



College of Architecture  
ILLINOIS INSTITUTE OF TECHNOLOGY



## **BUILDINGS, CITIES, AND PERFORMANCE**

**Simulation-based and data-driven methodologies in environmental research**

4<sup>th</sup> International Symposium of the PhD Program at IIT College of Architecture in collaboration with the Architectural Research Centers Consortium (ARCC)

November 15-17, 2019

S. R. Crown Hall, IIT Campus, Chicago, IL

The aim of this symposium is to bring together faculty and Ph.D. students, candidates, and recent graduates whose research interests lie with building and urban performance with respect to the sustainable built environments. The symposium is shaped around a central theme about *methodologies, methods and techniques* that are applied to investigate the performance of buildings and cities. The primary objective of the workshop is to create a platform for PhD students and faculty to share their ideas and experiences of using simulation-based and data-driven methodologies for solving current built-environment issues and report on complexities and challenges involved. This year's symposium will also include a panel discussion of PhD program directors and educators that aims to address current issues and challenges facing doctoral educations in architecture.

Topics of interest in this symposium include, but are not limited to, the following aspects of research on performance of buildings and cities:

- Research design and methodology development
- Data-driven and optimization techniques including machine learning and big-data approaches
- Performance simulation tools and techniques
- Performance with regard to thermal loads and comfort, energy, visual, air quality, airflow, embodied energy, and environmental impacts
- Design solutions (building envelopes, advanced materials and components, and smart technologies)
- Lessons from the past and historical insights on performance-based evolution of the built environment.
- Performances of buildings and cities beyond the environment

The IIT International PhD Symposium is an annual symposium held by the IIT College of Architecture that initiated in 2016 and operates on an annual-based cycle. This year's event is organized jointly with the Architectural Research Centers Consortium (ARCC). ARCC is an international organization committed to the expansion of the research culture and a supporting infrastructure in architecture and related design disciplines.

## INSTRUCTIONS

All submissions will be peer-reviewed. Selected full papers will be published in *Prometheus*, the journal of the IIT PhD program. Authors of accepted extended abstracts will be invited to present their papers at the symposium. Those unable to travel to Chicago can present via Skype. The proceedings of the previous (2018) symposium is expected to be published in summer 2019.

**Extended abstracts:** Please use the template to prepare a 1500-word extended abstract and submit it via the submission link by July 31, 2019. The extended abstract should communicate research problem, objectives, methods and key findings.

**Revised extended abstract:** The authors of accepted extended abstracts will be invited to submit a revised extended abstract by September 1, 2019 via the online submission system and present their research in the symposium.

**Posters:** Doctoral students are also encouraged to submit a poster. Please submit your submission via the online submission system by July 31, 2019.

**Final papers:** The authors of presented papers will be asked to submit a full paper after the symposium for publication in the new journal of the IIT PhD program.

**Submission link:** <https://www.conftool.net/IIT-ARCC-PHD>

## SCHEDULE

Extended abstract submission deadline: July 31, 2019

**Notification of decision for inclusion in the program: August 15, 2019**

Final extended abstract submission deadline: September 1, 2019

Poster submission deadline: September 1, 2019

Registration: Starting in early September, 2019

Opening event: November 15, 2019

Doctoral education and research panel: November 15, 2019

All-day paper sessions: November 16, 2019

Chicago architecture tour for symposium participants: November 17, 2019

## REGISTRATION

Registration fee for students with accepted extended abstracts: \$40

Complimentary breakfast and lunch will be served during the symposium.

A limited number of student travel grants are available to support participation of graduate students with accepted extended abstracts. To apply for travel grants, email your CV to [arch.phd.symp@iit.edu](mailto:arch.phd.symp@iit.edu) by August 31, 2019.

## STEERING COMMITTEE

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Faculty of Architecture, Karlsruhe Institute of Technology

### **Julian Wang, PhD**

Department of Architectural Engineering, Pennsylvania State University

## **VENUE**

The symposium will be held in the S. R. Crown Hall at IIT Campus in Chicago, IL, USA.

## **CONTACT**

All questions about submissions should be emailed to [arch.phd.symp@iit.edu](mailto:arch.phd.symp@iit.edu).