annals of telecommunications
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# Call for papers
## Special Issue on
## Design of Reliable Communication Networks

Following the 12th International Workshop DRCN 2016 that was held in CNAM Paris, March 14-17, 2016, we invite submissions for a forthcoming issue of *Annals of Telecommunications*.

Telecommunication networks play more than ever a central role in the deployment and operation of the vast amount of services offered to companies, administrations or individual customers. There seem to be an endless race between throughput requirements and bandwidth availabilities and huge amounts of data are stored or transferred every minute of every day. Promising new trends, such as Software-Defined Networks (SDN) or Network Function Virtualization (NFV), are emerging to ease and make more flexible the management and operations of modern networks. In this context, ensuring that the networks are reliable, resilient and able to survive or counter failures or attacks, is more than ever a very challenging issue.

This special issue is devoted to high quality articles that will help the community to better understand, analyze and address the new challenging problems of reliable network design, in contexts including but not limited to:

**Network design and operational aspects of Reliability**

- Survivability and traffic engineering for optical, IP and multi-layer networks
- Robustness of multi-domain network and protocol architectures
- Resilience in Software-Defined Networking (SDN)
- High-availability for Network Functions Virtualization (NFV) infrastructures
- Network dependability in cloud networking
- Dependability of cellular/mobile networks
- Reliability of wireless access and mesh networking
- Survivability in grid and distributed computing
- Resilience of networked critical infrastructures

**Theory and modeling**

- Network reliability analysis
- Methods for survivable network and systems design, analysis and operation
- Planning and optimization of reliable networks, systems, and services
- Network coding techniques to improve resilience
- Decomposition techniques for reliable network optimization
- Service differentiation based on recovery methods
- Simulation techniques for network resilience

**Resilience of Networked Services**

- Quality of Experience (QoE) and network service availability assessments
- Reliability requirements and metrics for users, businesses, and the society
- Dependability of networked applications
- Survivability of multimedia networks
- Reliability and resiliency of data center networks
- Recovery of overlay and peer-to-peer networks
- Restoration of services under various types of failures
- Application and service-specific survivability techniques
- Robustness of compound services

**Broad context**

- Telecommunication networks as an element of critical infrastructures
- Risk and reliability in the Internet and enterprise networks
- Public policy issues for survivability and resilience
- Standardization of network resilience and reliability
- Network resilience combined with economics and commercial issues
- Network robustness to natural disasters
- Robust network design for hostile environments
- Security issues in networks and their relation to survivability
- Network dependability and energy consumption trade-offs

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## Guest Editors:

- **Eric Gourdin**, eric.gourdin@orange.com, Orange, France
- **Deep Medhi**, DMedhi@umkc.edu, University of Missouri Kansas-City, USA
- **Achille Pattavina**, achille.pattavina@polimi.it, Politecnico di Milano, Italy

This special issue will invite extended versions of the selected papers presented at DRCN 2016. We also strongly encourage researchers unable to participate to the conference to submit papers for this call.

Papers must be written in English and describe original research not published or currently under review by other journals or conferences. The length of the article file should not exceed 35,000 characters including spaces (i.e. around 5,500 words). The manuscripts that are outside the expected length are likely to be rejected. All relevant papers submitted will go through an external review process.

Submissions should be prepared and sent according to the instructions available at:
http://annalsoftelecommunications.wp.mines-telecom.fr/how-to-publish/

## Proposed schedule

- **Manuscript submission** ~~September 15, 2016~~ **Extended October 15, 2016**
- **Notification of acceptance (after revision)** January 31, 2017
- **Online with DOI** as soon as accepted
- **Printed issue** July-December 2017