



## 5G and Beyond Fiber-Wireless Network Communications

Guest Editors:

**Dr. Agapi Mesodiakaki**

Department of Informatics,  
Aristotle University of  
Thessaloniki, 54453 Thessaloniki,  
Greece

**Dr. George Kalfas**

Department of Informatics,  
Aristotle University of  
Thessaloniki, 54453 Thessaloniki,  
Greece

**Dr. Marios Gatzianas**

Department of Informatics,  
Aristotle University of  
Thessaloniki, 54453 Thessaloniki,  
Greece

Deadline for manuscript  
submissions:

**closed (30 April 2022)**

### Message from the Guest Editors

Dear Colleagues,

To unleash the full potential of 5G communications and to prepare the ground for beyond 5G (B5G) communications, the joint study and optimization of the optical and wireless network domains is expected to play a key role. To support the user-centric communication paradigm introduced with 5G, enhanced and computationally efficient artificial intelligence (AI)/machine learning (ML) algorithms also need to be developed to predict user behavior and demands and, consequently, dynamically adapt the communication path, even proactively, in real-time.

For this Special Issue, we invite submissions exploring converged optical and wireless B5G network functionalities in a variety of topics. Contributions can focus on techniques and resource allocation algorithms, design, analysis, and management of virtualized networks, security and resilience, end-to-end network performance optimization, or cross-layer optimization strategies for B5G networks. Survey papers and reviews are also welcomed.

Dr. Agapi Mesodiakaki

Dr. George Kalfas

Dr. Marios Gatzianas

Guest Editors





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**  
Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[applsci@mdpi.com](mailto:applsci@mdpi.com)  
[X@Applsci](https://twitter.com/Applsci)