

"Energy Informatics for Green Cities"

The Theme: Energy Informatics is emerging as a new and inter-disciplinary research field. The main goal is to tackle the future global warming, energy crisis, and climate change challenges by exploiting advanced ICT theories and tools to address energy-related problems. The scope of Energy Informatics includes the next-generation communications, networking, computing, sensing and control technologies (e.g., big data, machine learning, 5G, cloud computing, fog computing); and their applications in the energy sectors (e.g., smart cities, smart grid, electric vehicles, and PV systems). In the past decade, we have witnessed a rapid development and application of advanced informatics technologies (information, communications, and networking technologies) to realize sustainable smart cities, covering many successful examples such as green buildings, smart homes, distributed microgrid systems, and green transportation systems. When equipped with advanced ICT technologies, buildings and homes are able to significantly improve energy efficiency, reliability, and security in grid operations, while satisfying users' comfort, and thus benefitting all stakeholders, namely energy consumers, utility companies, and energy generators. Moreover, distributed microgrid systems facilitate the deep integration of renewable energy and promote an efficient, secure, and economic exploitation of renewable energy resources. The rapid development of informatics technologies also leads to the success of green transportation systems, driving an exponential growth in using electric vehicles. A variety of recent advanced informatics technologies play important and indispensable roles in green transportation systems, and enable the joint management of energy flows, information flows, as well as transportation flows. This special section solicits high quality and unpublished work on recent advances in energy informatics for green cities. We solicit papers covering the following topics of interest, but not limited to:

Advanced informatics technologies for green smart cities:

- Advanced information architectures (e.g., SDN, Cloud and Fog Computing) for green cities
- Advanced informatics techniques (e.g., IoT, NB-IoT, and LTE-V) for green cities
- Advanced cyber security (e.g., privacy preservation, authentication) for green cities
- Advanced computing and control (e.g., machine learning, and Big Data analytics) for green cities

Advanced informatics applications for green cities:

- Advanced smart buildings and smart houses
- Advanced energy trading and market
- Advanced informatics for renewable energy management and forecasting
- Next-generation wireless communications for green cities
- Smart grids/energy harvesting/energy-transfer assisted informatics networks

Papers discussing new application areas and the resulting new developments at the interface of information technology and automation are especially welcome. All contributions must focus on the use of information technology in automation. Results obtained by simulations must be validated in bounds by experiments or analytical results.

Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics <http://tii.ieee-ies.org/>
Please submit your manuscript in electronic form through Manuscript Central web site: <http://mc.manuscriptcentral.com/tii>. On the submitting page #1 in popup menu of manuscript type, select: SS on **Energy Informatics for Green Cities**

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Before submitting manuscript check the review criteria (<http://tii.ieee-ies.org/o/RC.pdf>).

Note: The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable:

Deadline for manuscript submissions
Expected publication date (tentative)

July 1, 2017
February 2018

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