Call for Contributions

Submission:
1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event= SOFTNETWORKING +2018
Please select Track Preference as **SOFTNETWORKING**

Special track

SOFTNETWORKING: Advances in Software Defined Networking and Network Functions Virtualization

Chair and Coordinator
Chair and Coordinator: Eugen Borcoci, University Politehnica of Bucharest, Romania
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along with

ICN 2018, The Seventeenth International Conference on Networks
April 22, 2018 to April 26, 2018 - Athens, Greece
http://www.iaria.org/conferences2018/ICN18.html

The Symposium is dedicated tadvances and challenges in SDN&NFV technologies and their applications.

Software-Defined Networking (SDN) is a recent architectural and technological approach that decouples the network control and data planes. It separates the network control logic from the underlying routers and switches by logically centralizing the network control in SDN controllers and implementing the traffic forwarding in switching hardware. SDN offers network programmability capabilities, applicable in a flexible way. SDN introduces novel abstractions in networking, thus simplifying network management and facilitating faster network evolution. SDN is natively based on virtualization. Via service orchestration, the applications can automatically reconfigure the network and simultaneously optimize the user experience, application performance and network resource utilization.

Network Function Virtualization NFV is an emergent technology promoted recently (mainly by the telecom world), having as major objective timprove the capital efficiencies vs. traditional dedicated HW implementation solutions, by using COTS HW, tprovide Virtualized Network Functions (VNFs) through SW virtualization techniques. Among its specific objectives are: sharing of HW and reducing the number of different HW architectures; timprove flexibility in assigning VNFs tHW (better scalability, decoupling functionality from location, enabling time of day reuse, enhancing resilience through virtualization, and facilitating resource sharing); rapid service innovation through SW-based service deployment; common automation and operating procedures; reduced power usage; standardized and open I/Fs between VNFs infrastructure and management entities.

SDN approach can support or is applicable in various contexts: clouds/data centres; enterprise; WANs, cellular/mobile, wireless, home, sensors – networks; network and resources management, security; traffic and QoS management, media and content distribution. New areas of applications have targets in M2M, wireless and 5G networks. The 5G core network will most proba¬bly utilize the ongoing evolution in SDN and NFV tprovide a high level of flex¬ibility and scalability when supporting different 5G deployments with a com¬mon toolbox of network functions. While still in early stage, SDN is moving very fast towards its adoption in the industry and by the operators, but it still has open research issues.

NFV applications and use cases are oriented towards several areas (but not only): Home environment; Mobile Core&IMS; Mobile base stations; Fixed access networks; CDNs; flexible service offering through NFVIaaS, VNFaaS, VNPaaS, VNF flexible Forwarding Graphs.

SDN and NFV could be implemented independently; however, they are more and more seen as complementary technologies that can cooperate in complex systems. This open research issue is an important topic of the symposium. This special track has the objective of bringing the above vision closer to reality and will provide a comprehensive overview of the state-of-the-art machine learning aided approaches for next-generation wireless networks.

Prospective authors are invited to submit original papers on topics including, but not limited to:

- Software Defined Networking (SDN): concepts, challenges and architectures
- Control and Management in SDN; Network Operating Systems (NOS, ONOS) and virtualization in SDNs
- Network Function Virtualization concepts, challenges and architectures (NFV, OPNFV)
- SDN and NFV cooperation
- SDN and NFV standardization
- OpenDaylight (goals, platforms, interfaces and applications), OpenStack and SDN
- SDN Controllers design and implementation
- SDN Forwarding Elements design and implementation
- OpenFlow and Southbound Protocols
- Application programming interfaces for SDN
- Forwarding plane abstractions, programmability, languages
- Verification techniques and tools for SDN and NFV
- Performance evaluation, optimization and isolation of the Data and Control Planes
- SDN applications and use cases:
    - Data-center/ clouds/ BigData
    - Service Provider Networks: dynamic service chaining, optical networks and transport, cellular/mobile, traffic management, resources and QoS management, WANs/carrier networks and support for clouds, virtualization of aggregation networks
    - Enterprise, home, sensors networks
    - Software Defined Wireless Networks (SDWN)
    - SDN in mobile and 5G networks
    - SDN controlled vehicular networks
    - Internet of Things (IoT) and M2M communications
- NFV applications and use cases
    - Home environment
    - Mobile Core&IMS, mobile base stations
    - Fixed access networks
    - CDNs
    - NFVIaaS, VNFaaS, VNPaaS, VNF Forwarding Graphs
- Reliability, resiliency and fault management in SDN and NFV
- Security and privacy and in SDN and NFV
- Data and Control Plane scalability, inter-operability
- Autonomic (self) management technologies in SDN and NFV
- SDN/NFV architecture versus Content delivery and oriented networks, Information Centric Networking
- Operators and Service Providers business and deployment perspective on SDN and NFV
- Planning and Deployment of SDN/NFV technologies and applications in operational networks

Important Datelines

- Inform the Chairs: As soon as you decided to contribute
- Submission: ~~January 17, 2018~~ February 28, 2018
- Notification: ~~February 22, 2018~~ March 5, 2018
- Registration: ~~March 8, 2018~~ March 10, 2018
- Camera ready: ~~March 15, 2018~~ March 20, 2018

Note: These deadlines are somewhat flexible, providing arrangements are made ahead of time with the chair.

Contribution Types
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

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Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
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Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

Contacts
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