

October 2020, Vicenza IT

WORKSHOP ANNOUNCEMENT

Innovative concepts for the use of space for positioning and timing: GNSS and beyond (be-GNSS)

Global Navigation Satellite Systems (GNSS) and their augmentations have been a fundamental source of **Position, Navigation and Timing (PNT)** information, providing global coverage and unprecedented accuracy and stability. Nonetheless, the technological panorama is continually in evolution, acknowledging the appearance of new positioning services in radio systems other than GNSS. For example, mega-constellations of Low-Earth Orbit (LEO) satellites for broadband communications offer appealing opportunities to provide positioning services complementary to the MEO GNSSs. Furthermore, also the broadband terrestrial communication systems enter the game with a potentially relevant role: 5G positioning will be a key enabler for terrestrial positioning and its synergy with GNSS is the subject of an active research.

This workshop addresses the cutting-edge results of the worldwide research on **complementary methods to provide PNT services**, backing GNSS with other radio signals or systems of opportunity. The technological evolution at the user's receiver level necessary to process signals from multiple sources and different types of signal is another key aspect, able of determining the level on penetration of such complementary-PNT systems. The principal (yet not exhaustive) topics of interest for the workshop are:

- **PNT from LEO constellations**
- **Signals-of-Opportunity (SoO) and other terrestrial systems**
- **Receiver implementation strategies**
- **Synchronization strategies**
- **Models of radio propagation impairments impacting the complementary positioning signals**

The workshop is intended for researchers and scientists, expert in the field of satellite navigation, satellite-based positioning, terrestrial positioning, alternative PNT, radio signals of opportunity for navigation and timing, signal processing for multi-system PNT.

Workshop Chairs

Dr. Emanuela Falletti, Fondazione LINKS, Torino, Italy

Dominik Dötterböck, Universität der Bundeswehr München, Germany

Dr. Beatrice Motella, Fondazione LINKS, Torino, Italy

WiSEE 2020

Workshop Organization

The workshop will last one day and will include **panel presentations** in the morning, given by international experts, followed by **technical presentations** of the papers submitted and accepted to this workshop.

Paper Submission

As part of the WiSEE 2020 conference, this Workshop adopts the same dates, deadlines, submission rules and publication policies of the main Conference.

Perspective authors are invited to follow the [guidelines](#) set by the main Conference for the preparation and submission of the manuscripts (<https://attend.ieee.org/wisee-2020/submission-guide/>) and to periodically check the important dates.

Full-length Research Papers (6 pages) addressing solutions in one or more of the topics mentioned above are sought for the workshop.