

SONATA participation at the Berlin 5G Week

The Berlin 5G week will take place from the 6th to the 10th of November 2017. This year edition is joining three of the most solid events related to software-based networks and 5G technologies: 3rd IEEE NFV-SDN Conference, Industrial IoT Forum and the 8th FOKUS FUSECO FORUM.

The globally most discussed 5G hot topics, such as software-defined networks, network virtualization, network slicing for 5G verticals, Industrial Internet/IoT, 5G multi-access network support, and 5G testbeds and most recent technology PoCs, will be touched there.

SONATA participation will be intense there...

-----IEEE NFV-SDN event-----

Workshop 2: “Fourth Workshop on Network Function Virtualization and Programmable Networks”

When: Monday, Nov. 6, 2017

Room: Auditorium

Organisers:

- Ioannis Giannoulakis, NCSR D Greece
- Evangelos Markakis, TEIC Greece
- Josep Martrat, ATOS Spain
- George Xilouris, NCSR Demokritos Greece
- Anastasios Zafeiropoulos, UBITECH Greece
- Carlos Jesus Bernardos Cano, Universidad Carlos III de Madrid Spain

Program:

Session 1:

Chair: Evangelos Markakis

09:30 – 10:00 Keynote 1: “Network management automation and DevOps”, Shahar Steiff.

10:00 – 10:20 Paper 1: Hybrid SDN: Evaluation of the impact of an unreliable control channel.

10:20 – 10:40 Paper 2: Isolating SDN Control Traffic with Layer-2 Slicing in 6TiSCH Industrial IoT Networks.

10:40 – 11:00 Paper 3: Deployment of Virtual Network Functions over multiple WAN interconnected PoPs.

11:00 – 11:30 Networking Break.

Session 2:

Chair: George Xilouris

11:30 – 12:00 Keynote 2: “The Impact of DRM and Privacy Requirements on Virtualised and Programmable Network Architectures and Functions – The Bonseyes Use Case”, Kurt Tutschku.

12:00 – 12:20 Paper 1: An NFV-Powered Emergency System for Smart Enhanced Living Environments.

12:20 – 12:40 Paper 2: Using Small Cells for Enhancing 5G Network Facilities.

12:40 – 13:00 Paper 3: Assessing the Risk of Violating SLA Dependability Requirements in Software-Defined Networks.

Additional info: <http://www.pasiphae.eu/nfvpn/>

Workshop 1: “Third IEEE International Workshop on Orchestration for Software Defined Infrastructures”

When: Monday, Nov. 6, 2017

Room: Spektrum

Organisers:

- **Stuart Clayman, University College London, UK**
- Walter Cerroni, University of Bologna, Italy
- Barbara Martini, CNIT, Pisa, Italy
- Federica Paganelli, CNIT, Firenze, Italy

Endorsed by: SONATA, 5GEX, 5G-T

Program:

Session 1:

09:30 – 9:40 Welcome and introduction.

09:40 – 10:20 Keynote.

10:20 – 10:40 Giuseppe Portaluri; Davide Adami; Stefano Giordano; Michele Pagano: “A Novel Allocation Strategy for Virtual Machines in Software Defined Data Center”.

10:40 – 11:00 Farah Slim; Fabrice M. Guillemin; Annie Gravey; Yassine Hadjadj-Aoul: “Towards a Dynamic Adaptive Placement of Virtual Network Functions under ONAP”.

11:00 – 11:30 Networking Break.

Session 2:

11:30 – 11:50 Stefano Salsano; Francesco Lombardo; Claudio Pisa; Pierluigi Greto; Nicola Blefari-Melazzi: “RDCL 3D, a Model Agnostic Web Framework for the Design and Composition of NFV Services”.

11:50 – 12:10 Johan Pelay; Fabrice M. Guillemin; Olivier Barais: “Verifying the configuration of Virtualized Network Functions in software defined networks”.

12:10 – 12:30 Min Xie; Cyril Banino-Rokkones; Pål R. Grønsund; Andres J Gonzalez: “Service Assurance Architecture in NFV”.

12:30 – 12:50 Tryfon Theodorou; Lefteris Mamatas: “Software Defined Topology Control Strategies for the Internet of Things”.

12:50 – 13:00 Wrap-up discussion and closing session.

Additional info: <http://o4sdi.unibo.it/o4sdi3>

Demo Paper: "A Network Service Development Kit Supporting the End-to-End Lifecycle of NFV-based Telecom Services"

Authors: S. Van Rossem (Ghent University & iMinds – IBCN, Belgium); M. Peuster (Paderborn University, Germany); L. Conceição (Ubiwhere, Portugal); H. Razzaghi Kouchaksaraei (Paderborn University, Germany); W. Tavernier and D. Colle (IMEC – Ghent University, Belgium); M. Pickavet and P. Demeester (Ghent University – iMinds, Belgium)

Presenter: H. Razzaghi Kouchaksaraei, Paderborn University, Germany

When: Monday, Nov. 6, 2017. 18:30-21:00h

Room: Atrium, Desk number: 5

Demo purpose: To be demonstrated how the SONATA SDK (Service Development Kit) supports the lifecycle of a NFV-based service with easy-to-use features such as editing, validation, emulation, profiling and packaging. The different Graphical User Interfaces (GUI) and other SDK interfaces will be also demonstrated with service examples such as an Openflow controller with an OvS instance, a vEPC or a vCDN service.

Paper Presentation: "Profile Your Chains, Not Functions: Automated Network Service Profiling in DevOps Environments"

Authors: M. Peuster, H. Karl (University of Paderborn, Germany)

Presenter: Manuel Peuster, Paderborn University, Germany

When: Main conference track on Tuesday, Nov. 7, 2017, 10:45 – 12:30

Program: Session 1, NFV and SDN Architectures

Abstract: Benchmarking and profiling virtual network functions (VNFs) generates input knowledge for resource management decisions taken by management and orchestration systems. Such VNFs are usually not executed in isolation but are often deployed as part of a service function chain (SFC) that connects single functions into complex structures. To manage such chains, isolated performance profiles of single functions have to be combined to get insights into the overall behaviour of an SFC. This becomes particularly challenging in highly agile DevOps environments in which profiling processes need to be fully automated and detailed insights about a chain's internal structures are not always available.

In this paper, we introduce a fully automatable, flexible, and platform-agnostic profiling system that allows to profile entire SFCs at once. This obviates manual modelling procedures to combine profiling results from single VNFs to reflect SFC performance. We use a case study with different SFC configurations to show that it is hard to model the resulting SFC performance based on single-VNF measurements and that performance interactions between real, non-trivial functions that are deployed in a chain exist.

-----8th FOKUS-FUSECO Forum 2017-----

Presentation: “Making DevOps Possible in Telco Networks”

Presenter: Dr. Diego Lopez, Telefonica, Spain

When: Day 2 - Friday, Nov. 10, 2017, 14.00 - 15.30

Program: 8th FOKUS FUSECO Forum. Session 3: Network Virtualization, Network Slicing, Edge Computing & Open Source

Abstract: The DevOps model is already an established concept in IT industry, focused on reducing time to market by close collaboration between service developers and service operators. The switch to virtualization technologies in the network and its potential for quicker time-to-market deployment requires the application of agile development cycles supporting a DevOps approach. Development and operational tools, the two essential pillars of DevOps translate into the need of addressing the interfacing of service development tasks and the service platform, which have to be closely linked together. A realistic NFV DevOps approach has to take into account a trustworthy cycle with a mediation mechanism that ensures compliance to policies set by the service providers, and allowing developers across stakeholders to enter the ecosystem, so a collaborative approach that mitigates liability risks becomes possible across the network service lifecycle

Additional info: <https://www.fokus.fraunhofer.de/6cd17c460e050236>

Session and Panel: “Operator 5G Use Case Visions and Global 5G Standardization”

Chair: Dr. Alex Galis, University College London, UK

When: Day 2 - Friday, Nov. 10, 2017, 11.00 - 12.45

Program: 8th FOKUS FUSECO Forum. Session 2: Operator 5G Use Case Visions and Global 5G Standardization.

Goal: In this session, the idea is to obtain from leading Operators realistic views on what 5G infrastructures will be able to deliver to various application domains. In addition, we will gain an overview of the status quo of global 5G standardization. Also, we want to discuss potential evolution steps to be taken from today towards full 5G infrastructure in 2020 and beyond.

Additional info: <https://www.fokus.fraunhofer.de/fff2017/day2>

About SONATA

SONATA project is an EU-funded project Horizon 2020 and part of the 5G-PPP initiative. This innovative project has a 30 month work plan that started in July 2015. The consortium is integrated by 15 partners representing the whole value chain of the Telecommunication Industry and also some research and academic institutes.



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