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(Eds.)

Short Paper Proceedings of the

**IPIN-WiP 2019**

**The Tenth International Conference on  
Indoor Positioning and Indoor Navigation -  
Work-in-Progress (WiP) Papers**

Co-located with IPIN 2019, Pisa, Italy,

September 30<sup>th</sup> – October 3<sup>rd</sup>, 2019

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## Preface

This volume contains the Work-in-Progress papers presented at IPIN 2019, the Tenth International Conference on Indoor Positioning and Indoor Navigation (<http://ipin2019.isti.cnr.it/posters>) held in Pisa, Italy, on September 30<sup>th</sup> – October 3<sup>rd</sup>, 2019.

Launched in 2010 in Zurich, Switzerland, IPIN is a unique event entirely dedicated to indoor localisation, its applications and its development. The last ten years have seen enormous technical progress in this field, yet, in contrast with outdoors well-established GNSS solutions, no technology still exists cheap and accurate enough for the general market. The potential applications of indoor localisation are all-encompassing, from home to wide public areas, from IoT and personal devices to surveillance and crowd behaviour applications, from casual use to mission-critical systems.

Each year, IPIN solicits submission of high quality technical papers reporting original work not previously published, nor currently submitted for consideration elsewhere. Papers are submitted as one of two types:

- Regular paper: limited to 8 IEEE format pages, for oral presentation;
- Work-in-Progress (WiP) paper: from 5 to 8 LNCS format pages, for poster or oral presentation.

Regular papers proceedings have been submitted to IEEEExplore and can be found at the following link:

<https://ieeexplore.ieee.org/xpl/conhome/1800208/all-proceedings>

This volume collects the WiP papers presented as posters. Some of them have also been presented as oral presentation. Each paper was reviewed by at least two members of the Program Committee of the Conference and, on the basis of their recommendations, 61 documents have been selected for publication and presentation as WiP at IPIN 2019. Among all the WiP papers, the Program Committee has awarded one of them as Winner of the Best Poster with a money reward of 500 €. The best poster paper “Experimental TDoA Localisation in Real Public LoRa Networks” was submitted by Nico Podevijn, David Plets, Michiel Aernouts, Rafael Berkvens, Luc Martens, Maarten Weyn and Wout Joseph.

We thank all members of the IPIN 2019 Program Committee for their effort in the review process that was fundamental for maintaining the high scientific level of the conference and all the researchers of the IPIN community who supported this event by submitting their work and actively participating in it.

November 2019

*Francesco Potortì, Valérie Renaudin, Kyle O'Keefe and Filippo Palumbo*

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