

# PART III PHD PROGRAM OVERVIEW 2019—20



View of Siegel Field (Hoerr Schaudt  
Landscape Architects). Photo courtesy of  
Professor Ron Henderson, Director MLA+U.



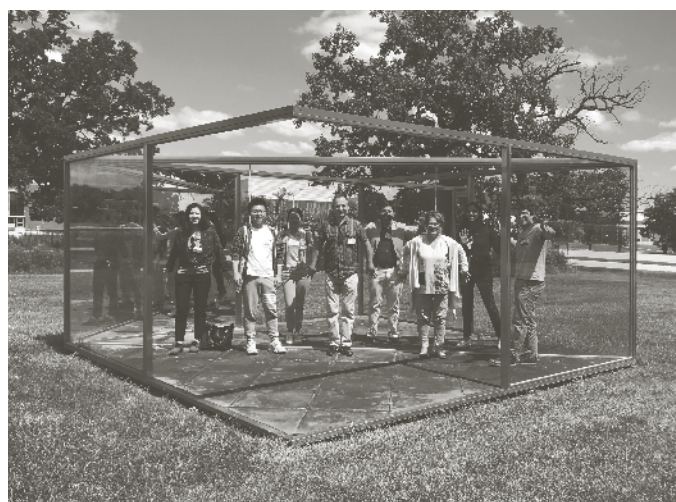
# PHD PROGRAM OVERVIEW 2019–20

## A Year in Perspective

Over the course of the 2019–20 academic year, the PhD Program experienced a transition as Professor Michelangelo Sabatino returned as director. Under his directorship, the PhD program engaged in several academic activities and launched the journal of the PhD program during the annual symposium. This journal contains the research presented during the symposium. We hosted our weekly Architecture Research Forum lecture series with a wide range of topics from history and theory to the technologies of the built environment to help students engage in intellectual discussions and gain theoretical and applied knowledge for developing their research. This year, we hosted guest scholars with different research and professional backgrounds to present their research on topics, including: Urban Design, Nature, Health; Creativity in the Selection of Structural Systems for Tall Buildings; Digital Virtual Sacred Architecture; and Building Leisure Space in the Black Metropolis: Public Park Infrastructure on Chicago’s South Side.

### Curator

Mehdi Ashayeri, PhD Candidate  
and Administrative Assistant  
*Illinois Institute of Technology*





PhD student field trip to Argonne National Lab, 2019. Inside of Dan Graham's Pavilion / Sculpture for Argonne, 1978-1982.



# ACADEMIC PROGRAMMING HIGHLIGHTS

## Architecture Research Forum

Our PhD program's weekly Architecture Research Forum lecture series is meant to provide our students and faculty with opportunities to learn from and interact with researchers from a host of different backgrounds, and local, national, and international institutions. Each year the program dedicates two consecutive weeks in the Spring semester for PhD students to present their dissertations and receive feedback on their work from peers and attendees. In Spring 2020, for the first time, we hosted "We Culture: Multidisciplinary PhD Forum," curated by PhD candidate Anat Mor-Avi. Students were invited from four PhD programs at IIT which include interdisciplinary research work related to architectural studies: College of Architecture; Institute of Design; Department of Civil, Architectural, and Environmental Engineering; and Lewis College of Human Sciences.

Here, we provide a list of guest speakers who presented during the Fall 2019 and Spring 2020 semesters. All ARF lectures are held at 3410 S. State, a Ludwig Mies van der Rohe-designed building immediately south of S. R. Crown Hall.

Nota Bene: Due to the interruption of the semester, the speakers scheduled for March 26 onward have been rescheduled for Fall 2020.

### FALL 2019

#### **1 – August 22 "Creativity in the Selection of Structural Systems for Tall Buildings"**

Joseph Colaco, Professor and Visiting Scholar  
*Gerald D. Hines College of Architecture and Design,  
University of Houston*

#### **2 – September 5 "Mobilizing the High Line"**

Ian Trivers, Visiting Assistant Professor of Urban Design  
*Washington University in St. Louis*

#### **3 – September 12 "The Space Within: Interior Experience as the Origin of Architecture"**

Robert McCarter, Author, Architect, and Ruth and Norman Moore Professor of Architecture  
*Washington University in St. Louis*

#### **4 – September 19 "From Critical to Transformative Pedagogy in Architectural Education"**

Kristin Jones, Adjunct Professor of Architecture  
*College of Architecture, Illinois Institute of Technology*

#### **5 – September 26 "Constructing the Architect; the Missing Meta-Discourse"**

Leonard R. Bachman, Architect, Professor of Architecture (retired)  
*University of Houston*

#### **6 – October 3 "Forward: Globalization + Africa Diaspora Architects"**

Carolyn Armenta Davis, Hon. AIA, Independent Architecture Historian, Curator and Lecturer

**7 — October 10 “Urban Design, Nature, Health”**

William Sullivan, Professor and Director, Rokwire: Illinois’ Smart, Healthy Community Initiative  
*Office of Provost, University of Illinois at Urbana-Champaign*

**8 — October 17 “Predictive Modeling & Simulation in R&D Decision Making”**

Ajith Rao, Senior Researcher  
*USG Corporation*

**9 — October 24 “Computational Modeling of Urban Systems”**

Yuri Mansury, Associate Professor of Social Science  
*Lewis College of Human Sciences, Illinois Institute of Technology*

**10 — November 7 “Digital Virtual Sacred Architecture”**

Anat Geva, Professor  
*Department of Architecture, Texas A&M University*

**11 — November 21 “Architecture in Conservation: Timely InterViews Defining Matters of Research”**

Federica Goffi, Co-Chair of PhD Program, Associate Professor, Architetto (Italy), PhD  
*Azrieli School of Architecture and Urbanism, Carleton University*

**SPRING 2020**

**12 — January 23 “The Tropical Botanical City: Lessons from Roberto Burle Marx’s Botanical Garden in Maracaibo, Venezuela”**

Maria A. Villalobos H., Assistant Professor of Landscape Architecture  
*College of Architecture, Illinois Institute of Technology*

**13 — January 30 “Urban Transformation: Preservation and Regeneration in Seoul”**

Donghoon Lee, Associate Professor of Architecture  
*Seoul National University of Science and Technology (Visiting Scholar CoA IIT PhD Program)*

**14 — February 6 “Studying Ongoing Planning and Design Efforts in Contemporary India: Insights from Field-Based Research”**

Sanjeev Vidyarthi, Associate Professor and Director of Master of City Design Program  
*College of Urban Planning and Public Affairs, The University of Illinois at Chicago*

**15 — February 13 & 20 “We Culture: Multidisciplinary PhD Forum for In-Progress Studies”**

Anat Mor-Avi, Curator, PhD Candidate, Adjunct Professor of Architecture  
*College of Architecture, Illinois Institute of Technology*

**16 — February 27 “Building Leisure Space in the Black Metropolis: Public Park Infrastructure on Chicago’s South Side”**

Brian McCammack, Assistant Professor of Environmental Studies and Chair of American Studies  
*Lake Forest College*

**17 — March 5 “Before IIT There Was Jazz on State: Bronzeville’s ‘Stroll’ in the Roaring ‘20s”**

Mindy Pugh, University Archivist and Public Historian  
*Illinois Institute of Technology*

**18 — March 12 “Wood as an Alternative Material in Tall Building Design”**

Jamshid Mohammadi, Professor of Civil and Architectural Engineering, Dean of the Graduate College, Vice Provost for Graduate Academic Affairs  
*Illinois Institute of Technology*

**19 — March 26 “Vertical Cities: Energy and Resiliency”**

Peng Du, Visiting Assistant Professor  
*College of Architecture, Illinois Institute of Technology*

**20 — April 2 “Unity Temple: The Noble Room”**

David Sokol, Professor Emeritus of Art History  
*The University of Illinois at Chicago*

**21 — April 9 “The Architecture of Environmental Reform in the Progressive Era United States”**

Benjamin Johnson, Associate Professor of History  
*Loyola University Chicago*

**22 — April 16 “Games for Girls and the Problem of ‘I Design’”**

Carly Kocurek, Associate Professor of Digital Humanities and Media Studies, Director of Graduate Studies  
*Lewis College of Human Sciences, Illinois Institute of Technology*

**23 — April 23 “The Art of Work: Open Plan Offices, 1950–1975”**

Joseph Clarke, Assistant Professor of History of Art  
*School of Cities, University of Toronto*

**24 — April 30 “The Urban Design and Policy Implications of Autonomous Vehicles and Navigation Safety”**

Matthew Spenko, Professor  
*The Mechanical, Materials, and Aerospace Engineering Department, Armour College of Engineering, Illinois Institute of Technology*  
Ron Henderson, Professor and Director of Landscape Architecture and Urbanism Program  
*College of Architecture, Illinois Institute of Technology*



PhD Architecture Research  
Forum: Lecture by Dr. Maria  
A. Villalobos H., Assistant  
Professor of Landscape  
Architecture, College of  
Architecture, IIT, January  
23, 2020.



PhD Architecture Research  
Forum: Lecture by Dr. Donghoon  
Lee, Associate Professor of  
Architecture, Seoul National  
University of Science and  
Technology, January 30, 2020.

PhD Architecture Research  
Forum: Lecture by Mindy Pugh,  
University Archivist and Public  
Historian at Illinois Institute  
of Technology, March 5, 2020.



PhD Architecture Research  
Forum: Lecture by Dr. Jamshid  
Mohammadi, Professor of Civil  
and Architectural Engineering,  
Dean of the Graduate College,  
Vice Provost for Graduate  
Academic Affairs, IIT, March  
12, 2020.

PhD Architecture Research  
Forum: Lecture by Dr. Sanjeev  
Vidarthi, Associate Professor  
and Director of Master of City  
Design Program, College of Urban  
Planning and Public Affairs at  
the University of Illinois at  
Chicago, February 6, 2020.





# WE CULTURE: MULTIDISCIPLINARY PHD FORUM

We believe in promoting a “we culture” among the PhD programs by opening a multidisciplinary channel and inviting interested students to share, listen, discuss, and socialize. The workshops included short presentations (up to 6 minutes and 12 slides), with discussions of each research topic and socializing during an in-house dinner immediately after.

## Curator

Anat Mor-Avi, PhD Candidate  
*College of Architecture, Illinois Institute  
of Technology*



PhD Architecture Research Forum:  
We Culture, S. R. Crown Hall,  
February 13, 2020.



PhD Architecture Research Forum:  
We Culture, S. R. Crown Hall,  
February 20, 2020.

**THURSDAY, FEBRUARY 13, 4-7 PM**

**“Water Cycle and Water Purification in Rural Landscape Ecological Restoration”**

Mei Yang *Visiting Scholar, Landscape Architecture Program, College of Architecture, IIT*

**“How Can Capacity Increasing of Design-Driven Collaboration Enable to Shape Communication Flows in the Process of Place-Making”**

Tongtong Xguo *Institute of Design PhD Program, IIT*

**“A Data-Driven and Physics-Based Framework for Integrated Energy-Air Quality (iE-AQ) Modeling”**

Mehdi Ashayeri *Architecture PhD Program, IIT*

**“The Impact of Double-Skin Facade Configurations on Natural Ventilation in Tall Office Buildings”**

Yohan Kim *Architecture PhD Program, IIT*

**“Community-Based Production: The New Technology and Future (New) Economic Paradigm Foster New Ways of Production, from Mass to Customize”**

Hendriana Werdhaningsih *Institute of Design PhD Program, IIT*

**“Emotional Attachment to Virtual Assistants”**

Leilasadat Mirghaderi *Technology & Humanities PhD Program, IIT*

**“The Latin American Retrofitted Metropolis, Architecture in the Midst of Urban Inequality”**

Alejandro Saldana Perales *Architecture PhD Program, IIT*

**“Preliminary Directions and Ideas”**

Rachel Hirsh *Technology & Humanities PhD Program, IIT*

**“Optimizing the Demand Control Ventilation Strategy in an Underground Parking Garage”**

Jongki Lee *Architectural Engineering PhD Program, IIT*

**“Investigating the Impact of Ultra-Tall Building Ordinances on the Future of Major Cities”**

Amjad Alkoud *Architecture PhD Program, IIT*

**“Architecture for Collaborative Creativity: A Catalyst in Forming a Culture of ‘We’ in Learning-Driven Environments”**

Anat Mor-Avi *Architecture PhD Program, IIT*

**THURSDAY, FEBRUARY 20, 4-7 PM**

**“The Virtual Space for Memories Before Modern Democracy”**

Monika Sziron *Technology & Humanities PhD Program, IIT*

**“Energy Analysis of Steam Distribution System in a Campus Building (Alumni Hall) Using Data-Driven Modeling and Physics-Based Model”**

Behzad Salimian Rizi *Architectural Engineering PhD Program, IIT*

**“Prototyping Ecosystems Towards Transformative Impact”**

Azra Sungu *Institute of Design PhD Program, IIT*

**“Embodied Energy and Environmental Impacts of Tall Buildings”**

Lijian Ma *Architecture PhD Program, IIT*

**“Computational Fluid Dynamic (CFD) Analysis of Natural Ventilation and Impacts on Energy Use in a Mid-Rise Residential Building in Chicago, IL”**

Insung Kang *Architectural Engineering PhD Program, IIT*

**“Simulating Human Behavior and Microclimates in Public Urban Spaces”**

Zahida Kahn *Architecture PhD Program, IIT*

**“Darwin’s Architect: Louis Sullivan and the Evolution of Modern Architecture”**

Syan Frey *Architecture PhD Program, IIT*

**“Equilibrium Optimizer: A Novel Optimization Algorithm”**

Afshin Faramarzi *Architectural Engineering PhD Program, IIT*

**“Making a Hot-Arid Desert Arab City More Livable: Investigating the Role of Street Design in Enhancing Walkability in Riyadh, Saudi Arabia”**

Omar Al-Mahdy *Architecture PhD Program, IIT*

**“The Impacts of the Physical Built Environment on Mental Health”**

Liwen Kang *Architecture PhD Program, IIT*

**“Viability of Carbon Composite as a Structural Material in Tall Buildings”**

Piyush Khairnar *Architecture PhD Program, IIT*

**“Post-World War II Utopia: The Case of Korangi Town”**

Nadia Shah *Architecture PhD Program, IIT*

# PHD PROGRAM HOSTS BOOK WORKSHOP: AUGUST 26–27, 2019



Minerals and Metals Research Bldg., Mies van der Rohe, 1943. Photo courtesy of Hedrich Blessing, Chicago History Museum.



IITRI Tower, Schmidt, Garden & Erickson, circa 1965 + Binga Arcade. Photo courtesy of IIT University Archives and Special Collections.

## **AUGUST 26: WORKSHOP PROGRAM DAY 1**

### **IIT College of Architecture**

#### **South Side Modern: IIT and the Building of Chicago**

S. R. Crown Hall. Rm. 14 (Lower Level), 3360 S. State St.

8:00 Registration at North entrance + Breakfast

9:00 Welcome + Introduction:  
Michelangelo Sabatino *IIT*

#### **Part I – The Birth of a “Red Brick” University**

9:30 Mindy Pugh *IIT*

10:00 Catherine Bruck *IIT*

10:30 Arthur Miller *Lake Forest College*

11:00 William Tyre *Glessner House*  
and Daniel Whittaker *IIT*

#### **Part II – Modernizing the Built Environment**

11:30 Dominic Pacyga *Columbia College*

12:00 Lunch + Discussion led by Thomas Dyja

12:45 Ann Durkin Keating *North Central College*

1:15 Daniel Bluestone *Boston University*

1:45 Michael Carriere *MSoE*  
and David Spatz *ASEH*

2:15 Coffee Break

2:30 Bradford Hunt *Newberry Library*

3:00 Amani Morrison *University of Delaware*

3:30 Ron Henderson *IIT*

4:00 Charles Waldheim *Harvard University*

4:45 Visit GRC with Kim Soss *IIT*  
Crown Hall Lower Level

5:30 Dinner in Crown UC2

Discussion led by Thomas Dyja

6:45 Campus Tour with Kevin Harrington *IIT*

## **AUGUST 27: WORKSHOP PROGRAM DAY 2**

### **IIT College of Architecture**

#### **South Side Modern: IIT and the Building of Chicago**

McCormick Tribune Campus Center Auditorium,  
3201 S. State St.

8:00 Registration at Auditorium entrance + Breakfast

9:00 Tibor Pataky *EPFL*

#### **Part III – Bronzeville and Chicago’s South Side**

9:30 Vittorio Pizzigoni *University of Genoa*

10:00 Gunny Harboe *Harboe Architects + IIT*

10:30 Maren Stange *The Cooper Union*

11:00 Robert M. Marovich *Journal of Gospel Music*

11:45 Lunch + Discussion led by Thomas Dyja

12:45 Visit to Galvin Library, University Archives  
with Alison Fukuchi *IIT*

1:15 Adam Strohm *IIT*

1:30 Amy Mooney *Columbia College*

2:00 Betsy Schlabach *Earlham College*

2:30 Coffee Break

#### **Part IV – A “Learn by Doing” Educational Model**

2:45 David van Zanten *Northwestern University*

3:15 Kevin Harrington *IIT*

3:45 Thomas Leslie *Iowa State*

and Zaida Garcia-Requejo *Universidade da Coruña*

4:15 Edoarda Corradi Dell’Acqua *IIT*

5:00 Dinner in Crown UC2

Discussion led by Thomas Dyja

# ANNUAL SYMPOSIUM HIGHLIGHTS

## Overview

The 4th PhD Student Symposium, *Buildings, Cities, and Performance II*, was organized by PhD Candidates Mehdi Ashayeri, Ezgi Bay, Omar Al-Mahdy, and Zahida Khan. On Friday, November 15, Andreas Wagner, professor and Vice Dean of Research at the Karlsruhe Institute of Technology (KIT), opened the symposium by delivering a keynote speech at S. R. Crown Hall. Paper presentations took place during the day on Saturday, November 16. Keynotes were also presented by Dr. Larry Bank, research engineer at Georgia Tech and former director at the NSF, and Associate Professor Dr. Elizabeth Grant from Virginia Tech. That night, PhD Symposium participants met at the Tadao Ando-designed Wrightwood 659 gallery in Chicago for dinner and the launch of *Prometheus, Journal of the PhD Program in Architecture*. On Sunday, November 17, a group of participants enjoyed two architectural tours: the IIT Kaplan Institute, designed by John Ronan (opened in 2018), and the Chicago Architecture Biennial at the Chicago Cultural Center.

Photos courtesy of Amjad Alkoud, Mehdi Ashayeri, Ezgi Bay, and Lijian Ma.

## 4th International Graduate Student Symposium

*Buildings, Cities, and Performance, II*

November 15–17, 2019  
S. R. Crown Hall, IIT Campus,  
Chicago, IL



Prometheus team, November 16, 2019. From left: Ezgi Bay, Melinda Van Leer, Michelangelo Sabatino, Mohammed Alkhabbaz, Marcos Petroli, Bud Rodecker, Narjes Abbasabadi, and Mehdi Ashayeri.





Launch of *Prometheus, Journal of the PhD Program in Architecture*, at Wrightwood 659, November 16, 2019. Introduction by Michelangelo Sabatino, with President Alan Cramb and Dean Reed Kroloff.



Launch of *Prometheus, Journal of the PhD Program in Architecture*, at Wrightwood 659, November 16, 2019.



Closing reception at Wrightwood 659, November 16, 2019.

Launch of *Prometheus, Journal of the PhD Program in Architecture*, at Wrightwood 659, November 16, 2019. Talk by the Editors, including Mohammed Alkhabbaz (Issue 01) and Narjes Abbasabadi (Issue 03).





Participants at the 4th Symposium. Entrance to S. R. Crown Hall, November 16, 2019.



Participants visiting the Kaplan Institute, designed by John Ronan, IIT campus, November 17, 2019.

4th Symposium's Opening  
Introduction by Dean Reed Kroloff at S. R. Crown Hall, November 15, 2019.



4th Symposium's Opening  
Introduction by Provost Peter Kilpatrick at S. R. Crown Hall, November 15, 2019.



Participants visiting Chicago Architectural Biennial, November 17, 2019.



4th Symposium's Discussion panel about architectural research, November 15, 2019. From left: Andreas Wagner, Elizabeth Grant, Hazem Rashed-Ali, Peng Du, and Michelangelo Sabatino.



Participants visiting Chicago Architectural Biennial, Chicago Cultural Center, November 17, 2019.





# STUDENT LIFE AND RESEARCH

## Overview of Doctoral Research

PhD students at IIT spend four to six years completing their studies. During their studies, they participate in many social activities from field trips to the annual Mies van der Rohe birthday party. Participating in these events contributes to a more pleasant learning environment, where students can share ideas and develop proactive behaviors. Because the majority of the students come from different countries, the PhD program promotes cultural diversity and research, both within and beyond American boundaries. The students enrolled in the PhD program explore the historic and contemporary inter-sections among Architecture, Culture, and Technology through two areas of specialized research: History, Theory, and Criticism (HTC), and Technologies of the Built Environment (TBE). Research topics are based on the expertise of our faculty, as well as the interests of our students.

### 1 — Amjad Alkoud

*Investigating the Impact of Ultra-Tall Building Ordinances on the Future of Major Cities; Chicago and Dubai* (2015–)

### 2 — Omar Al-Mahdy

*Making a Hot-Arid Desert Arab City More Livable: Investigating the Role of Street Design in Enhancing Walkability in Riyadh, Saudi Arabia* (2015–20)

### 3 — Mehdi Ashayeri

*A Hybrid Data-Driven Simulation Framework for Integrated Energy-Air Quality (iE-AQ) Modeling at Multiple Urban Scales* (2015–20)

### 4 — Ezgi Bay

*The Spacial Block: Natural Ventilation in Hot and Dry Climates of Turkey* (2015–20)

### 5 — Syan Frey

*Darwin's Architects: How the Theory of Evolution Shaped the Chicago School of Architecture* (2014–)

### 6 — Liwen Kang

*Public Health and Built Environment: Natural Based Solution to Improve Human Health, Experience, and Well-Being in Metropolitan Areas* (2018–)

### 7 — Piyush Khairnar

*Applications of Carbon Composites: A Study in Structural and Architectural Applications of Carbon Fiber Composites in Tall Buildings* (2018–)

### 8 — Zahida Khan

*Microclimate in Tall Urban Morphology: Study of Open Public Spaces at Street Level as 'Point of Repose' in the Context of Three Cities—Chicago, Dubai, and Mumbai* (2017–)

### 9 — Yohan Kim

*The Impact of Double-Skin Facade Configurations on Natural Ventilation in Tall Office Buildings* (2017–)

### 10 — Lijian Ma

*Archetype-Based Assessment of Embodied Energy and Environmental Impacts of Tall Buildings* (2018–)

### 11 — Lobna Mitkees

*Cultural Preservation and Energy Conservation* (2018–)

### 12 — Anat Mor-Avi

*Architecture for the Art of Collaborative Creativity: Engaging Space Attributes as a Catalyst in Forming a Culture of 'WE' for Students and Teachers in Learning Environments* (2016–2020)

### 13 — Alejandro Saldana Parales

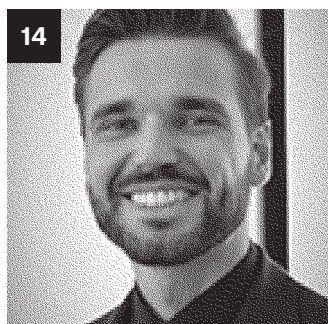
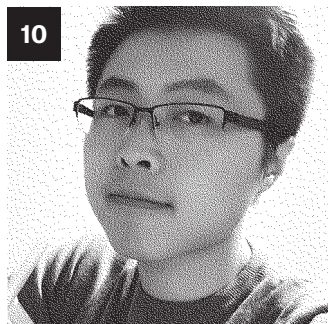
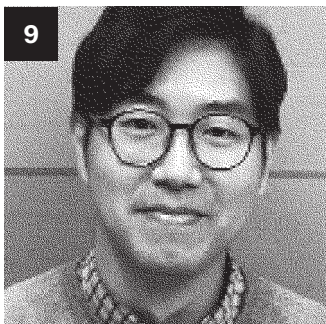
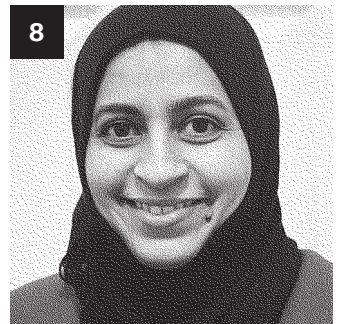
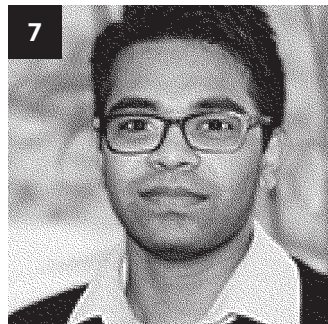
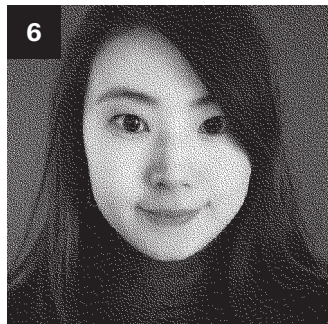
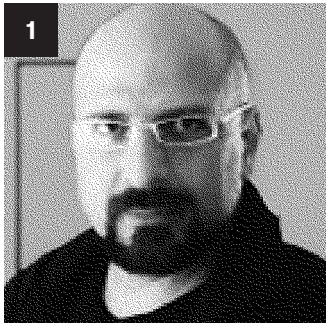
*The Public Chicago: New civic & public spaces and the built environment at the service of Chicago's urban transformation (2010–2020)* (2019–)

### 14 — Marcos Amado Petroli

*Toward a Civic Monumentality: Arches, Vaults, and Domes in Post-War American Architecture* (2016–20)

### 15 — Nadia Shah

*From Standardization to Appropriation—A Morphological Study of a Mid-Century Mass Housing Project's Mutation in the Global South* (2016–)



# STUDENT LIFE AND RESEARCH

## Building Community

Throughout the academic year, PhD students and faculty take a number of field trips to a host of different places, ranging from professional offices to national labs and museums. These opportunities allow our students to discover the diverse resources Chicago has to offer, network, and get to know each other.



Holiday Party: Visits to Chicago Maritime Museum at the Bridgeport Art Center and Packingtown Museum in The Plant, December 6, 2019.

Faculty members and PhD students at Ezgi Bay's doctoral defense, November 22, 2019.



Faculty and students visit Plant Chicago (Bubbly Dynamics, LLC).



Exterior view of Plant Chicago (photo courtesy of Eric Allix Rogers).

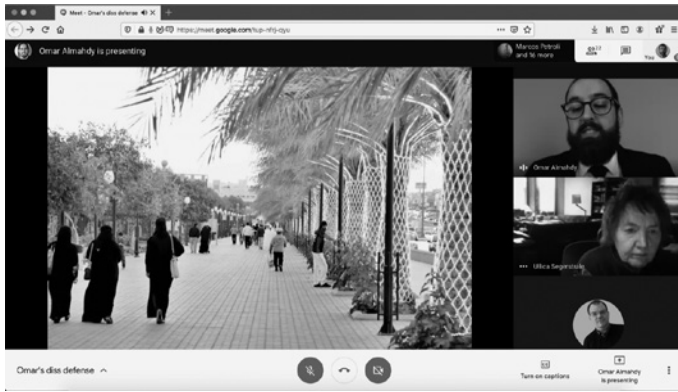
Interior view of Plant Chicago (photo courtesy of Eric Allix Rogers).



# STUDENT LIFE AND RESEARCH

## Graduation (2019-20)

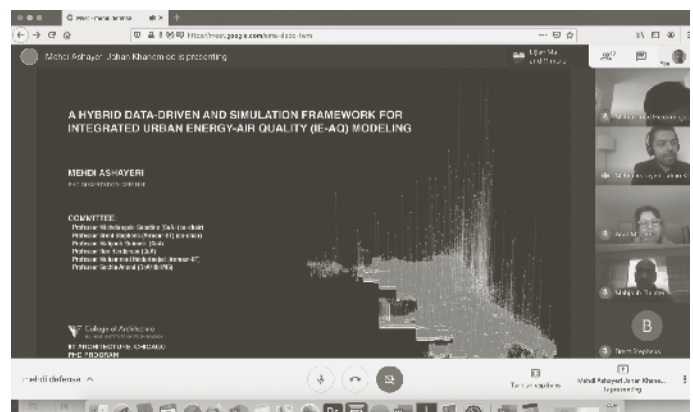
Photos courtesy of Michelangelo Sabatino.



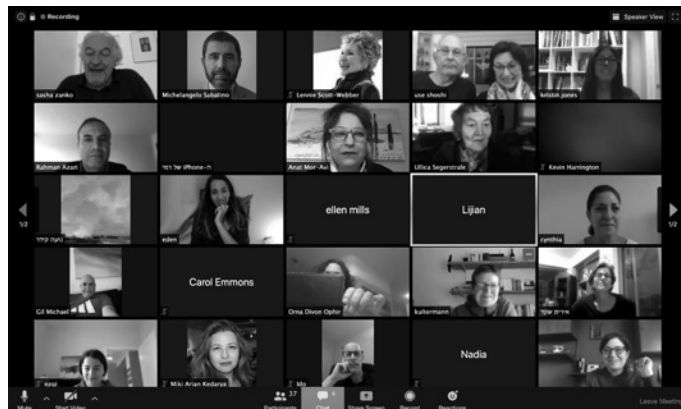
Virtual doctoral defense  
(via Google Hangouts) by Omar  
Al-Mahdy, April 2020.



Virtual doctoral defense  
(via Google Hangouts) by Medhi  
Ashayeri, April 2020.



Anat Mor-Avi's virtual defense  
via Zoom.



## CoA—PhD Program End of Year Awards

Every year graduating students receive three awards: ARCC King Student Medal, Best Defended Dissertation Award, and Spirit Award.



**Ashayeri, Mehdi.** 2019–2020 ARCC King Student Medal for Excellence in Architectural + Environmental Design Research—Named in honor of the late Jonathan King, co-founder and first president of the Architectural Research Centers Consortium (ARCC), this award is given to one student per ARCC member college, school, institute, or unit. Selection of recipients is at the discretion of the individual member institutions, but is based upon criteria that acknowledge innovation, integrity, and scholarship in architectural and/or environmental design research.



**Mor-Avi, Anat.** 2019–2020 Best Defended Dissertation Award—CoA PhD Faculty convene yearly to select the best defended dissertation in one of the two areas of specialized research: History, Theory, and Criticism or Technologies of the Built Environment. Preference is given to multidisciplinary dissertations that have yielded innovative quantitative and qualitative results.



**Bay, Ezgi.** 2019–2020 PhD Program Spirit Award—Awarded to a graduating PhD student and selected by the PhD students in recognition of outstanding contributions to building community spirit.

# ACCOMPLISHMENTS

This is a summary of PhD student and PhD alumni accomplishments throughout the 2019–20 academic year:

## Publications

**Ashayeri, Mehdi, Abbasabadi, Narjes, Heidarinejad, Mohammad, Stephens, Brent.** "Predicting intraurban PM<sub>2.5</sub> concentrations using enhanced machine learning approaches and incorporating human activity patterns" *Environmental Research* (2020, anticipated).

**Abbasabadi, Narjes, and Mehdi Ashayeri.** "Socioeconomic determinants of public health and residential building energy use in Chicago." *27th World Congress of Architects UIA 2020 Rio*, Rio de Janeiro, July 19–23, 2020 (anticipated).

**Bay, Ezgi.** "The spatial block: Natural ventilation as an architectural instrument." *Proceedings of the EAAE-ARCC International Conference* (2020, anticipated).

**Mor-Avi, Anat, and R. Talbert.** "A space for learning: An analysis of research on active learning spaces." *Heliyon* 5. December 2019.

**Petroli, Marcos.** "Modern Venatio and the Case of Dorton Arena in Raleigh, NC (1949–1952)." *Proceedings of the 16th International Docomomo Conference* (2020, anticipated).

## Presentations

**Abbasabadi, Narjes, Ashayeri, Mehdi.** "Socioeconomic Determinants of Public Health and Residential Building Energy Use in Chicago." *27th World Congress of Architects UIA 2020 Rio*, Rio de Janeiro, July 19–23, 2020.

**Ashayeri, Mehdi.** "A Data-Driven and Physics-Based Framework for Integrated Energy-Air Quality (iE-AQ) Modeling." Paper presented at the *4th International PhD Symposium*, Illinois Institute of Technology, November 2019.

**Ashayeri, Mehdi.** "A Framework for Indoor-Outdoor Building Performance Analysis." *The Chicago Chapter of IBPSA-USA (CHIBPSA) at the Annual BPAC Meetup*, Chicago, IL, October 2019.

**Ashayeri, Mehdi.** "An Integrated Simulation and Artificial Intelligence-Based Framework for Analyzing Indoor Air Quality for Urban Buildings." *The ASHRAE Building Performance Analysis (BPA)*, Denver, CO, 2019.

**Ashayeri, Mehdi.** "Urban Air Quality Modeling Based on Temporal Human Activity Patterns." *The Built Environment Research Group (BERG)*; Civil, Architectural, and Environmental Engineering Department, Armour College of Engineering, Illinois Institute of Technology, October 2019.

**Bay, Ezgi.** "Natural Ventilation as an Architectural Instrument: A Case Study of Gaziantep, Turkey." Paper presented at the *4th International PhD Symposium*, Illinois Institute of Technology, November 2019.

**Bay, Ezgi.** "The spatial block: Natural ventilation as an architectural instrument." *EAAE-ARCC International Conference*, Valencia, Spain, June 7–10, 2020.

**Petroli, Marcos.** "Modern Venatio and the Case of Dorton Arena in Raleigh, NC (1949–1952)." *16th International Docomomo Conference*, Tokyo, Japan, September 10–15, 2020.

**Pinzón, Andrés.** "Impact of the Accuracy of Shading Calculation on Passive House Design and Certification." Presented at the *2019 Buildings XIV International Conference*, Clearwater, FL, December 10, 2019.

**Pinzón, Andrés.** "Successfully Utilizing the WUFI Passive Dynamic Shading Tool." Presented at the *14th North America Passive House Conference (NAPHC)*, Washington, D.C., December 7, 2019.

**Pinzón, Andrés, Strauss, Andrew, and Bueno, Enrique.** "Passive House Project Becomes Pilot Program for National Policy on Net-Zero Energy Building (NZEB) in Colombia." Presented at the *14th North America Passive House Conference (NAPHC)*, Washington, D.C., December 6, 2019.

## Awards, Fellowships, Grants, and Scholarships

**Abbasabadi, Narjes.** 2020 ARCC Dissertation Award Honorable Mention. The Architectural Research Center Consortium (ARCC), 2020. The ARCC Dissertation Award is offered each year for the best dissertation by a doctoral student from a member school. The award is intended to honor significant new research in architecture and environmental design and to recognize the achievement of an emerging scholar. Based on the quality and utility of her research in the development of a multi-scale model that captures urban energy use, the ARCC Board of Directors is pleased to announce the recipient of an Honorable Mention of the 2020 ARCC Dissertation Award is Narjes Abbasabadi.

**Abbasabadi, Narjes.** Completion of the 2019 National Science Foundation (NSF), NSF-NHER, Wall of Wind Experimental Facility Research Planning Workshop, Florida International University, Miami, FL, December 2019.

**Abbasabadi, Narjes.** Travel Grant, National Science Foundation (NSF), NSF-NHER, Wall of Wind Experimental Facility Research Planning Workshop, Florida, December 2019.

**Ashayeri, Mehdi.** Completion of the 2019 National Science Foundation (NSF), NSF-NHER, Wall of Wind Experimental Facility Research Planning Workshop, Florida International University, Miami, FL, December 2019.

**Ashayeri, Mehdi.** Conference Fellowship, Building Performance Analysis Conference, ASHRAE, Denver, CO, September 2019.

**Ashayeri, Mehdi.** Scholarship Recipient, Civil, Architectural, and Environmental Engineering Department, Armour College of Engineering, Illinois Institute of Technology, Spring 2020.

**Ashayeri, Mehdi.** Travel Grant, College of Architecture, Illinois Institute of Technology, Chicago, IL, September 2019.

**Ashayeri, Mehdi.** Travel Grant, National Science Foundation (NSF), NSF-NHER, Wall of Wind Experimental Facility Research Planning Workshop, Florida, December 2019.

**Petroli, Marcos.** Society of Architectural Historians (SAH) Graduate Student Scholar Fellowship, SAH Annual International Conference, Seattle, WA, April 29–May 2, 2020.

## Defended Dissertations

During this past year, four students successfully defended their dissertations:

**Al-Mahdy, Omar.** “Investigating the Role of Street Design in Enhancing Walkability in Riyadh, Saud Arabia.” PhD diss., Illinois Institute of Technology, April 2020. Committee: Ron Henderson (co-chair), Tammy Gaber (co-chair), Michelangelo Sabatino, Rahman Azari, and Ullica Segerstrale.

**Ashayeri, Mehdi.** “A Hybrid Data-Driven Simulation Framework for Integrated Energy-Air Quality (IE-AQ) Modeling at Multiple Urban Scales.” PhD diss., Illinois Institute of Technology, April 2020. Committee: Michelangelo Sabatino (co-chair), Brent Stephens (co-chair), Mahjoub Elnimeiri, Ron Henderson, Mohammad Heidarnejad, and Sachin Anand.

**Bay, Ezgi.** “The Spatial Block: Natural Ventilation in Hot and Dry Climates of Turkey.” PhD diss., Illinois Institute of Technology, November 2019. Committee: Mahjoub Elnimeiri (chair), Rahman Azari, Matthew Herman, David Arditi, and Martin Felsen.

**Mor-Avi, Anat.** “Architecture for the Art of Collaborative Creativity: Active Affordances as Catalyst in Forming a Culture of ‘We’ in Learning-Driven Environments.” PhD diss., Illinois Institute of Technology, May 2020. Committee: Mimica Vedran (co-chair), Lennie Scott-Webber (co-chair), Rahman Azari, Ullica Segerstrale, Eva Kutermann, and Kristin Jones.

## Visiting Scholars 2019–2020

**Garcia-Requejo, Zaida.** Defended Dissertation: “MIES AT IIT: Connections Between Teaching and Architecture.” Escola Tècnica Superior de Arquitectura (UDC), University School of Architecture (UDC), March 2020.

## Recent Alumni News

Graduates of IIT’s PhD Program in Architecture typically pursue academic careers in universities, obtain positions in research institutions, or return to professional practice.

**Abbasabadi, Narjes.** Adjunct Professor, College of Architecture, Illinois Institute of Technology.

**Abbasabadi, Narjes.** Assistant Professor, College of Architecture, Planning and Public Affairs, University of Texas at Arlington, appointed Fall 2020.

**Abbasabadi, Narjes.** Faculty affiliate, Wanger Institute for Sustainable Energy Research (WISER), Illinois Institute of Technology.

**Fadel, Alia.** Assistant Professor/Lecturer of Landscape Architecture, School of Art, Leeds Beckett University, UK.

**Jeong, Hyesun.** Assistant Professor, College of Architecture, Planning and Public Affairs, University of Texas at Arlington.

**Pinzón, Andrés.** Assistant Professor, School of Architecture and Design, Universidad de los Andes (Bogota, Colombia), appointed Spring 2021.

**Whittaker, Daniel.** Senior Lecturer, Singapore University of Technology and Design, Singapore.