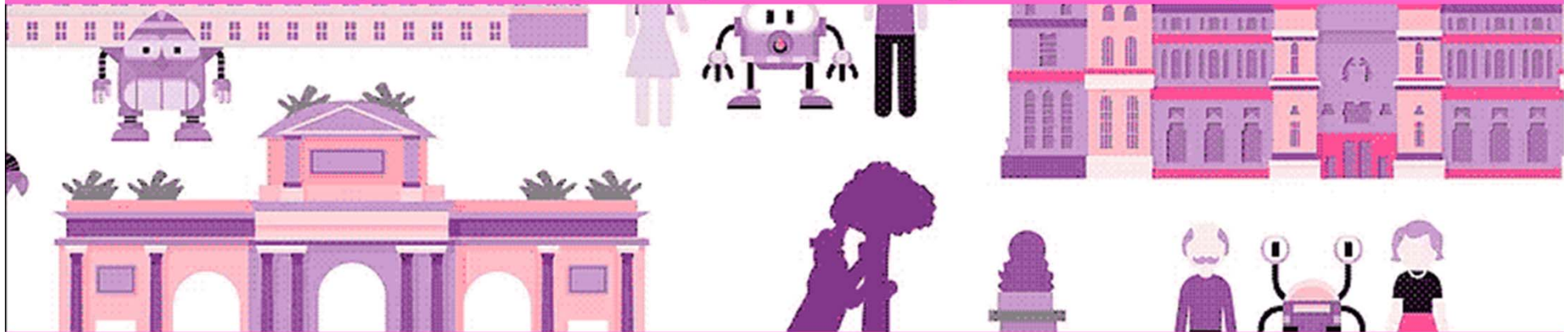


10th Workshop on Planning, Perception and Navigation for Intelligent Vehicles



MADRID 2018
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2018 IEEE/RSJ International Conference on Intelligent Robots and Systems

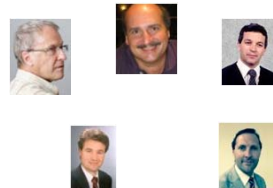
**Full Day Workshop
October 1st, Madrid, Spain**

**Research Director Christian
Laugier, INRIA,
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Christian.Laugier@inrialpes.fr,
<https://team.inria.fr/chroma/christian-laugier/>**

**Professor Philippe Martinet,
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<http://www-sop.inria.fr/members/Philippe.Martinet/>**

**Professor Urbano Nunes,
ISR/University of Coimbra,
urbano@deec.uc.pt,
<http://www.isr.uc.pt/~urbano>**

**Professor Christoph Stiller,
Karlsruher Institut für
Technologie
stiller@kit.edu
http://www.mrt.kit.edu/mitarbeiter_stiller.php**

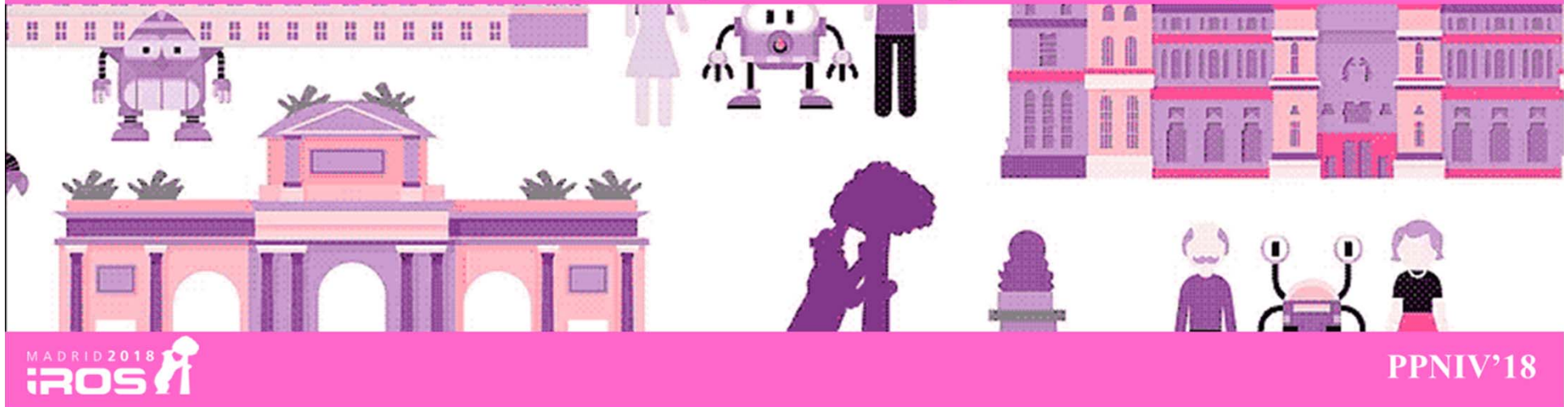


**Professor M.A. Sotelo,
University of
Alcalàmiguel.sotelo@uah.es,
www.invett.es/sotelo**

This workshop is organized in the framework of the IEEE Robotics and Automation's Technical Committee on: Autonomous Ground Vehicles and Intelligent Transportation Systems

TC-chairs: P. Martinet, C. Laugier, C. Stiller

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Session I: Deep Learning 9:00 – 9:40

Chairman: *P. Martinet (Inria, France)*

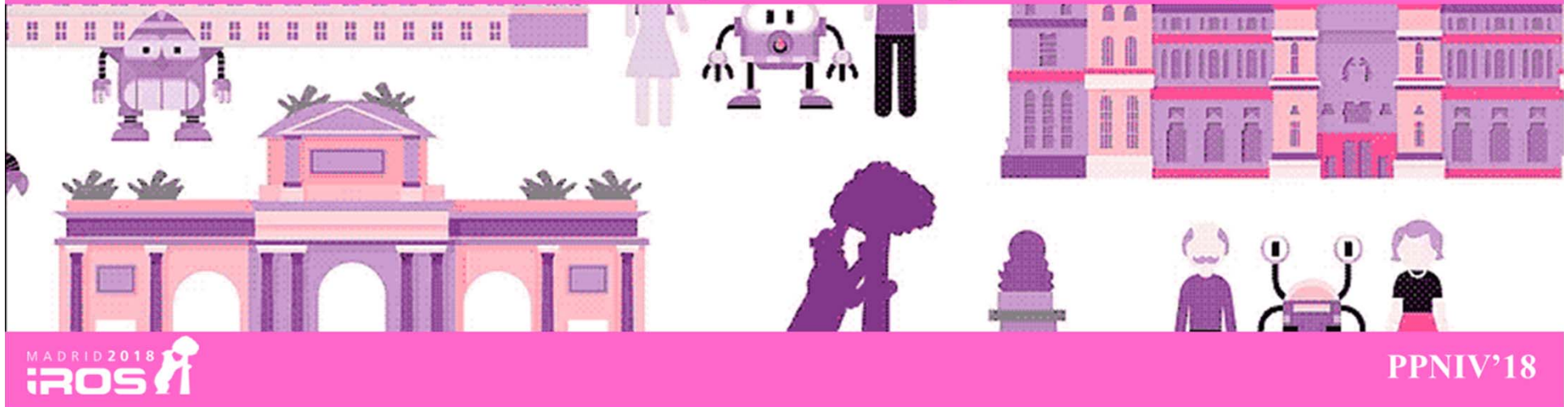
Title: ISA2: Intelligent Speed Adaptation from Appearance 9:00-9:20

Authors: C. Herranz-Perdiguero and **R. J. Lopez-Sastre**

Title: Classification of Point Cloud for Road Scene Understanding with Multiscale Voxel Deep Network 9:20-9:40

Authors: **X. Roynard** and J.E. Deschaud and F. Goulette

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Session II: Navigation, Decision, Safety 9:40 - 11:00

Chairman: *C. Laugier* (INRIA, France)

Title: Towards Fully Automated Driving: Results and Open Challenges in Intelligent Decision Making, Planning, and Maps 9:40-10:20

Keynote speaker: Maucher Dominik (Bosch, USA)

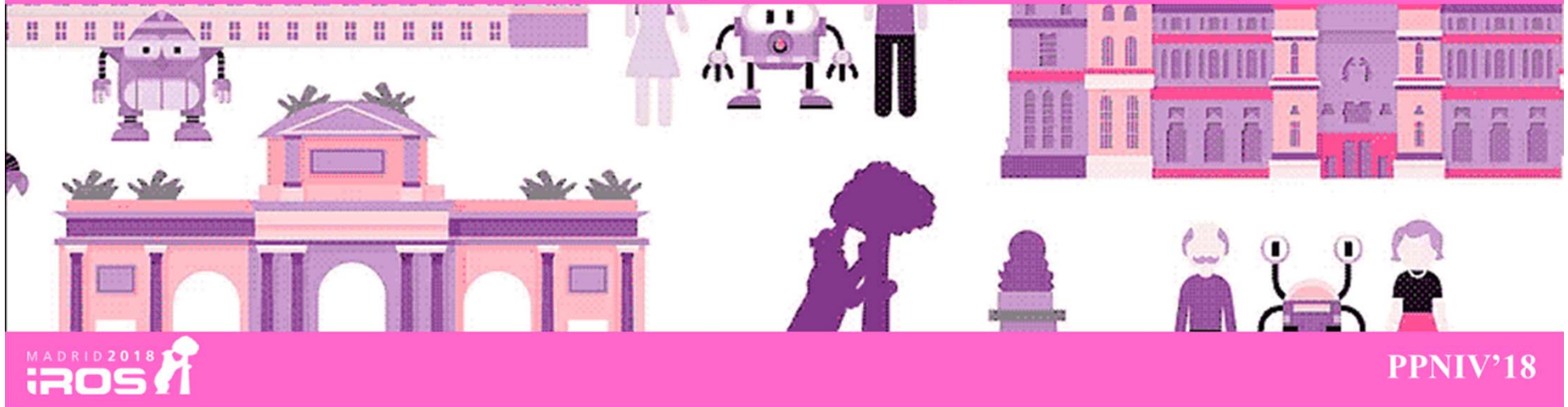
Title: Statistical Model Checking Applied on Perception and Decision-making Systems for Autonomous Driving 10:20-10:40

Authors: J. Quilbeuf, **M. Barbier**, L. Rummelhard, C. Laugier, A. Legay, B. Baudouin, T. Genevois, J. Ibanez-Guzman, and O. Simonin

Title: Automatically Learning Driver Behaviors for Safe Autonomous Vehicle Navigation 10:40-11:00

Authors: **E. Cheung**, A. Bera, E. Kubin, K. Gray, and D. Manocha

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Session III: Perception 11:30 12:50

Chairman: **Alberto Broggi** (Ambarella, USA)

Title: SoC for ultra HD mono and stereo-vision processing 11:30-12:10

Keynote speaker: Alberto Broggi (Ambarella/USA, VisLab/Italy)

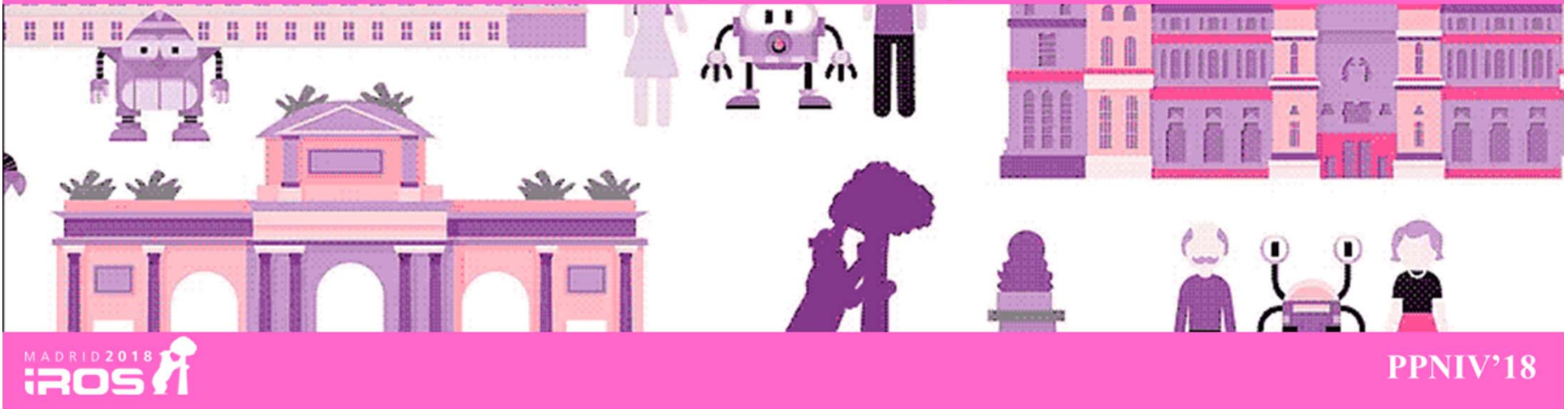
Title: Intelligent feature selection method for accurate laser-based mapping and localisation in self-driving cars 12:10-12:30

Authors: **N. Hernandez**, I. G. Daza, C. Salinas, I. Parra, J. Alonso, D. Fernandez-Llorca, M.A. Sotelo

Title: LiDAR based relative pose and covariance estimation for communicating vehicles exchanging a polygonal model of their shape 12:30-12:50

Authors: **E. Héry**, P. Xu and P. Bonnifait

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Session IV: Interactive session (1) 14:00-14:30

Chairman: **U. Nunes** (ISR/University of Coimbra, Portugal), **P. Martinet** (Inria, France)

Title: Vehicle Detection in UAV Aerial Video

Authors: **H. Zhang**, **C. Meng**, P. Guo, X. Ding and Z. Li

Title: MOMDP solving algorithms comparison for safe path planning problems in urban environments

Authors: **J.A. Delamer** and Y. Watanabe and C. P. Carvalho Chanel

Title: On finding low complexity heuristics for path planning in safety relevant applications

Authors: **R. Krutsch**

Title: Enhancing the educational process related to autonomous driving

Authors: **N. Sarantinoudis**, P. Spanoudakis, L. Doitsidis and **N. Tsourveloudis**

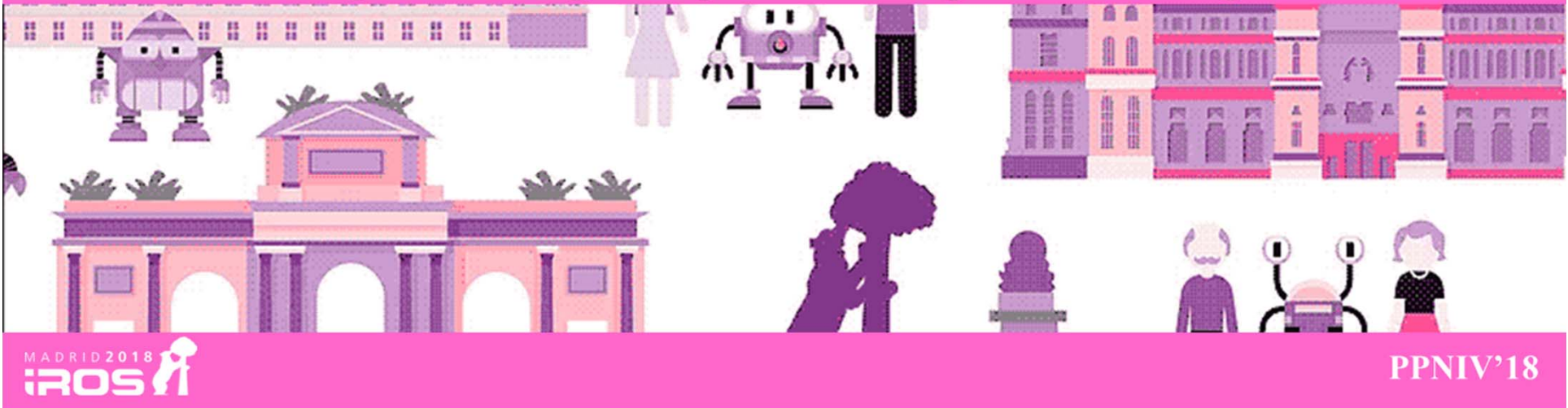
Title: CoMapping: Efficient 3D-Map Sharing: Methodology for Decentralized cases

Authors: **L. F. Contreras-Samame**, S. Dominguez-Quijada, O. Kermorgant and P. Martinet

Title: Single-View Place Recognition under Seasonal Changes

Authors: **D. Olid**, J. M. Facil and J. Civera

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Session IV: Interactive session (2) 14:30-15:00

Chairman: **U. Nunes** (ISR/University of Coimbra, Portugal), **P. Martinet** (Inria, France)

Title: Future Depth as Value Signal for Learning Collision Avoidance

Authors: **K. Kelchtermans** and T. Tuytelaars

Title: Automatic generation of ground truth for the evaluation of obstacle detection and tracking techniques

Authors: **H. Hajri**, E. Doucet, M. Revilloud, L. Halit, B. Lusetti, M.C. Rahal

Title: Autonomous navigation using visual sparse map

Authors: **S. Hong** and H. Cheng

Title: Socially Invisible Navigation for Intelligent Vehicles

Authors: **A. Bera**, T. Randhavane, E. Kubin, A. Wang, K. Gray, and D. Manocha

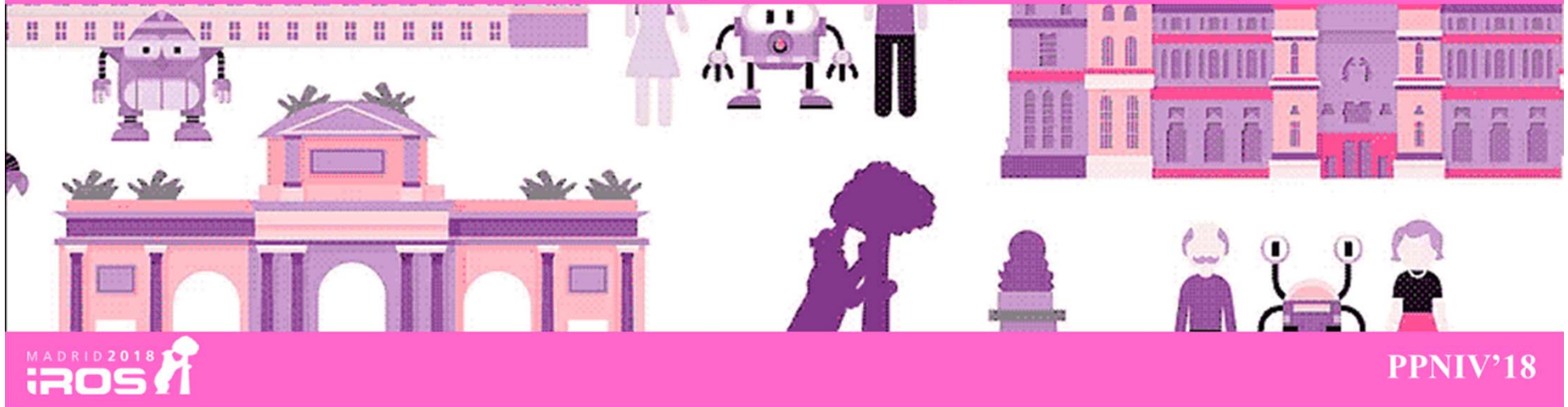
Title: An Egocubemap Based Algorithm for Quadrotors Obstacle Avoidance Using a Single Depth Camera

Authors: **T. Tezenas Du Montcel**, A. Negre, M. Muschinowski, E. Gomez-Balderas and N. Marchand

Title: DisNet: A novel method for distance estimation from monocular camera

Authors: **M. Abdul Haseeb**, J. Guan, D. Ristić-Durrant, A. Gräse

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Session V: Control – Planning 15:00 – 16:20

Chairman: **Miguel Angel Sotelo** (University of Alcalá, Madrid, Spain)

Title: Integration of Cooperative Services with Autonomous Driving 15:00-15:40

Keynote speaker: Jose Eugenio Naranjo Hernandez (Universidad Politecnica de Madrid, Spain)

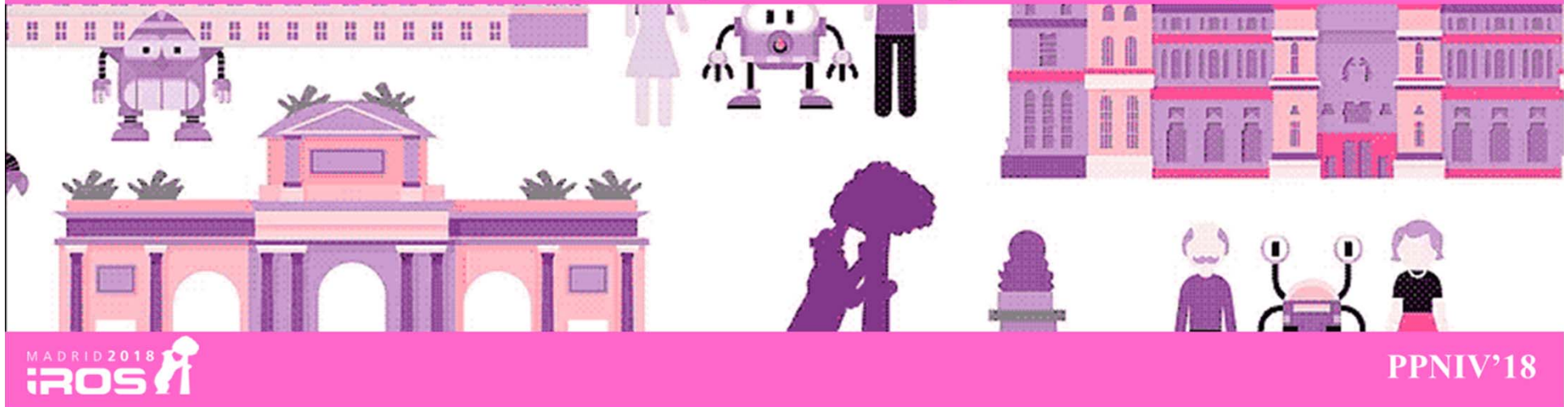
Title: Multi-Sensor-Based Predictive Control for Autonomous Backward Perpendicular and Diagonal Parking 15:40-16:00

Authors: D. Perez-Morales, O. Kermorgant, S. Dominguez-Quijada and P. Martinet

Title: Towards Uncertainty-Aware Path Planning for Navigation on Road Networks Using Augmented MDPs 16:00-16:20

Authors: L. Nardi, C. Stachniss

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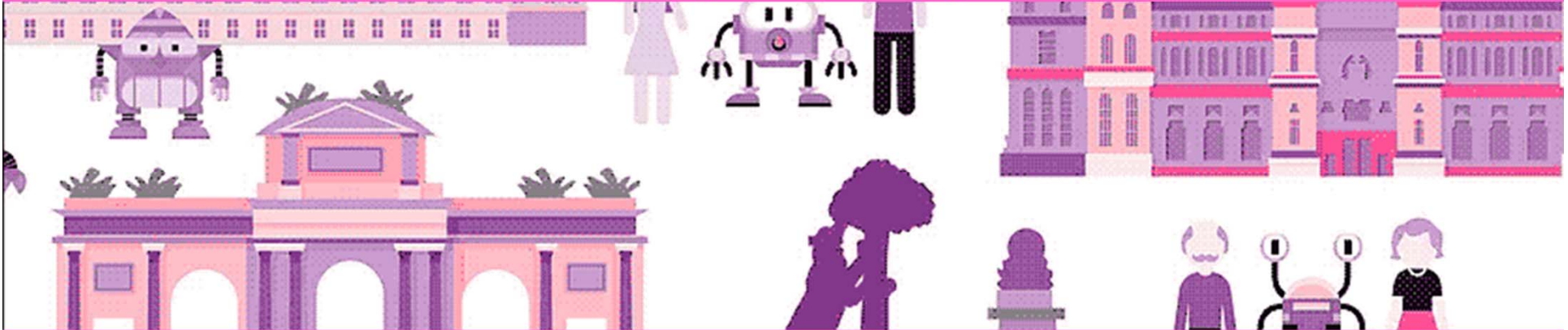
Round table: Robot taxis & Autonomous Shuttles 17:00:18-00

Chairman: Urbano Nunes (ISR/University of Coimbra, Portugal)

Participants:

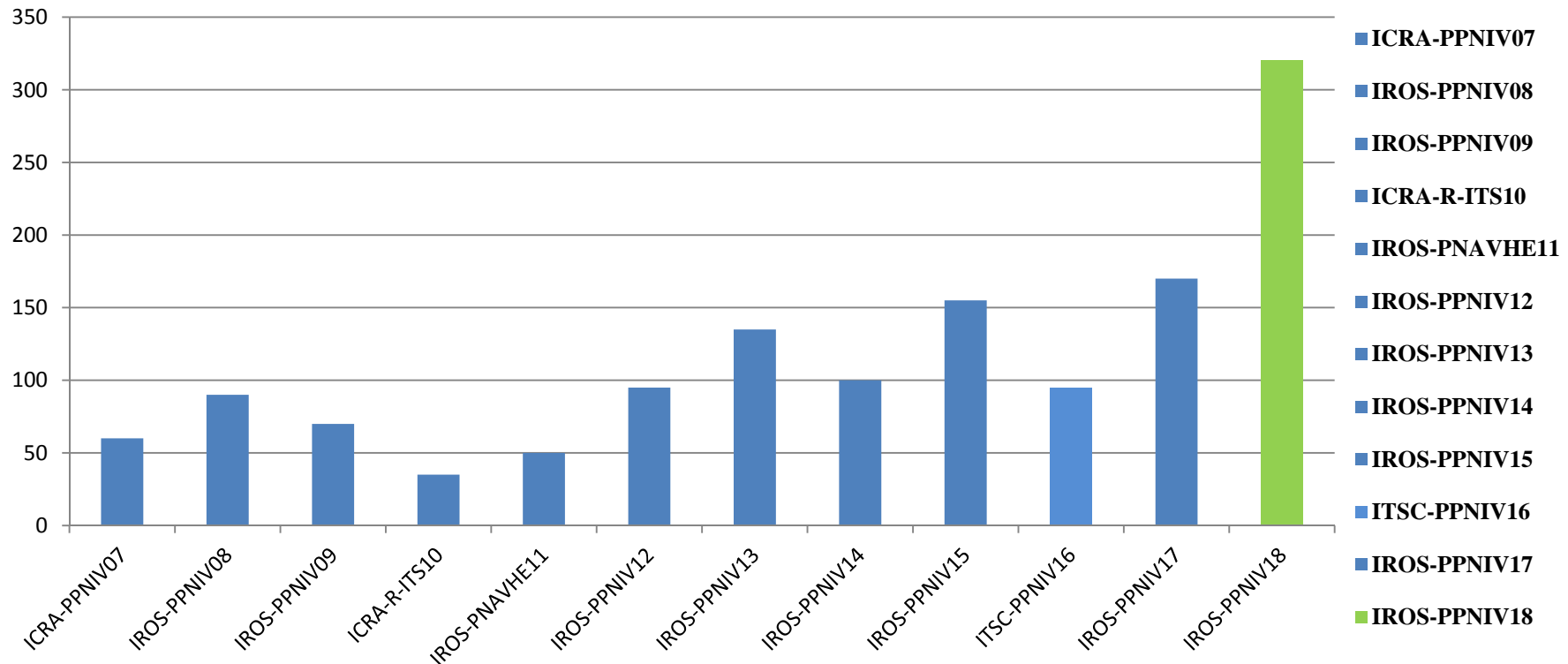
- **Robert Krutsch (Intel Deutschland GmbH, Germany)**
- **Moritz Werling (BMW, Germany)**
- **Nicole Camous (NavyaTech, France)**
- **Dominik Mauche (Bosch, USA)**

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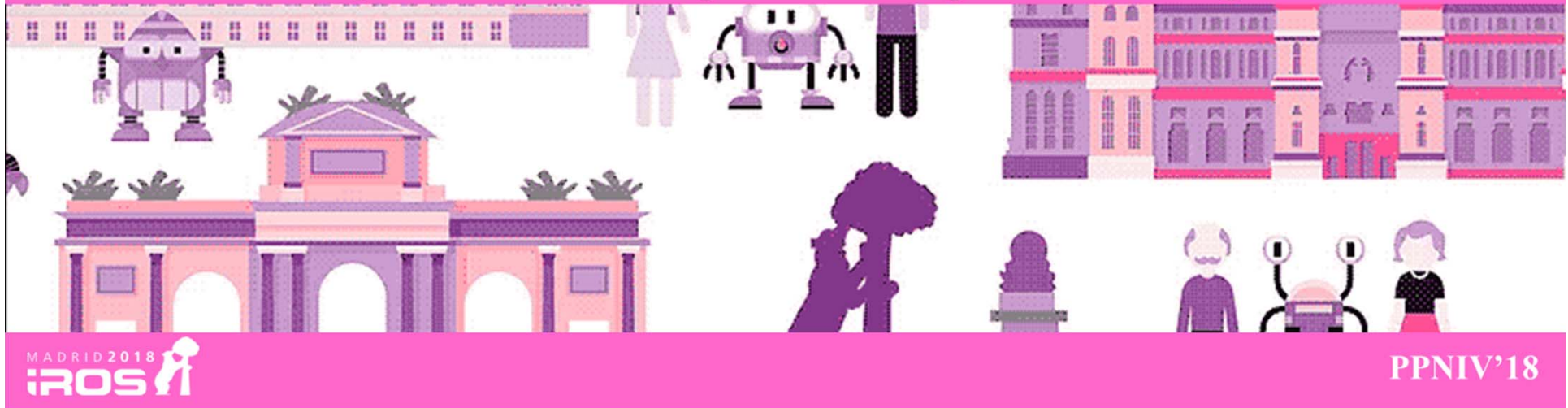


PPNIV'18

Attendees



10th Workshop on Planning, Perception and Navigation for Intelligent Vehicles



PPNIV18

- ✓ Over 320 attendees → Submit and share your work through PPNIV workshops
- ✓ Great Keynotes and Presentations
- ✓ Presentations, papers, and workshop proceedings will be on PPNIV18 webpage

→ <https://project.inria.fr/ppniv18>

Next events:

- ✓ Special issue on Perception and Decision for Autonomous Vehicles in IEEE Trans IV
- ✓ New PPNIV'19 will be submitted to IROS'19 (11th edition...)

Announcements:

- ✓ Looking for Junior Co-chair for the TC (contact us)
- ✓ Join the Mailing list by using the website of the TC

<http://www.ieee-ras.org/autonomous-ground-vehicles-and-intelligent-transportation-systems>