



## Special Session

# “Seamless Transition between localization systems”

### Abstract

Seamless transitions between outdoor and indoor localization systems and cooperation between them still represent challenging tasks. With the term Seamless Transition we refer to the ability to switch between outdoor and indoor positioning technologies without any interruption or loss of accuracy, while cooperation refers to the ability of indoor positioning technologies to work together to provide more accurate and reliable indoor positioning solutions. In this regard, researchers are required to start investigating mechanisms enabling cooperation between multiple localization systems, including protocols, algorithms, and privacy-preserving procedures. The research on seamless transition between outdoor and indoor localization systems and cooperation between indoor localization technologies is motivated by the growing demand for accurate and reliable location-based services in both outdoor and indoor environments. The ability to seamlessly switch between different positioning technologies and to combine them for improved accuracy and reliability is crucial for enabling a wide range of applications.

Novelty in such areas comes from the development of new algorithms and techniques for hybrid positioning, map matching, and machine learning that can enable seamless transitions, which exploit different technologies. There are several technical challenges that need to be addressed in order to achieve seamless transition and cooperation between indoor localisation technologies. Some of these challenges include protocol and interface definitions, interoperability.

### In this Special Session, we invite authors to submit papers related (**but not limited**) to:

In particular, we welcome papers that address theoretical, technical, or practical aspects of this topic, including sensor fusion, hybrid positioning, context awareness, map matching, and machine learning approaches. We also encourage papers that present case studies or evaluations of existing systems.

### Organizers

- Paolo Barsocchi
- Antonino Crivello
- Francesco Furfari
- Michele Girolami
- Filippo Palumbo

### Important Dates

- Submission deadline: 15 May 2023
- Notification of acceptance: 21 June 2023

Manuscripts are submitted according to the IPIN 2023 Conference instructions for authors. Papers undergo a single-blind review process by at least two reviewers. Accepted regular papers are submitted to IEEE Xplore Digital Library, accepted WiP papers to CEUR-WS.org, which is currently indexed by Scopus, Ei Compendex and DBLP.

Submit your paper now in <https://softconf.com/n/ipin2023/>

If you have any further questions, please contact Antonino Crivello (Email: [antonino.crivello@isti.cnr.it](mailto:antonino.crivello@isti.cnr.it))