

Call for competition

IPIN is pleased to announce the seventh IPIN 2020 Indoor Localization Competition. The competition is aimed at bringing together the academic and industrial research communities for evaluating different approaches and envisioning new research opportunities for the indoor localization area, where no generally accepted standards exist yet.

IPIN 2020 Indoor Localization Competition will consist of several Tracks. The competition builds on the experience of previous competitions and is based on the EvAAL framework, ensuring experience, solidity and a well-founded scientific method. In 2020 the competition hosts five different tracks:

- Track 3: Smartphone (off-site)
- Track 4: Foot-mounted IMU (off-site)
- Track 5: xDR in manufacturing (off-site)
- Track 6: On-vehicle smartphone (off-site)
- Track 7: Channel impulse response (off-site)

Off-site tracks

Competitors calibrate their algorithms in advance using a ground truth reference database, and compete using new unreferenced data.

Track 3 - Smartphone: A pedestrian walking under realistic conditions in multi-floor buildings using data provided by a conventional smartphone.

Track 4 - Foot-mounted IMU: A pedestrian carries PERSY (PEdestrian Reference SYstem), a state-of-the-art Inertial Navigation System producing IMU data, MAG data & GNSS data, without the help of any maps.

Track 5 - xDR in manufacturing: Workers and forklifts moving in industrial scenarios using data provided by a mobile device equivalent to a smartphone.

Track 6 - On-vehicle smartphone: A vehicle moves along an indoor and outdoor path using data provided by a smartphone fixed at the inside front.

Track 7 - Channel Impulse Response: Different objects travel through an obstructed indoor area with NLOS/LOS transitions.

Technical competition details

The evaluation criteria for the competition, restrictions on the accepted technologies, technical rules and a

description of the benchmarks are detailed in the technical annexes to this call, which will be made public by end in August. Announcements and possible refinements of the annexes, also based on applicants' comments, will be timely distributed on the competition discussion mailing list contest@evaal.aalooa.org and will appear on the EvAAL web site <http://evaal.aalooa.org/>.

All the data gathered by the competition committee during the competition, including data produced by competing systems, will be published after the competition for the purpose of research and comparison. Winners of the competition will be announced on the EvAAL and IPIN web sites and on the contest mailing list. Scientific publishing opportunities will be offered to competitors and prizes will be awarded to the winners.

Competitor admission process

A competitor can be any individual or group of individuals working as a single team, associated to a single or a number of organizations, who applies to participate in one or several tracks. Only one team from the same organization (laboratory) is allowed to compete in any number of Tracks. Registration cost is 100€ for the first Track plus 50€ for any additional Track, to be paid when results are submitted.

More detail will be published on the EvAAL web site and the contest mailing list.

Subscribe to the contest mailing list to get updated on the competition:

<http://evaal.aalooa.org/mailman/listinfo/contest>.

Competition - Important Dates

Technical annexes published	3 August
Data published	15 September
Submission of results	30 November
Proclamation of winners	14 December

Organizing Committees

Competition chairs: Francesco Potorti, ISTI-CNR (IT)

Sangjoon Park, ETRI (KR)

Track 3: Joaquín Torres-Sospedra, University Jaume I (ES)

Track 4: Miguel Ortiz - GEOLOC Team, University Gustave Eiffel (FR)

Track 5: Ryosuke Ichikari, AIST (JP)

Ryo Shimomura, AIST and University of Tsukuba (JP)

Track 6: Dongyan Wei, Xinchun Ji, Aerospace Information Research Institute, CAS (CH)

Track 7: Christopher Mutschler, Fraunhofer IIS