



Research activities

Smart city, cloud computing, IoT

Security and privacy

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Smart city, cloud computing, IoT

Sensing technologies

Mobile sensing, location-based services, single board computers (e.g. RaspberryPi and Arduino-based sensing)

City Information System

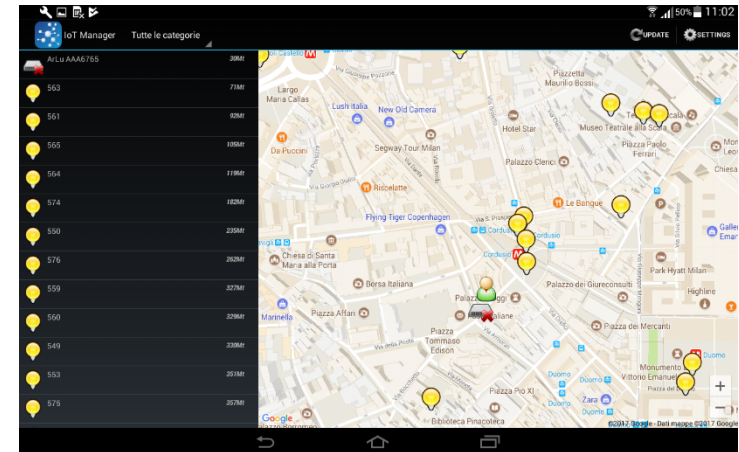
Innovation strategies for smart cities, complex information systems for urban and suburban environments.

Cloud computing platforms

Cloud computing platforms (e.g. Amazon Web Services), cloud computing architectures and design patterns.

Internet of Things

Distributed sensor networks, device management, NoSQL and Big Data solutions for IoT.



IoT Manager has been implemented as open source IoT platform for teaching and research purposes. The mobile client source code is free for use (LGPL) and can be reached here:

<https://github.com/smartcitylabunibo>

For more information:
smartcity.csr.unibo.it

Security and privacy

Probabilistic data structures

Probabilistic primitives for network security and privacy-preserving mechanisms.

Secure and privacy-preserving tracking and monitoring

Cryptographic protocols and hashing procedures for border controls, critical infrastructure protection, counter-terrorism.

Electronic machine-readable travel documents

Cryptographic protocols, identity management, public key infrastructures and inspection systems procedures for eMRTD.

Anonymous routing for IoT

Security and privacy strategies for the Internet of Things.



We have implemented the SBF data structure both in C++ and Python. All the code is free for use (LGPL) and can be reached here:

<https://github.com/spatialbloomfilter>

For more information:
sbf.csr.unibo.it