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Special Issue on Advances on Indoor Air Quality Systems for Healthy and Sustainable Buildings

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Special Issue on Advances on Indoor Air Quality Systems for Healthy and Sustainable Buildings

Buildings that adhere to or perform above the most recent criteria for energy efficiency and carbon footprint are known as “green buildings.” Requirements for health-focused building design extend considerably where occupants' comfort, health, productivity, and well-being are essential in this design approach. A healthy building is an emerging concept that is being slowly realized by advancing sensors technologies and rapid expansion use and integration of the Internet of Things (IoT). This concept focuses on the health and well-being of occupants who spend more than 80% of their time in indoor environments such as homes, workplaces, schools, and malls. Indoor air quality research and development efforts are much more critical today, as contamination from sick-building syndrome and viruses like COVID-19 are commonly spread by recirculating indoor air. Within this context, indoor air quality directly impacts occupants' health and well-being. Emissions from furniture, cleaning supplies, paints, chemicals, pets, and cooking can negatively impact indoor air quality; however, assessing the impact and extent of each of these sources on indoor air quality presents significant challenges due to the multivariate nature of indoor air quality factors. Still, an integrated approach and tools that allow for quantitative evaluation and analysis are needed to provide an indoor air quality assessment.

We invite original research article submissions for this Special Issue on a variety of subjects that propose software and/or hardware solutions for a healthy building concept. All contributions will be peer-reviewed.

Topic Areas

- Application of IoT technologies in smart, healthy buildings
- Sensing and control of energy systems and indoor environments in buildings
- New development of low-cost sensors, local networks, and performance data visualization to enable smart, connected buildings
- Data analytics tools, artificial intelligence, and machine learning applications for smart, healthy buildings
- Smart buildings and data privacy challenges
- Equipment and systems for indoor air quality
- Impact of COVID-19 on the future design of buildings
- Development of standards and challenges for smart, connected homes
- Integrating outdoor air quality forecasting for indoor environment management in healthy buildings

Publication Target Dates

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|--------------------------------|-----------------------|
| Paper submission deadline | March 31, 2023 |
| Initial review completed | June 30, 2023 |
| Special Issue publication date | August 2023 |

Submission Instructions

Papers should be submitted electronically to the journal at journaltool.asme.org. If you already have an account, log in as an author to your ASME account. If you do not have an account, sign up for an account. In either case, at the **Paper Submittal** page, select the [ASME Journal of Engineering for Sustainable Buildings and Cities](#) and then select the Special Issue **Advances on Indoor Air Quality Systems for Healthy and Sustainable Buildings**.

Papers received after the deadline or papers not selected for inclusion in the Special Issue may be accepted for publication in a regular issue.

Guest Editors

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