



# 19th International Conference on Network and Service Management

## Network and Service Management in the Era of Generative AI and Digital Twins

30 October - 2 November 2023, Niagara Falls, Canada

### CALL FOR PAPERS

The 19th International Conference on Network and Service Management (CNSM) is inviting authors to submit original contributions in network and service management research. CNSM is a selective single-track conference, covering all aspects of the management of networks and services, pervasive systems, enterprises, and cloud computing environments. CNSM 2023 will particularly focus on advancing network and service management in the era of generative AI and digital twins for improved performance, security and dependability.

Papers accepted and presented at CNSM 2023 will be published as open access on the conference website and will be submitted for possible publication in IEEE Xplore. Authors of selected papers accepted for publication in the CNSM 2023 proceedings will be invited to submit an extended version of their papers to the IEEE Transactions on Network and Service Management journal.

### Topics of Interest (but not limited to)

#### Technologies

- Communication Protocols
- Middleware
- Overlay Networks
- Peer-to-Peer Networks
- Cloud Computing and Cloud Storage
- Data, Information, and Semantic Models
- Information Visualization
- Software-Defined Networking
- Network Function Virtualization
- Orchestration
- Operations and Business Support Systems
- Control and Data Plane Programmability
- Distributed Ledger Technology

#### Service Management

- Multimedia Services
- Content Delivery Services
- Cloud Computing Services
- Internet Connectivity and Internet Access Services
- Internet of Things Services

- Security Services
- Context-Aware Services
- Information Technology Services
- Microservices-based Applications
- Service Assurance

#### Functional Areas

- Fault Management
- Configuration Management
- Accounting Management
- Performance Management
- Security Management

#### Management Paradigms

- Centralized Management
- Hierarchical Management
- Distributed Management
- Federated Management
- Autonomic and Cognitive Management
- Policy- and Intent-Based Management
- Model-Driven Management
- Pro-active Management

- Energy-aware Management
- QoE-Centric Management

#### Methods

- Mathematical Logic and Automated Reasoning
- Optimization Theories
- Control Theory
- Probability Theory, Stochastic Processes, and Queuing Theory
- Artificial Intelligence and Machine Learning
- Evolutionary Algorithms
- Economic Theory and Game Theory
- Monitoring and Measurements
- Data Mining and (Big) Data Analysis
- Computer Simulation Experiments
- Testbed Experimentation and Field Trials
- Software Engineering Methodologies



### Important Dates

*Paper Submission:*

26 June 2023

*Rebuttal Period:*

15-18 August 2023

*Acceptance Notification:*

25 August 2022

*Camera Ready due:*

8 September 2022

### Technical Program Co-Chairs

*Noura Limam,*

University of Waterloo,  
Canada

*Majid Ghaderi,*

University of Calgary, Canada

*Remi Badonnel,*

TELECOM Nancy - University  
of Lorraine, France

### General Co-Chairs

*Raouf Boutaba,*

University of Waterloo,  
Canada

*Prosper Chemouil,*

CNAM, France

### Paper Submission

Authors are invited to submit original contributions that have not been published or submitted for publication elsewhere. Papers should be prepared using the IEEE 2-column conference style and are limited to 9 pages including references (full papers) or 5 pages including references (short papers). Papers must be submitted electronically in PDF format through EDAS at <https://edas.info/N30975>.

Papers exceeding page limits, multiple submissions, and self-plagiarized papers will be rejected without further review. All other papers will get a thorough single-blind review process, followed by a rebuttal phase.

For further information, please check <http://www.cnsm-conf.org/2023/>.