

Call for Papers

The First ACM SIGEnergy Workshop on Fair, Accountable, Transparent, and Ethical (FATE) AI for Smart Environments and Energy Systems

<https://fatesys.github.io/2021/>

With the advent of IoT, high performance computing, and ubiquitous and smart sensing, the SenSys/BuildSys community is noticing a big shift in the adoption of data-driven black-box modeling (also referred to as AI) to solve problems in the space of smart environments and energy systems. As a result, these AI-enabled systems for smart buildings, smart cities, smart grids, electric transportation, among others are attaining better accuracy and efficiency numbers every year. However, these data-driven black-box solutions are rarely held accountable for the impact of their actions on the human in the loop which significantly impacts their real-world adoption. To truly conceptualize the idea of smart systems for everyone, it is critical to study AI-enabled smart environments and energy systems to enforce energy equity and ensure not just clean and resilient energy systems, but also make them affordable and accessible for all. The first ACM SIGEnergy workshop on Fair, Accountable, Transparent, and Ethical AI for Smart Environments and Energy Systems intends to bring together researchers from diverse backgrounds and discuss key issues, challenges, breakthroughs, and socio-economic impact in developing fair, accountable, transparent and ethical AI techniques for smart environments and energy systems.

The aim of this workshop is to create a platform for the SenSys/BuildSys community to discuss developing AI-enabled smart environments and energy systems that are not just accurate but also take responsibility for their actions. We invite submissions including, but not limited to:

- Studies exploring type of biases in energy-related data and their implications
- Challenges in collecting representative data for fair training of the AI models
- Studies on eXplainable AI (XAI) for smart environments and energy systems
- Interpretable and explainable ML/AI models
- Physics-informed ML for model interpretation
- Innovative ML/AI models and their key limitations pertaining to FATE
- Socio-economic impact analysis for energy equity
- Fair metrics for the evaluation of ML/AI methods
- Exploring visual analytics for bias evaluation in data and models

Submission guidelines

Submitted papers must be unpublished and must not be currently under review for any other publication. Paper submissions must be at most 4 single-spaced US Letter (8.5"x11") pages, including figures, tables, and appendices (excluding references). 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.

Submission link

All submissions must be in Adobe Portable Document Format (PDF) format through the HotCRP: <https://fatesys21.hotcrp.com/>.

Important dates

- Submission Deadline: September 3, 2021 (AOE)
- Notifications: September 24, 2021 (AOE)
- Camera-ready: October 1, 2021 (AOE)
- Workshop: TBA