

COOPERATIVE, CONNECTED AND AUTONOMOUS DRIVING

The purpose of this course is to provide an overview of the state of the art and the key enabling technologies in the field of cooperative, connected and autonomous vehicles, such as positioning systems, environment perception and inter-vehicle communication.

➤ **Course duration: 10 contact hours**

➤ **Dates: 28, 29 & 30 June 2023**

■ **Recommended background knowledge for students:**

- Basic engineering concepts
- Delivery mode: Face to face

Meet Our

INSTRUCTORS



Felipe Jiménez is full professor at UPM and Head of the Intelligent Systems Unit of INSIA-UPM. He is leading several national and international research projects in the field of Intelligent Transport Systems, connected and autonomous driving and assistance systems. He is author and co-author of six books, more than 15 book chapters and 70 journal papers.



José E. Naranjo is associate professor at the School of Computer Science, UPM in 2005 and was a 1999 to 2007 he was a member of the Spanish National Research Institute Autopia Group from 1999 to 2007. His research interests include AI, V2X communications, C-ITS, usability and accessibility and CCAD.

LEARNING GOALS

■ **Learn**

Basic technology



Connected and autonomous driving

■ **Get acquainted with**

Principal effects, challenges and experiences



Connected and autonomous vehicles

SYLLABUS

MODULES

I. Autonomous driving and architecture of autonomous vehicles

I. Positioning systems and digital maps
II. Detecting the scenario around the vehicle
III. Decision making in autonomous vehicles

I. Communications for connected driving. V2X communications

I. Non-technical effects and future trends
II. Industry talk: Planning connected and automated vehicles

Meet Our

INDUSTRY SPEAKER



Cecilia Medina holds an MA in Political Science and Sociology, an MA in Foreign Trade and International Relations and is a specialist in promotion and management of international R&D projects. She has been working at the Spanish Association of Automotive Suppliers –SERNAUTO– since 2006. She acts as coordinator of the Spanish Automotive and Mobility Technological Platform and represents Spain in the European Road Transport Research Advisory Council.