

Workshop

Secure, Connected and Resilient Smart Cities

Organizing Projects	S4AllCities (https://www.s4allcities.eu/) BRAINE (https://www.braine-project.eu/)
Structure	2 h, 6 papers
Organizers	Aris Bonanos a.bonanos@exus.co.uk Silvia Fichera silvia.fichera@santannapisa.it

Recent innovations in the field of telecommunications and computer science enabled the transformation of the city to today's form.

The usage of interconnected smart devices , with the ability of sensing and elaborating data and then properly reacting to a situation, is one of the main characteristics of a future smart city.

This can be achieved thanks to the progress in the field of Artificial Intelligence and to the increasingly powerful devices available for sale (smart cameras, drones, smart road signs, self-driving cars, etc.). Smart devices are able to process collected data locally faster than they were able to in the past.

The increasing usage of software, and communication networks, increases the interest on cyber security to protect and prevent attacks to the network itself, to protect collected data and the access to the devices.

The projects S4AllCities and BRAINE are together in the organization of the "Secure, Connected and Resilient Smart Cities" workshop hosted during the IEEE MeditCom 2021.

S4AllCities (Smart Spaces Safety and Security for All Cities - <https://www.s4allcities.eu>) project started in September 2020. The project integrates advanced technological and organizational solutions in a market oriented unified Cyber – Physical Security Management

framework, aiming at raising the resilience of city infrastructure, services, ICT systems, IoT and fostering intelligence and information sharing among its security stakeholders. S4AllCities centers around three modular yet interconnected digital twin sub-systems designed to ingest large amounts of data from edge-computing sensors deployed around the Smart Cities, which appropriately fuse the information received to establish recommended courses of action and present timely, concise, actionable information to the relevant operators.

BRAINE (Big Data and Artificial Intelligence at the Edge - <https://www.braine-project.eu/>) project started in May 2020. The project aims at enhancing edge computing with the capability of natively AI, instead of relying on the cloud. The foreseen architecture is not only a matter of software. To add computational capabilities to the edge means adapting the hardware to manage big data processing and AI. The BRAINE project's overall aim is to boost the development of the Edge framework and, specifically, energy efficient hardware and AI empowered software systems, capable of processing Big Data at the Edge, supporting security, data privacy and sovereignty. One of the scenarios in which BRAINE wants to demonstrate the edge computing enabling AI is the hyperconnected smart city.

The smart city is the confluence of the two projects. Both projects are focused on boosting the usage of edge computing to provide advanced services to the population. Main application will be in predicting, anticipating and managing changes in the city for examples during public events, emergency situations or crowd management.

Topics of Interest

This workshop seeks to attract high quality contributions covering both theory and practice in the field of security and edge computing in the hyperconnected smart city. In particular, the topics of interest include, but are not limited to, the following areas:

- Cyber security application for smart cities;
- Security, privacy and data integrity at the edge;
- AI/ML at the edge;
- Cyber security platforms and architectures for digital services;
- Machine learning, big data, network analytics;
- Secure runtime environments, including trustworthy systems and user devices;
- Orchestration and Automatic Configuration of security functions;
- Security, trust and privacy for industrial systems and the IoT (including smart grids);
- Intelligent urban systems and infrastructure;
- Digital twin data and application