



“SMART GRIDS AND SMART CITIES” INTERNATIONAL SUMMER SCHOOL 6-8 June 2017 - Barcelona

DAY 1: SMART CITIES

TABLE 4: IMPLEMENTATION OF THE SMART CITY CONCEPT

Advanced infrastructure for smart lighting urban illumination. Asunción Santamaría, Research Centre for Smart Buildings and Energy Efficiency - Universidad Politécnica de Madrid (CeDInt-UPM).



Asunción Santamaría Galdón. MsC Telecomm. Engineer from Universidad Politécnica de Madrid (UPM) in 1989. Ph.D in Telecomm. Engineering from UPM in 1993. She obtained the UPM’s Special Award of Doctoral Thesis in 1994. Since 1994, she is Associate Professor in the Telecommunication School of UPM.

Asunción has extensive experience in management of research activity, serving as Academic Secretary of the E.T.S.I. Telecommunication of UPM from 1998 to 2002, Deputy Director in educational area (2002-2003) and Director of CeDInt-UPM since 2005.

Her research career began in the discipline of wireless infrared optical communications, mobile communications and wireless systems, where she worked on more than 15 research projects funded by Spanish National Government, European Commission and European Space Agency. She co-authored a patent on a Distance Measurement system using a laser beam modulated with pseudorandom signals.

In 2002 she joined the Optics Engineering UPM Group with Professors Miñano and Benitez. She reconciles her research activity with the direction of CeDInt-UPM Center since 2005. As director of CeDInt, she creates two new research lines, dealing with ICT for Energy Efficiency and Internet of Things and Virtual Reality and Visualization.

CeDInt-UPM employs more than 60 researchers whose activity is supported by more than 50 R&D projects in collaboration with industry. In the field of ICT for Energy Efficiency, it is highlighted the development and launch of BATNet, an IoT solution based on standard OpenSW and OpenHW, available to developers. BATNet solution comprises a family of sensors and actuators based on IPv6 for energy management of buildings and infrastructure. BATNet Middleware Platform integrates ontologies and the OSGI standard for management of infrastructures (homes, buildings, industries and urban illumination systems). In the area of virtual reality and visualization, she has directed numerous projects aimed to create 3D interactive immersive environments, 3D television and, most recently, in visualization of big data.

Asunción is very active in the processes of exploitation and transfer of knowledge of those areas to the different business players in order to revert to society CeDInt-UPM research activity results. She has participated in 93 research projects funded by companies and public regional, national and European bodies. She is the author of 17 articles in refereed journals and 11 books. She also has 48 publications in national and international conferences. She has been a reviewer of scientific journals (Technical Reviewers Staff) of the IEEE Communications Society and she has participated as evaluator of research projects for PGIDIT of the Directorate General of I + D + i of the Xunta de Galicia. She has been mentor and Jury Member of IBM SmartCamp 2013 and 2015. Asunción has been representative of the European Platform of Universities engaged in Energy Research (USA/EUPT) in the Working Group of the European Strategic Energy Technology Plan (SET-Plan) Integrated Roadmap of the European Commission.