



IEEE IM 2019: 1st International Workshop on:

“Slicing in end-to-end Networks including Wireless: Orchestration & Management”

(SliceWoman) <https://intrig.dca.fee.unicamp.br/slwmn2019/>

Call for Papers (CFP)

Submission Deadline: December 15, 2018

With the emergence of 5G, application service use-cases and network users (enterprise, carriers, service providers, end users...) rise dynamically changing needs in terms of network services and resources. Users have differentiated behaviors and event-related usages. As devices become network agnostic, they also expect ubiquitous access to services, from any device, via any network at any time. In addition to enhanced Mobile Broadband (eMBB) services, 5G will cover smart cities and vertical markets and its design needs to meet the requirements of massive Machine-Type Communications (mMTC), characterized by a very large density of connected objects, Ultra Reliable Low Latency Communications (URLLC), with stringent requirements in terms of low latency and high availability and reliability.

The adoption of virtualization, then softwarization for networks and infrastructures is an opportunity to move from monolithic network solutions to customized end-to-end network services conceived on-demand, and deployed dynamically and “on-the-fly”. An important objective of network slicing is going beyond resource sharing and consumption reduction, providing flexible mechanisms for network service provisioning, supported by novel deployment models, while ensuring smooth service continuity and automating the management and orchestration of network services and resources.

However, slicing approaches are still at their infancy and multiple issues are yet to be addressed. For example, slicing of the Radio Access Network (RAN) raises specific issues as real-time requirements of low-layer network functions make their virtualization difficult and reduce slicing flexibility. Indeed, while core and access network slicing is constrained by existing mechanisms, it can be facilitated by new approaches which are the focus of this workshop.

New technology trends such as Slice-as-a-Service, VIM on-demand, WIM on-demand, RAN-as-a-Service, runtime allocation of data center and network elements bring a series of challenges in the way network services and slices are conceived, deployed, provided and intelligently managed.

There are many open questions that need to be addressed, including:

- What are the abstractions and models needed to ensure slicing is deployable in networks.
- What are the end-to-end issues that need to be addressed to allow slicing everywhere.
- How to define new radio resource allocation and orchestration mechanisms that support the coexistence of a large number of slices.
- How do the existing technologies in computing, networking, and storage, become elements of a slice, and how are they managed in this context.
- Is it better to adapt existing components to support slicing, or is it better to design new ones.

SliceWoman workshop aims at providing an international forum for researchers and practitioners from academia, industry, network operators, and service providers to discuss and address the challenges deriving from such evolution in the application, the network and the infrastructure layers.



Enlightened by this vision, we are welcoming papers that cover any of the following topics:

- Virtual networks and abstraction models
- Exposure platforms, frameworks and APIs (description, selection, negotiation, etc.)
- "as-a-Service" paradigms for slice management and orchestration
- Slicing heterogeneous infrastructures
- Multi-Access Edge Computing slicing, Slicing at the Edge
- Cross-domain network slicing
- Network transformation schemes and strategies to support network slicing
- Adaptation approaches of legacy architectures
- Impact of Slicing on FCAPS operations
- Slice lifecycle management
- Slice deployment and placement
- Service Function Chaining for slices
- Self-organizing network (SON) functions for slicing
- Attachment and mobility management
- Multi-tenant slicing for QoS assurance
- Integration of different Radio Access Technologies (RAT) into slices.
- Scheduler design for heterogeneous services
- Multiple resource allocation and fairness
- Spectrum sharing for slices
- Adaptation of lower layer network functions to slicing (massive MIMO, numerology).
- Slice management for energy efficient networks
- Artificial intelligence for slice management
- Big data and graph data bases for network slicing
- Game theory tools for stakeholder cooperation
- Business layer for inter-operator resource sharing
- Business roles, ecosystem value chains & Business models

Paper Submission

Prospective authors are invited to submit high-quality original technical papers for presentation at the conference and publication in the IM 2019 Proceedings. All submissions must be written in English and must use standard [IEEE two-column conference template](#) that can be downloaded from <https://goo.gl/osSfEF>.

Technical Papers can be of two types: Full papers or Short papers, up to 7 pages and 4 pages respectively, including tables, figures and references.

Papers submitted should describe original, previously unpublished research results, not currently under review by another conference or journal. All submitted papers will be reviewed. Papers will appear in the conference proceeding and will be submitted on IEEE Xplore. Only PDF files will be accepted for the review process and all manuscripts must be electronically submitted through JEMS https://submissoes.sbc.org.br/im2019_slicewoman.

Important Dates:

Submission deadline: December 15, 2018

Acceptance notification: January 25, 2019

Author registration: February 8, 2019

Camera-ready: February 8, 2019

Conference start: April 8, 2019

Workshop chairs e-mail: slicewoman2019chairs@googlegroups.com