NetP - 1st Network Programmability workshop

To be held in conjunction with CNSM 2021 - 17th International Conference on Network and Service Management, Izmir, Turkey // 25-29 October 2021

Historically, networks were operated by exploiting specialized high performance hardware components performing specific tasks, such as address translation, tunneling, load balancing, traffic engineering, protocol accelerators, performance improvement proxies, traffic monitoring, filtering and protection, intrusion detection, etc. Clearly this approach was meant to cope with the ever increasing performance requirements we witnessed in the last years, but on the other hand it was not well suited to address the highly dynamic networking scenarios in which new protocols, new applications and new technologies are constantly added to the picture.

Novel approaches like SDN and NFV revoluzioned the network function design and implementation by providing the enabling tools for the deployment of programmable and scalable networks. After years of research many application scenarios were proved to benefit from this innovative paradigm shift to the point that programmable network building blocks are widely acknowledged as the foundation of modern networks.

Nevertheless, many aspects are still under investigation. We believe that several questions are still open, like : “what is the best high level language?”, “what are the most suited HW/SW architectures?”, “how can we exploit HW offloading opportunities?”, “can we further optimize/accelerate the network workloads?”, "how can we program network-wide services by chaining local network functions in a scalable way?", "what is the interaction between programmability at node level and programmability at network level?"

This workshop has the aim of openly discussing the above mentioned aspects, topics of interest include but are not limited to:

- design of high-level languages and associated tool chains for specifying network behavior;
- automated methods and tools for validating both control and data plane operations;
- programmable data plane architectures, hardware platforms, software execution environments, and protocols;
- network applications addressing open problems in traffic engineering, measurement, and problem diagnosis;
- architectures exploring in-network compute and storage elements;
- techniques to assert network security properties such as access control and traffic isolation;
- network wide Service Function Chaining;
- Segment Routing;
- eBPF / uBPF;
- programmable networking experimental testbeds, including federation, operations and internationalization.

Paper Submission
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Authors are invited to submit original unpublished papers not under review elsewhere.

Submissions will be subjected to a single-blind peer-review process. Papers should be submitted in IEEE 2-column format, with paper length up to 7 pages including references.

The workshop aims at stimulating an open discussion, therefore papers describing innovative but still preliminary ideas or position papers will be evaluated for their merit by the TPC.

Papers should be submitted through the EDAS system: [...].

At least one of the authors will have to register for the workshop and present the work.

Proceedings
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Papers accepted and presented at NetP will be published open access on the conference Web site with IFIP copyright, and will be submitted for inclusion in IEEE Xplore, ACM and IFIP Digital Libraries.

Important Dates
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Paper Submission: July 31, 2021
Acceptance Notification: Sept 7, 2021
Camera Ready Submission: Sept 21, 2021

Information and contacts
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The workshop organizers can be contacted by email: netp-workshop@googlegroups.com

Organizing Committee
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== *Workshop co-organizers* ==
Stefano Salsano, University of Rome "Tor Vergata", Italy
Lisandro Zambenedetti Granville, Federal University of Rio Grande do Sul, Brasil

== *Technical Program Committee Co-Chairs* ==
Marco Bonola, CNIT, Italy
Gabor Retvari, Budapest University of Technology and Economics, Hungary
Ahmed Abdelsalam, CISCO, Italy

== *Technical Program Committee* ==
Gianni Antichi, Queen Mary University London, UK
Mohamed Boucadair, Orange, France
Pablo Camarillo, CISCO, Spain
Carmelo Cascone, ONF, US
Antonio Cianfrani, University of Rome “La Sapienza”, Italy
Thomas Clausen, École Polytechnique, France
Kentaro Ebisawa, Toyota Motor Corporation, Japan
Paolo Giaccone, Politecnico di Torino, Italy
Christian Jacquenet, Orange, France
Sandor Laki, Eötvös Loránd University, Hungary
Tamas Levai, Budapest University of Technology and Economics, Hungary
Lefteris Mamatas, University of Macedonia, Greece
Fabio Martignon, University of Bergamo, Italy
Laurent Metzger, Eastern Switzerland University of Applied Sciences
Panagiotis Papadimitriou, University of Macedonia, Greece
Rafael Pasquini, UFU, Brasil
Marco Polverini, University of Rome “La Sapienza”, Italy
Gergely Pongracz, Ericsson, Hungary
Salvatore Pontarelli, University of Rome “La Sapienza”, Italy
Fernando Ramos, University of Lisbon, Portugal
Christian Esteve Rothenberg, University of Campinas, Brasil
Stefano Secci, CNAM, Paris, France
Giuseppe Siracusano, NEC EuroLab, Germany
Giacomo Verticale, Politecnico di Milano, Italy
Mohamed Faten Zhani, ÉTS Montreal, Canada