOKUS offers it's solutions in seven business units: Three of the seven units address the horizontal issues of digital networking: networks, system quality and visualization. Four of the seven business units are vertically positioned and focus on the design of digital networking in the respective branches: media, general public, mobility and security.

Thereby FOKUS acts as a supplier and technology independent agent between industry, science and the public administration, that can combine long standing scientific expertise and experience from various branches to optimal solutions for its customers. The researchers concentrate not only on the technical infrastructure but furthermore develop practical concepts, prototypes and applications in a pre-competitive environment. At the center of the research activities lies the development of cross-domain and cross–organizational solutions that are both interoperable and user-centric.

With around 430 employees FOKUS is one of the largest Fraunhofer institutes. With more than 25 years of experience, FOKUS is one of the most important actors in the ICT research landscape both nationally and worldwide. Market-oriented solutions are being distributed by a total of 11 spin-offs.

SYSTEM QUALITY FROM THE BEGINNING

The System Quality Center is your partner when it comes to securing, evaluating and optimizing the quality of software-based systems. Quality assurance in early development stages helps to detect errors at the beginning and therefore avoids expensive post-production troubleshooting and debugging. The SQC experts' goal is to develop trust-worthy and secure systems. The scientists focus on optimizing development processes, system architecture, system design, as well as testing and verifying software-based systems. To do so, they use their knowledge in as many fields as information technology, telecommunication, automotive engineering, railway technology and medical technology.

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