

CALL FOR PAPERS

WORKSHOP ON AERIAL COMMUNICATIONS IN 5G AND BEYOND NETWORKS (AERCOMM)

Held in Conjunction with IEEE WCNC 2020 Seoul, South Korea, April 6-9, 2020

1. IMPORTANT DATES

Full paper submission: ~~December 31, 2019~~ **January 12, 2020**

Notification of acceptance: January 31, 2020

Final camera-ready copy: February 15, 2020

Workshop: 6-9 April 2020 (exact workshop date to be confirmed)

2. SUBMISSION GUIDELINES

All submissions should be written in English with a maximum paper length of eight (8) printed pages (10-point font) including figures. The papers exceeding 6 pages will be subject to an additional fee of 100 USD/page. Papers exceeding 8 pages will not be accepted at EDAS. Only PDF files with all fonts embedded are accepted for review. Your submitted PDF file and registered EDAS account must list the same author(s) and title. Accepted papers will be published in the WCNC 2020 Proceedings, and the papers presented by an author at the workshop will be submitted to IEEE Xplore.

3. SCOPE

In the last decade or so, the use of Unmanned Aerial Vehicles (UAVs), also commonly referred to as drones, has received significant attention from various industry sectors and research communities. This is mostly attributed to the broad of range of UAV-enabled use cases in agriculture, public protection and disaster relief (PPDR), logistics, media production, mapping, and so on. The transformation of UAVs into distributed aerial communications and computing platforms is gathering pace by leveraging research advancements in 5G/6G technologies, edge computing, machine learning, and so on. This transformation promises exciting and high impact use cases and innovations far beyond legacy UAV solutions. The transformation further requires efficient integration of unmanned aerial systems traffic management (UTM) with more conventional air traffic management for an orderly air space with when UAVs are adopted in large numbers. The AERCOMM workshop collocated with IEEE WCNC 2020 aims to provide a venue for exchanging of latest developments between (but not limited to) academic researchers, vendors, operators, verticals and regulators.

To that end, original submissions that discuss research, experimentation and evaluation strategies are encouraged within the following scope or related areas:

- 3-D placement of aerial base stations
- Aerial nodes characterization (UAVs, balloons, small/pico satellites)
- On-demand deployment of multiple aerial base stations
- Air-to-air channel characterization
- Multi-tier aerial network architectures
- Deployment of aerial base stations for optimal quality coverage
- Energy aware trajectory optimization for aerial base stations
- Resource management of flying base stations
- Dynamic utilization of the available spectrum
- Predictive Deployment of UAV base stations
- Reliability and availability of UAV-based networks
- Softwarization and Virtualization for fast deployment networks
- Allocation of computational resources to UAVs and other flying platforms
- Services and Service Function Chains deployment in on-demand mobile deployable communication platforms
- Service functions offloading to mobile aerial nodes
- Predictive networking for low-latency support of flying objects
- 3-D handover for aerial users
- UTM architectures
- UTM mechanisms and service differentiation
- UAV key performance indicator evaluations using simulations and trials
- Network slicing for UTM
- Slices in constrained environments (Drones, Edge, etc.)
- 5G enhancements in UTM

3. ORGANISATION

The AERCOMM workshop is jointly organized by two international research collaboration projects with a strong focus on UAV related research and experimentation, namely:

- H2020 EU-Korea project *Virtual Presence in Moving Objects Through 5G (PriMO-5G)* <https://primo-5g.eu/>
- H2020 EU project *Unmanned Aerial Vehicle Vertical Applications' Trials Leveraging Advanced 5G Facilities (5G!Drones)* <https://5gdrones.eu/>

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2. Prof. Riku Jäntti, Aalto University, Finland
3. Adj. Prof. Jussi Haapola, University of Oulu, Finland
4. Dr. Akis Kourtis, NCSR "Demokritos", Greece

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3. Prof. Chan-Byoung Chae , Yonsei University, Korea
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5. George Xilouris, NCSR, Greece

3.3. Publication Co-Chairs

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2. Dr. Abdequoddouss Laghrissi, University of Oulu, Finland

3.4. Technical Program Committee Members

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20. Tanel Järvelin, Cafe Tech, Estonia
21. Dr. Tuomo Hänninen, University of Oulu, Finland

For more information about AERCOMM Workshop at WCNC2020

Please visit: <https://primo-5g.eu/aercomm/>