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Special Issue on Distributed Smart Sensing for Mobile Vision
IEEE Sensors journal

Large scale imaging sensor networks are becoming increasingly important for a wide variety of real-world applications. Recent advances in camera hardware and communication technologies allow us to set up ad-hoc networks of stationary and mobile visual sensors. This creates new opportunities for gathering, analyzing and storing video data from distributed cameras. Concomitantly, it creates an urgent need to develop vision algorithms that take advantage of mobile sensors, such as cell phones, tablets, other consumer devices with embedded cameras, etc. Further, mobile sensors present an opportunity to develop algorithms that take into account the limited computational and memory resources available on these devices, their extreme mobility and limited connectivity, and the power constraints under which these tether-less devices operate. This work is interdisciplinary and lies at the intersection of image processing and analysis, sensor networks, embedded systems, and mobile devices. The challenge is to exploit constraints and opportunities arising in these disparate areas concomitantly to develop theoretically sound methods for a diverse range of applications.

High-quality original papers are solicited for this special issue. The published papers will either explore a new theory or application that brings ideas from two or more of the relevant fields together or develop a framework that may facilitate such confluence of ideas. The papers may address challenges to develop automated image processing and analysis techniques to integrate and interpret information from distributed multiple live video streams. In addition, in-depth, authoritative overview and tutorial papers are welcome. As such this issue will represent a state-of-the art of the emerging field of distributed cameras and mobile vision.

Potential topics include (but are not limited to):

- Signal and image processing for a network of smart cameras and/or mobile devices
- Distributed smart camera and network architectures
- Resource management in distributed camera networks
- Automatic reconfiguration of visual sensor networks
- Distributed cameras for multi-view analysis and 3D models
- Distributed cameras and mobile vision for smart environments
- Surveillance, tracking and recognition through networks of visual sensors
- Context-aware and power-aware visual sensor networks
- Applications of distributed cameras and mobile vision

Submission guidelines

All papers shall undergo the standard IEEE Sensors Journal peer review process. All manuscript must be submitted on-line, via the *IEEE Manuscript Central*^{TM} portal, see **http://sensors-ieee.manuscriptcentral.com**. When submitting, please indicate in the "Manuscript Type" roll down menu, and also by email to Ms. Alison Larkin, **a.larkin@ieee.org**, that the paper is intended for the "Distributed Cameras for Mobile Vision" Special Issue. Authors are requested to **suggest names of four qualified reviewers** for their manuscript in the space provided for these recommendations in *Manuscript Central*. For manuscript preparation and submission, please follow the guidelines in the *Information for Authors* at the IEEE Sensors Journal web page **http://www.ieee.org/sensors**.

Guest Editors

- Bir Bhanu, University of California at Riverside (USA), bhanu@cris.ucr.edu
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Schedule

- Manuscript submission due: March 1, 2014
- First round of reviews due: June 1, 2014
- Revised submission due: August 15, 2014
- Second review due and final decision: September 30, 2014
- Final manuscript due: November 1, 2014