

## ESR6

### *ESR6 project title-* **Collaborative techniques for infrastructure-less Indoor Positioning Systems**

*Lead beneficiary (place of employment)* – Universitat Jaume I, Spain

*Supervisory team* - Prof. Joaquin Huerta and Dr. Sven Casteleyn (Universitat Jaume I, Spain), Assoc. Prof. Simona Lohan (Tampere University, Finland) and industrial mentor: Dr. Florean Curticepan (Wirepas, Finland).

*Project tasks and objectives:* To test and experiment with various fingerprinting technologies (WIFI, magnetic field) and peer-to-peer communication protocols, with respect to range, battery power, data security, privacy, etc; to develop a baseline collaborative indoor positioning system using the selected technologies; to experiment the developed collaborative indoor positioning system, and to compare them to existing non-collaborative algorithms along different dimensions (e.g., accuracy, battery drainage); to ensure anonymous collaboration and to avoid location leakage. The ESR will also have the possibility to participate in the Advisory Board of the network (two ESRs are selected annually by voting among the 15 ESRs of the network). The ESR will also be involved in social media promotion of the network, such as Webropol surveys, Facebook and LinkedIn groups, Youtube video channels, Twitter and blogging.

*Mobility/cross-country and cross-sector secondments including industrial training:* 6 cumulated months at Tampere University, Finland and 3 months of industrial experience at Wirepas, Finland

*Eligibility:* MSc degree in a relevant degree obtained after Sep 2015 and not having lived or worked more than 12 cumulative months in Spain during Aug 2016-Aug 2019.

*Preferred starting date-* September 2019

*Trial period* - 12 months

*Target degree* –joint PhD degree from Tampere University, Finland and Universitat Jaume I, Spain

*Approximate gross salary* – about 2800 EUR/month

#### *Working and living conditions in Spain*

**Spain** is the 10th country in the world with the highest quality of life and, above all, a mosaic of cultures what is reflected in the hundreds of its heritage sites. In fact, Spain is the third country in the world in UNESCO world heritage sites.

**Castellón** is a small city open to the Mediterranean Sea. Increasingly, Castellón attracts students from all over the world due to the international projection of the Universitat Jaume I (UJI). Read more about Spain and Castellón:

- <https://www.spain.info/en/>
- <http://www.turismodecastellon.com/es/>
- <https://www.castellonturismo.com/>

**Universitat Jaume I** is a higher public education institution devoted to innovation as a means to socially, culturally and economically develop its environment. It is a technology oriented University as is shown by the fact that UJI hosted the very first web portal in Spain and in Spanish language around the world. The Higher School of Technology and Experimental Sciences is a center noted for the quality of its research, its international impact in the industry and society of Castellón and surroundings areas. Read more: <http://www.uji.es>

*Information about the industrial partner* – **Wirepas** is a privately owned company with headquarters in Tampere, Finland and offices in France, Germany, South Korea and the United States. Wirepas was established in 2010 in Tampere, Finland. The company had its roots at Tampere University of Technology (TUT), where a ten-year research project was conducted around the radio frequency mesh technology. Nowadays, Wirepas is completely independent from TUT and has no inter-relationship with TUT.