

IPIN competition 2016

**Chairs: Francesco Potorti
Antonio R. Jiménez
Sangjoon Park**



**International Conference
on Indoor Positioning
and Indoor Navigation**



organised by EvAAL

KICS
The Korean Institute of
Communications and
Information Sciences

ETRI
한국 전자통신연구원
Electronics and Telecommunications Research Institute

tecnalia



EvAAL competitions: a history

- ▶ Born from the universAAL FP7 project
 - ▶ 2011 Indoor Localization & Tracking for AAL
 - ▶ 2012-2013 + Activity Recognition for AAL
- ▶ 2014 IPIN 2014 competition
 - ▶ Smartphone and Foot-mounted tracks
- ▶ 2015 EvAAL-ETRI competition at IPIN
 - ▶ additional Fingerprinting off-site track
- ▶ 2016 IPIN 2016 competition
 - ▶ additional Robot positioning track

IPIN 2016 competition organisers



● Competition chairs

Francesco Potortì (IT)

Antonio R. Jiménez (ES)

Sangjoon Park (KR)

● Software chairs

● Track 1 chairs

● Track 2 chairs

● Track 3 chairs

○ Track 4 chairs

IPIN competition 2016

The Location

- ▶ Escuela Politécnica Superior, Universidad de Alcalá



I PIN competition 2016 Tracks

- ▶ Track 1: Smartphone based
 - 6 competitors + 1 withdrawn
- ▶ Track 2: Pedestrian dead reckoning
 - 6 competitors + 1 withdrawn
- ▶ Track 3: Smartphone based (off-site)
 - 5 competitors + 1 withdrawn
- ▶ Track 4: Mobile robot
 - 2 competitors + 2 off-track + 2 withdrawn

I PIN competition 2016 wordlet



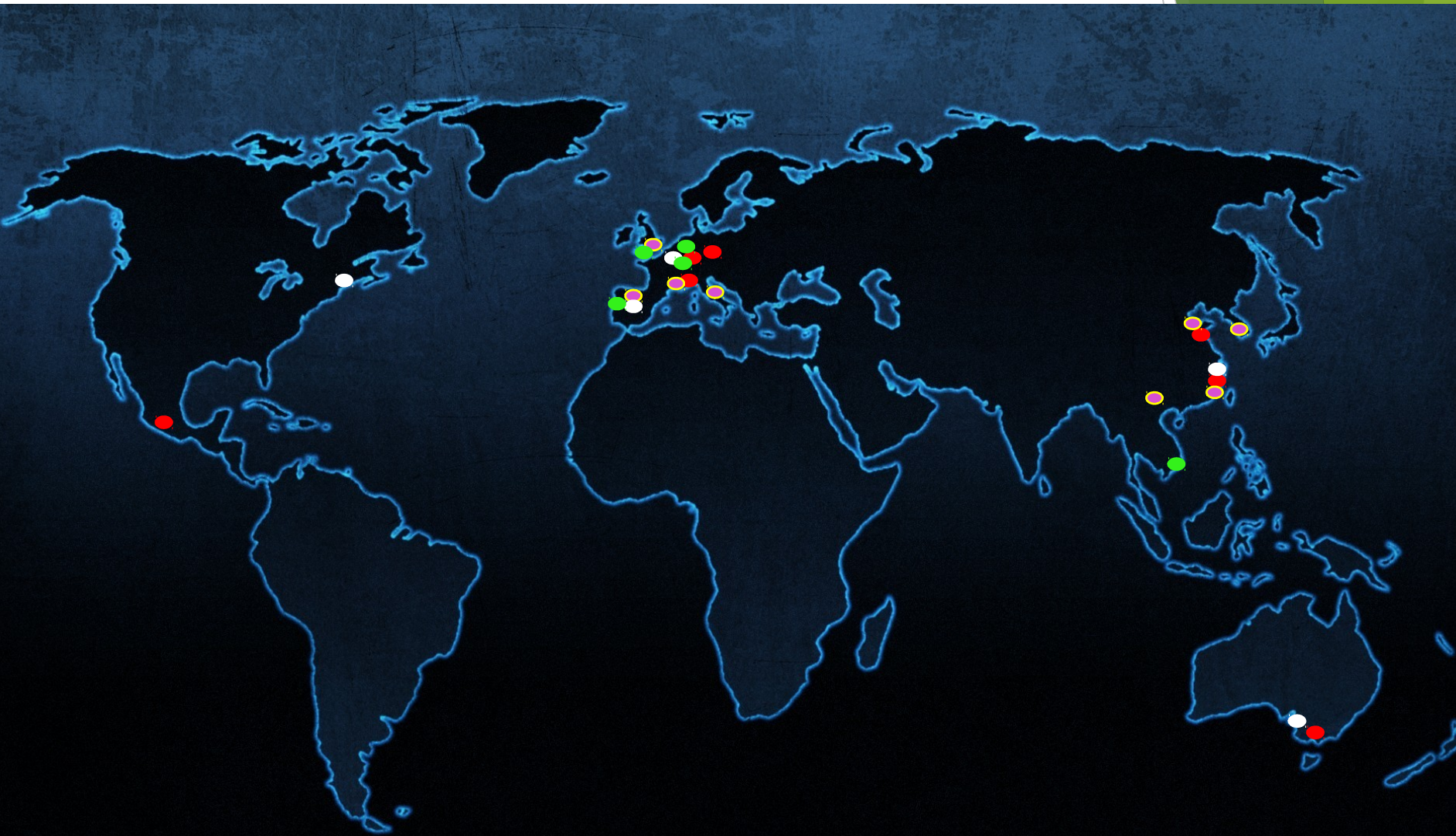
I PIN competition 2016

Evolution of attendance

- ▶ Number of teams completing the competition
- ▶ (+ withdrawn, no-show, off-track)

	Phone	PDR	Off-site	Robot
2014	7 (+3)	0 (+1)	-	-
2015	4 (+1)	2 (+1)	4 (+0)	-
2016	6 (+1)	6 (+1)	5 (+1)	2 (+4)

IPIN 2016 competitors



IPIN competition 2016

EvAAL evaluation criteria

- ▶ Accuracy based on point correspondence
 - ▶ Best suited for real-time applications
 - ▶ **Localisation error** is Euclidean distance between competitor's estimate and real position of **corresponding keypoint**
 - ▶ **Final score** is third quartile of the localisation errors
 - ▶ 15 m penalty for each floor error