**Call for papers**
**Special Issue on**

# Machine Learning for Networking

**Lead Guest Editor**

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**Guest Editors**

- **Prof. Ruben Milocco,** Universidad del Comahue, Argentina
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**Topics of interest for this special issue include but are not limited to:**

- New paradigms for dependable wireless communication
- Dependable wireless communications technologies
- Dependable distributed architectures
- Dependable wireless communications in IoT
- Dependable delay tolerant networks
- Dependable Medium Access Protocols
- Dependable aspects of smart mobility and cooperative ITS
- Wireless network virtualization
- Dependability evaluation of wireless communication systems
- Analytical and Numerical methods, simulations, experimentation, benchmarking, verification, field data analysis.
- Architecture, design, implementation and management of dependable applications supported by wireless communications
- Security threats in wireless communications
- Physical layer dependability
- Fault-tolerant techniques for wireless communications
- Harmonizing security and timeliness in wireless communications
- Pattern recognition and classification for networks
- Machine learning for network slicing optimization
- Machine learning for 5G system
- Machine learning for user behavior prediction
- New innovative machine learning methods

- Optimization of machine learning methods
- Performance analysis of machine learning algorithms
- Experimental evaluations of machine learning
- Data mining in heterogeneous networks
- Machine learning for multimedia
- Machine learning for Internet of Things
- Machine learning for security and protection
- Distributed and decentralized machine learning algorithms
- Intelligent cloud-support communications
- Intelligent resource allocation
- Intelligent energy-aware/green communications
- Intelligent software defined networks
- Intelligent cooperative networks
- Intelligent positioning and navigation systems
- Intelligent wireless communications
- Intelligent wireless sensor networks
- Intelligent underwater sensor networks

The recent development of both big data which aims at collecting and storing large amounts of data and cloud computing that allows large amounts of data to be processed rapidly and efficiently have made it possible the emergence of machine learning solutions that learn from huge sets of data in order to be able later to rapidly answer to similar problems. Many different machine-learning solutions have been developed so far, including supervised and non-supervised learning, reinforcement learning, transfer learning.

Last generation networks (4G, 5G and future 6G) also take huge advantage of the cloud and tend to rely more and more on this computing facility. Most of the proposed solutions also allow to grab many information about the state of the network, the state of the communications, the end-users and/or any connected applications.

Applying machine-learning solutions to network management and developing machine-learning solutions on top of networks is a virtuous circle that will benefit to both machine learning and networking.

This special issue aims at collecting and reporting on recent research and advanced knowledge related to machine learning in networking.

Papers must describe original research that advances state-of-the-art research and must not be simultaneously submitted to a journal or a conference with proceedings. Papers must be written in excellent English and should not exceed 20 pages. Previously published or accepted conference papers must contain at least 50% new material to be considered for the special issue.  A covering letter to the Guest editors clearly describing the extensions made must accompany these types of submissions. All submissions must be made using the instructions available at:

http://annalsoftelecommunications.wp.mines-telecom.fr/how-to-publish/

The authors can directly submit their papers at: https://www.editorialmanager.com/ante/  and must select "Open Topic" in the menu "Choose Article Type" and then in the questionnaire on the "Additional Information" section, they will be able to select the item "CfP: Machine Learning for Networking".

**Proposed schedule**

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| • **Manuscript submission** | June 30, 2020 |
| • **Online with DOI** | As soon as accepted |
| • **Printed issue** | 2021 |

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