

Description of ITAC Areas

“Technology-Trend Areas”

Mobile Applications and Computing: Innovative research leading to solutions/products that efficiently use the currently available computational power of mobile phones, mobile applications with mobile-centric interfaces that span a variety of device types from different vendors, mobile consumer application platform tools and mobile enterprise platform tools.

Cloud Computing: Innovative research leading to solutions/products in building cloud environments and delivering cloud services with selected workloads, hybrid cloud computing which brings together external public cloud services and internal private cloud services, as well as the capabilities to secure, manage and govern the entire cloud spectrum.

Contextual, Social Analytics/Experience: Innovative research leading to solutions/products in context-aware computing and social interactions, which uses information about an end-user or object environment, activities, connections and preferences to improve the quality of interaction with that end-user or object. Special focus is given to context linking mobile, social, location, payment and commerce, and building skills in augmented reality, model-driven security and ensemble applications.

Business Analytics: Innovative research leading to solutions incorporating descriptive, predictive, prescriptive or decisive analytics making extensive use of data to drive business planning.

Internet of Things: Innovative research leading to solutions/products related to the Internet of Things (IoT), which describes how the Internet will expand as sensors and intelligence are added to physical items such as consumer devices or physical assets and these objects are connected to the Internet. Enabling technologies include: embedded sensors, image recognition technologies (especially in camera-equipped smart-phones and tablets), and near-field communication (NFC).

Gamification: Innovative research leading to solutions/products related to gamification, where game attributes are embedded into day-to-day business activities – interacting with the next generation in their native language, and tapping into an enthusiastic older generation that has embraced gaming.

Big Data: Innovative research leading to solutions that handle datasets whose volume, velocity, variety, and veracity is beyond the ability of typical database software tools to capture, store, manage and analyze.

Cognitive Computing: Innovative research leading to solutions/products using the notion of cognitive computing where computing systems are based on artificial intelligence, machine learning, natural language processing, among other techniques to interact seamlessly with humans.

Smart Machines ^{!NEW} : Innovative research leading to solutions/products wherein used machines/equipment are evolved from running automatic basic tasks to advanced self-learning sophisticated tasks, using machine learning techniques, machine-to-machine communications, cognitive analytics... etc.