

# BuildSys '23 Call for Papers - The 10th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation

Istanbul, Turkey - November 15-16, 2023

Built environments and critical urban infrastructures account for over half of society's energy consumption and are the mainstay of our nation's economy, security, and health. Advances in the effective integration of networked sensors, building controls, and physical infrastructure are transforming our society. In the information age, unprecedented research of cyber-physical infrastructures includes the acquisition, integration, and analysis of big and heterogeneous data, such as sensors, devices, vehicles, buildings, and humans, to tackle the major issues that cities face, e.g., air pollution, increased energy consumption, unsafe or unproductive human environments, and traffic congestion.

Systems optimization, data analysis, and modeling applied to the built environment are particularly important in improving our society, e.g., by increasing its sustainability and enhancing people's quality of life. These systems represent the foundation for emerging "smart cities".

To address these challenges, [the 10th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation \(BuildSys '23\)](#) will be held November 15-16, 2023, in Istanbul, Turkey. BuildSys is the premier conference for researchers and practitioners working to develop and optimize smart infrastructure systems that are driven by sophisticated sensing, computing, and control functions.

## Important Dates

- Abstract Registration\*: July 10, 2023, 23:59 [AOE](#).
- Paper Submission: July 17, 2023, 23:59 [AOE](#).
- Paper Notification: September 15, 2023.
- Camera Ready Submission: Early October 2023 - Exact date to be announced.

\* 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 (Approx. 150-250 words). After registering the paper's abstract, you will have one additional week to upload the PDF file of the paper (either a 10-page Full paper or a 4-page Notes paper).

## Targeted Topics

We invite original contributions with topics including, but not limited to, the following:

- Applications in smart and connected communities;
- Sensing and control for urban infrastructure systems;
- Novel sensor methodologies, techniques, and tools;
- Sensor meta-data modeling or characterization approaches;
- Sensing and control of electrical, gas, and water loads;
- Improved user interfaces to built infrastructure;
- Modeling, simulation, optimization, and control of heating, cooling, lighting, ventilation, water usage, and other resource flows in built environments;
- Sensor systems and applications that enhance the energy efficiency, reliability, or resiliency of the built environment;

- Sensor systems and applications impacting the health, wellness, safety, or comfort of humans in built environments;
- 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, and water;
- Sensor systems for reliable occupancy counting;
- Long-lived and energy harvesting sensor systems;
- Scalable indoor localization and contextual computing;
- Security, privacy, safety, and reliability inbuilt systems;
- Empirical studies of city-scale wireless communications;
- Environmental Sensing;
- Smart building and city technologies and initiatives in developing countries;
- Vehicle, mobility, and traffic-related technologies.

## Paper Types

We solicit two types of original submissions:

- Regular papers for oral presentation (10 pages max)
- Notes papers for oral presentation (4 pages max)

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.

During the review process, regular 10-page paper submissions that are promising but don't meet the requirements for that level could be accepted as a condensed 4-page notes paper if the authors agree. Rejected papers of both types also might be encouraged to convert to a BuildSys workshop or poster/demo submission based on the topic.

## 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. 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 this former 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 HotCRP platform for this conference: <https://buildsys23.hotcrp.com>.

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.