

BuildSys'21: The 8th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation

March 2021

Call for Papers

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 human, to tackle the major issues that cities face, e.g., air pollution, increased energy consumption 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".

The 8th ACM International Conference on Systems for Built Environments (BuildSys'21) will be held November 18-19, 2021 in Coimbra, Portugal.

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. We invite original contributions 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;
- 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 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;
- Sensor systems for reliable occupancy counting;
- Long-lived and energy harvesting sensor systems;
- Scalable indoor localization and contextual computing;
- Security, privacy, safety, and reliability in built systems;
- Empirical studies of city-scale wireless communications;
- Environmental Sensing;
- Vehicle technologies and Traffic.

This year, we are in particular interested in

- Smart building and city technologies and initiatives in developing countries
- COVID impact and response in smart infrastructure

Paper Types

We solicit two types of original submissions:

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

Important Dates

- Abstract Registration*: July 9, 2021, AOE.
- Paper Submission: July 16, 2021, AOE.
- Paper Notification: September 10, 2021.
- Camera Ready Submission: October 1, 2021.

* 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 (either a 10-page Full paper or a 4-page Notes paper).