The 2015 International Electro/Information Technology Conference (EIT 2015) was hosted by Northern Illinois University, Dekalb, Illinois, USA on May 21-23, 2015. One of the EIT 2015 themes is mobile/handheld computing. The subjects of handheld computing not only cover the ones of desktop computing but also include many new subjects such as location-based services and wireless and mobile networking. This issue includes outstanding papers selected from the Conference and they give new mobile perspectives different from the ones from traditional computing. Regular papers submitted to the Journal are also included. A brief introduction of each of the four articles is given next.

**Article 1. Cyber-Physical Platform Development for Multivariable Artificial Pancreas Systems:** This paper describes a distributed sensor platform for a new breed of artificial pancreas devices. In recent work, a multi-variable adaptive algorithm has been proposed which incorporates physical activity of the patients for accurate prediction and control of glucose levels. In order to facilitate this algorithm, the authors integrate a smartphone and multiple sensors including activity trackers and a glucose monitor into a distributed system. The proposed sensor platform provides real-time data access for the artificial pancreas control algorithm hosted on a remote device.

**Article 2. Meet your Users: In Situ Data Collection from Within Apps in Large-Scale Deployments:** Software used as a vehicle for large-scale user trials “in the wild” has become popular. So far, researchers have needed to hardcode survey items into the software
application studied, which is laborious and error prone. This paper discusses how these problems are addressed using TEMPEST, a platform for longitudinal in situ data collection. The authors illustrate the use of TEMPEST to study the deployment and real-world use of a tablet application called idAnimate; this application has been designed to support the creation of simple animations as design representations during the creative design process. The authors discuss how the tool has supported the gathering of data in over 4000 installations, both from a development and research perspective, and relate their experiences to current research perspectives on large-scale app trials.

Article 3. Networked Wireless Sensors, Active RFID, and Handheld Devices for Modern Car Park Management: Wireless Sensor Networks (WSNs) perform the following two steps: (i) spatially distributed autonomous sensor nodes are used to collect to physical conditions, such as temperature and humidity, and (ii) the collected data is passed through the network to a server. RFID (Radio-Frequency IDentification) device, consisting of a small chip and an antenna, serves the same purpose as a bar code. Other than providing a unique identifier for that object, it is able to carry more data, 2,000 bytes, than a bar code or magnetic strip does. This paper studies networked wireless sensors, actuators, RFID, and mobile computing technologies for modern car park management systems with sophisticated services over the emerging internet of things (IoT). The authors propose a scalable and low-cost car parking framework (CPF) based on the integration of aforementioned technologies. A preliminary prototype implementation has been performed, as well as experimentation of some modules of the proposed CPF. The results demonstrate proof of concept, and particularly reveal that the proposed approach for WSN deployment considerably reduces the cost and energy consumption compared to existing solutions.

Article 4. A Distributed Computing Algorithm for Deployment of Mobile Robotic Agents with Limited Sensing Ranges: This paper presents a distributed computing algorithm for an application of deploying a group of mobile robotic agents in a convex region. Each agent can be treated as an embedded system with its own sensors and actuators. Under the assumption that agents have limited sensing capabilities, the distributed computing algorithm is designed to make agents cover the convex region so that each member’s individual region, the space around them, is optimized. Each agent must accommodate its kinematic constraints and can only exchange information locally based on the range of the sensors equipped. The proposed algorithm utilizes Voronoi partitions to create individual subregions and directs each member toward the centroid of their subregion. The Voronoi partitions are updated with each iteration of the algorithm. Simulation results are provided to validate the proposed algorithm.

The editors thank the reviewers, authors, and the EIT 2015 personnel for their great help and contributions. Without them, this special issue would not be possible. In addition, this is the sixth year of the IJHCR. The Editor-in-Chief appreciates your supports and your submissions to the IJHCR are the greatest support for it.

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