



IEEE NfV-SDN

2021 IEEE Conference on Network Functions Virtualization & Software Defined Networks

Crete, Greece (Hybrid Event)

November 9th – 11th, 2021

#IEEE #NFV #SDN

CALL FOR PAPERS

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Network Functions Virtualization (NFV) and Software Defined Networks (SDN) are an accepted evolution in all areas of network concepts and technologies. They are dramatically transforming telecommunication networks, campus, enterprise, and data center networks, and accelerating the introduction of technologies and applications, which require programmatic control of networks. Currently, NFV and SDN are in the transition phase from development and trials to full-scale deployments.

Significant enablers for rapid adoption are the shifts towards open-source software and hardware development, the convergence of IT and telco tools and technologies, and alignment of operational processes. Integration of the latest research in software technologies, algorithms, hardware design, etc., driven by competition for adoption of the best ideas is helping to drive global acceptance of NFV and SDN.

The 2021 IEEE NFV-SDN conference is an important forum for the ongoing exchange of the latest ideas, developments, and results amongst ecosystem partners in both academia and industry. The conference fosters knowledge sharing and discussion on new approaches as well as work addressing gaps and improvements in NFV and SDN enabled architectures, algorithms and operational frameworks for virtualized network functions and infrastructures.

The event will be a hybrid event with very strong physical components, if permitted by the global health situation.

IMPORTANT DATES

May 17 th , 2021	Workshop proposal deadline
August 03 rd , 2021	Full paper submission deadline
July 19 th , 2021	Tutorial proposal deadline
August 9 th , 2021	Demo/Fast Track paper submission deadline
September 13 th , 2021	Acceptance notification (full papers)
September 6 th , 2021	Acceptance notification (fast-track papers, demos)
October 04 th , 2021	Camera-ready papers

TOPICS

The IEEE NFV-SDN conference invites researchers from around the world to share ideas influencing the evolution and operation of NFV and SDN technologies. The following is a non-exhaustive list of topics:

NFV and SDN Architectures, Infrastructure and Elements

- Emerging improvements including Network Slicing and the unikernel paradigm
- Impact of "open X"
- Improvements in design of forwarding elements, e.g., switches/routers, wireless systems
- Optimizing NFV infrastructures including hardware acceleration technologies
- Heterogeneous server platforms and the detailed element-level CPU/GPU/FPGA mapping of NFV functions
- SDN/NFV in recent and novel architecture paradigms such as Edge, Fog etc.

NFV and SDN Operation

- Dynamic license management, autonomies, machine learning, monitoring, resiliency, fault management and self-healing
- Network security and isolation impacts of virtualization technologies
- Advanced tools for automated design, deployment, validation, and management
- Application of machine learning and big data analytics to manage to simplify deployment and operation of SDN/NFV networks

Performance Analysis and Optimization

- Costs of migration of application containers and workloads
- Data/control plane performance, interoperability, and scalability studies

Barbara Martini, CNIT, IT
Tim Culver, UT Dallas, US
Rentao Gu, Beijing University of Posts
and Telecommunications, CN

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- Resource dimensioning and optimization (e.g. cloud-native design), workload isolation and tradeoffs
- Design guidelines for modularity, scalability, high availability and interoperability (e.g. container and micro services implementations)

Results and Evaluations in Application Scenarios

- Comparative studies on different virtualization technologies
- Usage scenarios such as SD-WAN, IoT, Smart Grid, Smart Cities, etc.
- Improvements in future communication infrastructure enabled by SDN and NFV including fixed and wireless access, public, private and hybrid clouds
- Social and regulatory impacts (e.g. network implications of data location and privacy)

DEMOS, TUTORIALS, WORKSHOPS, DOCTORAL SYMPOSIUM

Call for Demos: The IEEE NFV-SDN 2021 conference also invites demonstration papers in the NFV and SDN realms addressing (but not limited to) the topics above. The demonstrations should be configured to run in a cloud environment accessible via Internet and presented from the exhibition space floor on the demonstrator's laptop. Also, an author of an accepted demo is required to register for the conference at the full or limited rate and present the demo at the IEEE NFV-SDN 2021 conference. For information on submission, please visit <http://www.ieee-nfvdsn.org/>

Call for Tutorials: The organizing committee invites proposals for tutorials to be held prior to the main conference. Tutorials should serve one or more of the following objectives: introducing students and newcomers to major topics in NFV and SDN research; providing instructions on established practices and methodologies; surveying a mature area of NFV and SDN research and/or practice; motivating and explaining an NFV and SDN topic of emerging importance; introducing expert non-specialists to an NFV and SDN research area. Proposals should be submitted by electronic mail to the Tutorial Program Co-Chairs. For information on submission, please visit <http://www.ieee-nfvdsn.org/>

Call for Workshop Proposals: The committee solicits proposals for one full-day or two half-day workshops to be held at the beginning of the main technical program. The scope of the workshops aims to complement the main conference program with forums for exchange of technical expertise, development, integration and standardization efforts on particularly focused areas of interest within the frame of NFV and SDN. Proposals from industry and academia are welcome. Proposals should be submitted by electronic mail to the Workshop Program Co-Chairs. For information on submission, please visit <http://www.ieee-nfvdsn.org/>

Call for Doctoral Symposium: The Doctoral Symposium is a new feature for the conference this year. It provides an opportunity for young researchers (PhD students) to discuss and get valuable feedback on preliminary research work from experienced researchers from both industry and academia. It will help to build and strengthen collaboration amongst the communities researching and working in the areas of NFV and SDN. The doctoral symposium has the status of an IEEE workshop and provides an excellent opportunity for networking amongst PhD students and experienced researchers. Accepted submissions are published in the conference proceedings. For information on submission, please visit <http://www.ieee-nfvdsn.org/>

AUTHOR & SUBMISSION GUIDELINES

Prospective authors are invited to submit original full technical or fast-track papers for publication in the IEEE NFV-SDN 2021 Conference Proceedings and for presentation in the technical sessions. We solicit submission of high-quality full papers reporting original and novel research results on all above topics. Papers must be written in English, unpublished and not submitted elsewhere. Full papers must be formatted as the standard IEEE double-column conference template.

FULL TECHNICAL PAPERS should have a maximum paper length of six (6) printed pages (10-point font), including figures, without incurring additional page charges (maximum 1 additional page with over length page charge of USD100 if accepted). Papers exceeding 7 pages will not be accepted at EDAS. For information on submissions, please visit <http://www.ieee-nfvdsn.org/>

FAST-TRACK PAPERS: In addition, we welcome fast-track papers from the research community up to four (4) pages in length (10pt font); max. one additional page with over length page charge of USD100 if accepted. These papers should focus more on recent and newly developing results. FAST-TRACK papers will be reviewed with a more open mind towards the scope of evaluation or breadth of topics compared to longer papers. We recommend that authors check both calls for papers before submitting. For information on submissions, please visit <http://www.ieee-nfvdsn.org/>

DEMO PAPERS should have a maximum paper length of two (2) printed pages (10-point font), including figures, without incurring additional page charges (maximum 1 additional page with over length page charge of USD100 if accepted). Papers exceeding 3 pages will not be accepted at EDAS. For information on submissions, please visit <http://www.ieee-nfvsdn.org/>

To be published in the IEEE NFV-SDN 2021 Conference Proceedings and to be eligible for publication in IEEE Xplore, an author of an accepted paper is required to register for the conference at the FULL (member or non-member) rate and the paper must be presented by an author of that paper at the conference according to the rules of a hybrid event (e.g., the authors must be able to answer question in real-time by the audience). For authors with multiple accepted papers, one FULL registration is valid for up to 3 papers. Accepted and presented papers will be published in the IEEE NFV-SDN 2021 Conference Proceedings and submitted to IEEE Xplore®.

The IEEE reserves the right to exclude a paper from distribution after the conference (including its removal from IEEE Xplore) if the paper is not presented at the conference. Papers are reviewed on the basis that they do not contain plagiarized material and have not been submitted to any other conference at the same time (double submission). These matters are taken very seriously, and the IEEE Communications Society will act against any author who engages in either practice. In addition, IEEE NFV-SDN 2021 will take action on discriminating reviews.