BuildSys '19: The 6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation

Call for Papers

Built environments and critical urban infrastructure systems are the mainstay of our nation's economy, security, and health. These systems account for over half of society's energy consumption and their operations play an important role in sustainability, resilience, and people's quality of life. Advances in the effective integration of networked sensors, participatory and opportunistic sensing, data analytics, control techniques, and physical infrastructure are transforming our society. In the information age, unprecedented research at the intersection of cyber-physical infrastructures, human-centered systems, and smart cities has enabled us to tackle the major issues that cities face, e.g., mobility, safety, pollution, increased energy consumption, and traffic congestion.

Systems optimization, data analysis and modeling applied to the built environment by leveraging innovative techniques for acquisition, integration, and analysis of big and heterogeneous data sources from sensors, devices, vehicles, buildings, and human are particularly important in improving our society. These systems represent the foundation for emerging "smart cities".

The 6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation (BuildSys 2019) will be held November 13-14, 2019 at Columbia University in New York, USA. This year a subset of the best papers in the ACM BuildSys proceedings will be fast tracked to the ACM Transactions on Sensor Networks with minor revisions, upon authors' agreement.

BuildSys is the premier conference for researchers and practitioners working to develop and optimize smart infrastructure systems that are driven by sophisticated sensing, computing, data analysis, operational analytics, and control functions. We invite original contributions in all emerging domains that leverage information-driven systems to further move the built environment toward smarter operations. Topics of interest include but not limited to the following:

- Improved user interfaces to the built environment and civil infrastructure;
- Infrastructure operational analytics
- Sensing and control for managing urban infrastructure systems;
- Novel sensor methodologies, techniques, and tools;
- Security, privacy, safety, and reliability in built systems;
- Sensing and control of electrical, gas, and water loads;
- Localization and contextual computing for increased human-infrastructure interactions;
- Modeling, simulation, optimization, and control of heating, cooling, lighting, ventilation, water usage, and other resource flows in built environments;

- New sociotechnical systems for innovative applications and services to enable more livable, workable, sustainable, and connected communities;
- Sensor systems and applications that enhance energy efficiency, energy reliability, durability, and comfort;
- Systems that integrate infrastructure with the smart grid to offer demand response and ancillary services;
- Distributed generation, alternative energy, renewable sources, and energy storage in buildings;
- Emerging standards for data collection, energy control, or interoperability of disparate devices or systems;
- Sensing, modeling, and predicting the urban heartbeat including sounds, movements, and radio spectrum;
- Human in the loop sensing and control for efficient usage of electricity, gas, heating, water;
- Long-lived and energy harvesting sensor systems;
- Scalable indoor localization and contextual computing;
- Empirical studies of city-scale wireless communications;
- Environmental Sensing;
- Vehicle technologies, traffic, and sustainable mobility.

Paper Types

We solicit Three types of original submissions:

- Regular papers for oral presentation (10 pages)
- Notes papers for oral presentation (4 pages)
- Abstract papers for short oral and optional poster presentations (2 pages)

Notes papers are 4-page papers intended to discuss preliminary research results, advocate new research directions, describe public software or datasets, or present short projects that do not warrant a 10-page paper. Notes papers serve, in part, to encourage younger researchers and research teams entering this field of research to share their work. We also encourage Notes paper submissions from industry participants that may not be able to devote resources to a full paper. While Notes papers are not expected to have extensive evaluations, they will be reviewed based on the novelty of their ideas, potential for impact, and quality of presentation.

This year we will also have abstract only papers, where the presentation will include a very short oral and an optional poster presentation. The abstract papers will be reviewed by a subset of reviewers and focus on the novelty of the ideas and to encourage new topic areas in BuildSys.

Submission Guidelines

Submitted papers must be unpublished and must not be currently under review for any other publication. Submissions must be full papers, at most 10 single-spaced US Letter (8.5" x 11") pages, including figures, tables, references, and appendices. Submissions for Note papers must be at most 4 single-spaced US Letter (8.5"x11") pages, including figures, tables, references, and appendices. Submissions for Abstract papers must be at most 2 single-spaced US Letter (8.5"x11") pages, including figures, tables, references, and appendices. All submissions must use the LaTeX (preferred) or Word styles found here. Authors must make a good faith effort to anonymize their submissions by (1) using the "anonymous" option for the class and (2) using "anonsuppress" section where appropriate. Papers that do not meet the size, formatting, and anonymization requirements will not be reviewed. Please note that ACM uses 9-pt fonts in all conference proceedings, and the style (both LaTeX and Word) implicitly define the font size to be 9-pt. Please refer to the publication chair's Note as well as the User Guide of the new class. Accepted submissions will be available on the ACM digital library on the first day of the conference.

Submission Link

All papers must be in Adobe Portable Document Format (PDF) and submitted through the web submission form.

For notes papers, the submission site has a checkbox called "Notes papers." Those who submit notes papers need to check this box to indicate their paper types.
For abstract papers, the submission site has a checkbox called "Abstract papers." Those who submit abstract papers need to check this box to indicate their paper types.

Important Dates

- Abstract Registration: June 15, 2019, AOE
- Paper Submission: ~~June 22, 2018, AOE~~ June 29, 2018, AOE. (No further extension will be granted)
- Paper Notification: August 1st, 2019, AOE.

** For the abstract registration, you only need to enter the title of the paper, the list of authors and their email addresses, the PC conflicts, and a brief abstract (~150-250 words). After registering the paper's abstract, you will have one additional week to upload the PDF file of the paper (a 10-page Full paper, a 4-page Notes paper, or a 2-page Abstract paper).