Workshop 1: HTSN 2017
Hot-topics in Softwarized Networks 2017

Monday, July 3, 2017

Track 1: Network Accelerated Functions (NEAF-IO 2017)
Track General Chairs:
Roberto Bifulco, NEC Labs Europe, Germany
Fabian Schneider, NEC Labs Europe, Germany

Session Chair: Fabian Schneider, NEC Labs Europe, Germany

09:00-10:30 On offloading programmable SDN controller tasks to the embedded microcontroller of stateful SDN dataplanes
Salvatore Pontarelli, Marco Bonola, Giuseppe Bianchi, University of Rome Tor Vergata, Italy
Valerio Bruschi, CNIT, Italy

A Pipeline Functional Language for Stateful Packet Processing
Nicola Bonelli, Stefano Giordano, Gregorio Procissi, Università di Pisa, Italy

10:30-11:00 Coffee Break

11:00-12:30 Towards traffic classification offloading to stateful SDN data planes
Davide Sanvito, Daniele Moro, Antonio Capone, Politecnico di Milano, Italy

Realizing Stateful Flow Processing with Forwarding Tables and In-Switch-Generated Messages (invited)
Peer Hasselmeyer, Fabian Schneider, Andreas Ripke, NEC Laboratories Europe, Germany

12:30-14:00 Lunch Break

Track 2: Security in Network Function Virtualization and Software Defined Networks (SNS 2017)
Track General Chairs:
Dr. Shao Ying Zhu, University of Derby, UK
Linas Maknavicius, Nokia Bell Labs, France
Eleni Trouva, NCSR Demokritos, Greece
Dr. Colin Allison, University of St Andrews, UK
Dr. George Gardikis, Space Hellas, Greece

Session Chair: Shao Ying Zhu, University of Derby, UK

14:00-16:00 KEYNOTE SPEECH
Trust and integrity in softwarized networks
Antonio Lioy, Politecnico di Torino, Italy

SHIELD: A Novel NFV-based Cybersecurity Framework
G. Gardikis, K. Tzoulas, K. Tripolitis, A. Bartzas, S. Costicoglou, Space Hellas S.A., Greece
B. Gaston, C. Fernández, C. Dávila, i2CAT, Greece
L. Jacquin, H. Attak, Hewlett Packard Labs, United Kingdom
D. Katsianis, I. Neokosmidis, INCITES Consulting SARL, Luxembourg
T. Batista, R. Preto, UBIWHERE Ltd., Portugal
A. Lioy, Politecnico di Torino, Italy
A. Litke, N. Papadakis, D. Papadopoulos, *Infi Technologies PC, Greece*
A. Pastor, J. Nuñez, *Telefonica I+D, Spain*
N. Davri, G. Xylouris, M. Kafetzakis, *ORION Innovations P.C., Greece*
M. Terranova, C. Giustozzi, *Agenzia per l’Italia Digitale, Italy*
E. Trouva, Y. Angelopoulos, A. Kourtis, *NCSR “Demokritos”, Greece*

**Detecting and Mitigating Denial of Service Attacks against the Data Plane in Software Defined Networks**
Raphael Durner, Michael Wiedemann, Wolfgang Kellerer, *Technical University of Munich, Germany*
Claas Lorenz, *Genua GmbH, Germany*

**A Model for the Analysis of Security Policies in Service Function Chains**
Luca Durante, Lucia Seno, Fulvio Valenza, Adriano Valenzano, *CNR-IEIIT, Italy*

**Measuring the effectiveness of SDN mitigations against cyber attacks**
Ralph Koning, Ben de Graaff, Robert Meijer, Cees de Laat, Paola Grosso, *University of Amsterdam, The Netherlands*

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16:00-16:30   Coffee Break

**Track 3: Multi-Provider Network Slicing and Virtualization (MPNSV 2017)**
Track General Chairs:  
Olivier Dugeon, Orange, France  
Alex Galis, University College London (UCL), UK  
Carlos Jesús Bernardos Cano, Universidad Carlos III de Madrid, Spain

Session Chair: Stuart Clayman, *University College London, London, UK*

16:30-18:00   TUTORIAL

**Multi-domain federation: scope, challenges, and opportunities**
Luca Cominardi, *University Carlos III Madrid, Spain*

**SDNetkit: A Testbed for Experimenting SDN in Multi-Domain Networks**
Habib Mostafaei, Gabriele Lospoto, Roberto di Lallo, Massimo Rimondini, Giuseppe Di Battista, *Roma Tre University, Italy*

**Sharing of Crosshaul Networks via a Multi-Domain Exchange Environment for 5G Services**
Luis Miguel Contreras Murillo, *Telefonica I+D – Spain*
Carlos Jesús Bernardos Cano, Antonio Oliva, *Universidad Carlos III de Madrid, Spain*
Xavier Costa-Pérez, *NEC Laboratories Europe, Germany*
Workshop 2: OSSN 2017

The 2nd International Workshop on Open-Source Software Networking 2017

Workshop General Chairs:
JongWon Kim, GIST (Gwangju Institute of Science & Technology), Korea
Fulvio Risso, Politecnico di Torino, Italy
Ivan Seskar, Rutgers University, USA

Monday, July 3, 2017

Session 1: Orchestration
Chair: Fulvio Risso, Politecnico di Torino, Italy
11:00-12:30  End-to-End Service Orchestration across SDN and Cloud Computing Domains
Roberto Bonafiglio, Gabriele Castellano, Ivano Cerrato, Fulvio Risso, Politecnico di Torino, Italy

Automated Cloud Migration based on Network Traffic Dependencies
Jargalsaikhan Narantuya, Hannie Zang, Hyuk Lim, Gwangju Institute of Science and Technology, Republic of Korea

X-MANO: An Open-Source Platform for Cross-domain Management and Orchestration
Antonio Francescon, Giovanni Baggio, Riccardo Fedrizzi, Roberto Riggio, CREATE-NET / FBK, Italy
Enrico Orsini, Intecs, Italy

Prototyping NFV-based Multi-access Edge Computing in 5G ready Networks with Open Baton
Giuseppe Carella, Michael Pauls, Thomas Magedanz, Technical University of Berlin, Germany
Marco Cilloni, Luca Foschini, Paolo Bellavista, University of Bologna, Italy

12:30-14:00 Lunch Break

Session 2: Services
Chair: Jong Won Kim, GIST (Gwangju Institute of Science & Technology), Korea
14:00-16:00  KEYNOTE SPEECH
In kernel-network functions: replacing Linux networking tools with Iovisor-based software
F. Risso, Politecnico di Torino, Italy

Load balancing on distributed datastore in OpenDaylight SDN controller cluster
Taehong Kim, Seong-Gon Choi, Chungbuk National University, Republic of Korea
Jungho Myung, Chang-Gyu Lim, Electronics and Telecommunications Research Institute, Republic of Korea

An Open-Source Virtual Set-Top-Box for Softwarized Networks
Gabriele Baldoni, Alfio Lombardo, Sergio Micalizzi, Corrado Rametta, Alessandro Vassallo, University of Catania, Italy

Per-User NFV Services with Mobility Support
Matteo D'Ambrosio, Mario Ullio, Vinicio Vercellone, TIM, Italy
Ivano Cerrato, Fulvio Risso, Politecnico di Torino, Italy

16:00-16:30 Coffee Break
Session 3: Monitoring and troubleshooting
Chair: Thomas Magedanz, Technical University of Berlin, Germany
16:30-18:00  
**Overload and Failure Management in Service Function Chaining**
Jaewook Lee, Haneul Ko, Dongeun Suh, Seokwon Jang, Sangheon Pack, Korea University, Republic of Korea

**SmartX MultiView Visibility Framework Leveraging Open-Source Software for SDN-Cloud Playground**
Muhammad Usman, Aris Risdianto, Jungsu Han, Moonjoong Kang, JongWon Kim, Gwangju Institute of Science and Technology, Republic of Korea

**PANEL**  
Can Academia and Industry Collaborate on OpenSource Software?
Moderator: F. Risso, Politecnico di Torino, Italy
- JongWon Kim, Gwangju Institute of Science & Technology (GIST), Korea
- Thomas Magedanz, Fraunhofer FOKUS, Germany
- Antonio Manzalini, Telecom Italia, Italy
- Marco Di Girolamo, Hewlett Packard Enterprise, Italy
- Nicola Iotti, Caligoo, Italy
Workshop 3: NetFog 2017

The 1st International Workshop on NEtwork programmabiliTy: From the data center tO the Ground 2017

Workshop General Chairs:
Roberto Bruschi, Consortium for Telecommunications (CNIT), Genova, Italy
Claudia Campolo, University Mediterranea of Reggio Calabria, Italy
Florian Wamser, University of Würzburg, Germany

Monday, July 3, 2017

Session 1: Virtualization in multi-domain environments
Chair: Roberto Bruschi, Consortium for Telecommunications (CNIT), Genova, Italy
11:00-12:30
Energy Efficient Dynamic Flow-based Management For Relay-assisted Heterogeneous Networks
Li Li, Yifei Wei, Mei Song, Beijing University of posts and telecommunications, Republic of China
Xiaojun Wang, Dublin City University, Ireland

A Scalable SDN Slicing Scheme for Multi-domain Fog/Cloud Services
Roberto Bruschi, Paolo Lago, CNIT, Genoa Research Unit
Franco Davoli, Jane Frances Pajo, University of Genoa, Italy

On Experimenting 5G: Testbed Set-up for SDN Orchestration across Network Cloud and IoT domains
Silvia Fichera, Mokha Gharbaoui, Piero Castoldi, Scuola Superiore Sant’Anna, Italy
Barbara Martini, CNIT, Italy
Antonio Manzalini, Telecom Italia, Italy

An NFV Approach to Share Home Multimedia Devices
Giuseppe Faraci, Alfio Lombardo, University of Catania, Italy

12:30-14:00 Lunch Break

Session 2: Demonstration session
Chair: Michael Seufert, University of Würzburg, Germany
14:00-14:45 Drone Racing in the Fog (H2020 INPUT Project)
Paolo Lago, Jane Frances Pajo, Frank Loh, Florian Wamser, and Roberto Bruschi

Session 3: Evaluation tools and methodologies
Chair: Claudia Campolo, University Mediterranea of Reggio Calabria, Italy
14:45-16:00 EdgeNetworkCloudSim: Placement of Service Chains in Edge Clouds Using NetworkCloudSim
Michael Seufert, Brice Kamneng Kwam, Florian Wamser, Phuoc Tran-Gia, University of Würzburg, Germany

Understanding Disruptive Monitoring Capabilities of Programmable Networks
Paul Chaignon, Kahina Lazri, Orange Labs, France
Jérôme François, Olivier Festor, INRIA Nancy Grand Est, France

A framework to correlate power consumption and resource usage in cloud infrastructures
Divya Tekke Kanapram, University of Genoa, Italy
Matteo Repetto, CNIT, Italy
Riccardo Rapuzzi, DITEN, University of Genoa, Italy
Guerino Lamanna, Infocom SRL, Italy