

Cognitive cities: beyond the smart city concept

Special Session on

Francisco Falcone Institute for Smart Cities. Universidad Pública de Navarra Francisco.falcone@unavarra.es



Full Professor with the Department of Electrical, Electronic and Communication Engineering, Public University of Navarra, where he leads the Smart Cities Institute. He works on contextual and interactive environments solutions, through the integration of heterogeneous wireless communications networks. He is also a Distinguished Visiting Professor with the Tecnologico de Monterrey, Mexico.

Name and affiliation of organizers:

Iyad Dayoub

INSA Hauts-de-France & Univ. Polytechnique Hauts-de-France iyad.dayoub@uphf.fr



Senior Member, IEEE. He is currently а Professor of communications engineering. His current research activities at IEMN, Université Polytechnique Hauts-de-France (UPHF) and INSA H-d-F are focused on wireless communications, high-speed communications, cognitive radio, and hybrid radio-optic technologies.

Jose Rabadan IDeTIC-Universidad de las Palmas de Gran Canaria Jose.rabadan@ulpgc.es



Full Professor and a Researcher attached to the IDeTIC University Institute. His research interests include the field of wireless optical communications, visible light communication systems, and high-performance coding and modulation schemes and channel estimation techniques for OCC. He has been also involved in several projects related smart tourism destination design and implementation.

Scope of the session

The evolution of smart cities has been gradual, mainly based on collect electronic data from and about people and infrastructure to improve efficiency and quality of life. The next step forward is the development of cognitive cities (CC), proactive and predictive instead of merely reactive. In a cognitive city, there is continuous interaction between technology and residents, vehicles, public services, and infrastructures. The city is then conceived as a living, adaptive body that not only "knows", but "learns" dynamically to increase parameters as sustainability, safety, security etc. This concept involves not only communications networks but data processing, sensing & monitoring, IoT etc. as well as sociological, regulatory and security issues.

Prospective authors are invited to submit original and unpublished work on the following research topics related to this Special Session:

- Artificial Intelligence Theory and Technology Related to Cognitive City.
- Computer-Human Interaction
- User Interface Technology.
- Internet of Behavior
- 6G and IoT for urban environments
- Regulatory aspects of CC.
- Security on the frame of connected cities

- Joint Communication & sensing techniques
- Educational Technology and Strategy in CC.
- Social impact of AI in the frame of CC
- AI driven decision making processes
- Ethics implications of AI driven systems
- Environmental and sustainability AI driven strategies
- CC for Tourism Destinations
- CC Governance