PART II
PHD PROGRAM OVERVIEW 2020–21

IIT Campus Tour in September 2020.
Photo courtesy of Will Quam.

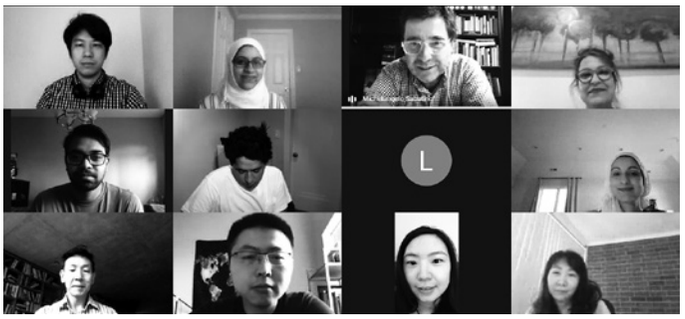
PHD PROGRAM OVERVIEW 2020–21

A Year in Perspective

Curator

Alejandro Saldaña Perales,
PhD Program Administrative Assistant
Illinois Institute of Technology

The 2020–21 academic year has been like no other. Subjected to forces, which are sometimes beyond our comprehension, we have been forced to rethink how we all live our lives on our planet. Shifting through different levels of lockdown, the PhD Program embraced a fully virtual model. This gave the program the opportunity of conducting its agenda with as much regularity as possible. Adapting to these new criteria has been challenging. However, reflecting on what is now gone and what we currently have has allowed us to make the best use of our resources. Our weekly Architectural Research Forum became a platform for PhD students and candidates to debate on their diverse research topics and interests. The academic year saw the inception of our Weekly Newsletter as means to stay close to all our PhD family members. When enjoying nice weather, we hosted outdoor gatherings following all safety protocols and health recommendations. All in, this year has been a learning curve. Mitigating the effects of isolation and fostering community from our homes, we've come to value any occasion to be close together, either virtually or in person.



PhD students and candidates during one of the weekly ARF sessions, August 27, 2020.

PhD Students, joined by MS Arch and MArch students, during a guided tour of Hyde Park and the University of Chicago campus, October 10, 2020.

PhD Program Director, Professor Michelangelo Sabatino, joins MS Arch and PhD students for a bike tour of Bronzeville, October 3, 2020.

ACADEMIC PROGRAMMING HIGHLIGHTS

Architecture Research Forum

The weekly lecture series of the PhD Program is a platform allowing our students to interact, network, and share their work with guests. The sessions are meant to cover highly diverse and specific issues ranging from architecture, urban design and city policy, building technologies, and landscape architecture. Due to the lockdown conditions prevailing throughout most of the year, the Architectural Research Forum went virtual. Similarly, the forum's focus turned into the work of our very own students. Working in a collaborative fashion, each session benefited from the ongoing work of our students, whilst they exploited the debates and conversations these lectures promoted. Occasion for a respite came in the shape of a couple of special guests, who accepted the mission to join our forum.

Here, we provide the schedule of our weekly lectures.
These conversations were conducted virtually every Thursday.

FALL 2020

1 — August 27 "Welcome Back & Celebration Picnic"
All PhD Students and Candidates
Hosted by Michelangelo Sabatino, Professor and PhD Program Director
Illinois Institute of Technology

2 — September 3 "The PhD Dissertation Demystified"
Dan Whittaker (PhD '18), Senior Lecturer
Singapore University of Technology and Design

3 — September 10 "After a PhD: Expectation and Reality"
Marcos Amado Petroli (PhD '21), Assistant Professor
Judson University, Elgin, IL

4 — September 17 — DOUBLE FEATURE
"Louis Sullivan, Decorator and Engineer 1873–1880"
Syan Frey, PhD Candidate
Illinois Institute of Technology
"Simulating Human Spatial Behavior and Microclimates Using AMB"
Zahida Khan, PhD Candidate
Illinois Institute of Technology

5 — September 24 — DOUBLE FEATURE
"Radical Resistance or Active Agency in a Contested Space: The Case of Korangi Town"
Nadia Shah, PhD Candidate
Illinois Institute of Technology
"Carbon Composites as a Structural Material for Tall Buildings"
Piyush Khairnar, PhD Candidate
Illinois Institute of Technology

6 — October — SPECIAL EVENT
"Making and Remaking Classics: The Evolution of Architectural Photography at the Farnsworth House and Philip Johnson Glass House"
Robin Hill, photographer; Hilary Lewis, Chief Curator and Creative Director, *The Glass House*; Scott Mehaffey, Executive Director, *Farnsworth House;* Michelangelo Sabatino, Professor and Director PhD Program in Architecture, College of Architecture, *Illinois Institute of Technology*

7 — October 8 — DOUBLE FEATURE
"The Feasibility of Double-Skin Facades to Provide Natural Ventilation in Tall Office Buildings"
Yohan Kim, PhD Candidate
Illinois Institute of Technology
"Personal Comfort Systems"
Lobna Mitkees, PhD Candidate
Illinois Institute of Technology

8 — October 15 — SPECIAL EVENT
"Modern in the Middle: Chicago Houses 1929–1975, Book Launch"
Michelangelo Sabatino, Professor and Director PhD Program in Architecture, College of Architecture
Illinois Institute of Technology

9 — October 22 — DOUBLE FEATURE
"Henry Hobson Richardson, 1838–1886: Looking Backward Moving Forward"
Kevin Harrington, Professor Emeritus, Lewis College of Human Sciences
Illinois Institute of Technology

"The Glessner House, Convenient & Artistic"
Elaine Harrington, Former Curator
Glessner House Museum

10 — October 29 — DOUBLE FEATURE
"The Impacts of the Physical Built Environment on Mental Health: The Well-Being Benefits of Urban Green Spaces"
Liwen Kang, PhD Candidate
Illinois Institute of Technology
"A BIM-Based Life Cycle Assessment Tool of Embodied Energy and Environmental Impacts of Tall Buildings"
Lijian Ma, PhD Candidate
Illinois Institute of Technology

11 — November 5 — DOUBLE FEATURE
"Biophilic LEED Eco High-Rise Residential Building in Chicago"
Camélia Mina Geng, PhD Student
Illinois Institute of Technology
"Investigating the impact of Ultra-tall Building ordinances on the future of Major Cities: Dubai and Chicago"
Amjad Alkoud, PhD Candidate
Illinois Institute of Technology

12 — November 19 — DOUBLE FEATURE
"**Horto Urbs Est: A History Towards Hybrid Landscapes at Private Developments in Chicago's South Side"**
Alejandro Saldaña Perales, PhD Student
Illinois Institute of Technology
"A Review of Hybrid Mode of Inpatient Care and Homecare Design Based on IoMT Technology"
Tian Li, PhD Student
Illinois Institute of Technology

13 — December 3 — DOUBLE FEATURE
"The Driverless City"
Alexis Arias Betancourt, PhD Student
Illinois Institute of Technology
"Sustainable Facades"
Donghyun Lee, PhD Student
Illinois Institute of Technology

SPRING 2021

Urban Spectrum: Interdisciplinary Conversations on Projecting the City
Curated by Alejandro Saldaña Perales

1 — January 21 "PhD Homecoming & Welcome Back"
All PhD Students and Candidates
Hosted by Michelangelo Sabatino, Professor and PhD Program Director
Illinois Institute of Technology

2 — January 28 "Diversity, Planning, and the City"
Susan Fainstein, Senior Research Fellow, Department of Urban Planning and Design, Graduate School of Design
Harvard University

3 — February 4 "Sakura Orihon"
Ron Henderson, Professor and Director of the Landscape Architecture + Urbanism Program
Illinois Institute of Technology

4 — February 11 "The Past and Present of Monterrey's Industrial Landscape"
Pablo Landa Ruiloba, Independent Researcher/Curator of the Mexican Pavilion for the 2016 Venice Biennale of Architecture

5 — February 18 "Take Back the Streets: Reclaiming Pedestrian Spaces in the Auto Era"
Dave Amos, Professor and YouTube star of City Beautiful
UC Berkeley

6 — February 25 "Contested Historic Preservation of the Not-Old: Brutalism and Bertrand Goldberg"
Larry Bennett, Professor Emeritus, Political Science Department
DePaul University

7 — March 11 "Recursive Labor: Analog and Digital Form-Finding for Munich '72"
Sean Keller, Associate Professor and Associate Dean for Strategic Initiatives at the College of Architecture
Illinois Institute of Technology

8 — March 18 "On Agricultural Modernization and Collective Memory"
Charles Waldheim, John E. Irving Professor and Director, Office for Urbanization
Harvard University Graduate School of Design

9 — March 25 "City Building Through Partnership: In Search of a Collaborative Advantage"
Matti Siemiatycki, Interim Director of the School of Cities and Professor of Geography and Planning
University of Toronto

10 — April 1 "How One Structure Changed Chicago... and Chicagoans"
Patrick T. Reardon, author, essayist, poet, and former "Chicago Tribune" reporter

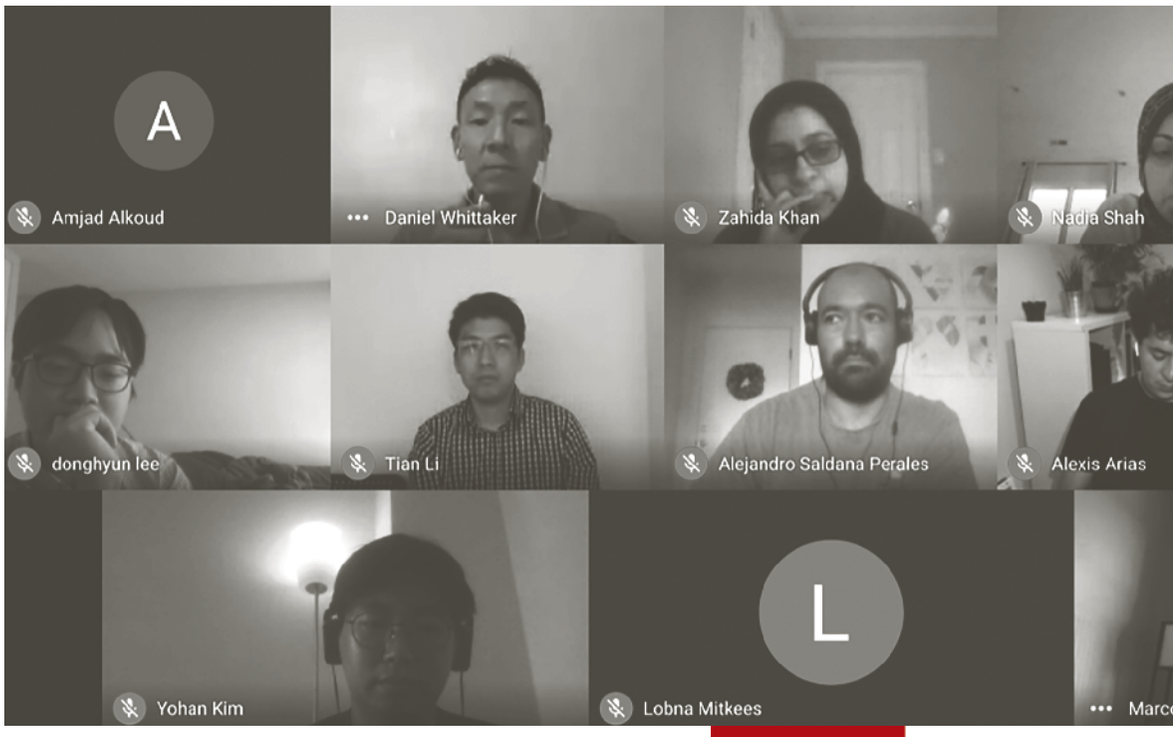
11 — April 8 "Medellín: Urbanism and Society"
Jorge Perez Jaramillo, Architecture and urban consultant; senior counsel at the World Bank; adviser for the Government of Antioquia (COL); resident, the Rockefeller Foundation Bellagio; visiting fellow, King's College Cambridge (UK); and planning director, Medellín

12 — April 15 "Prairie Style in Chicago's Parks"
Julia Bachrach, Historian, preservation planner, and urban design professional; former historian and planning supervisor, Chicago Park District; and president, Julia Bachrach Consulting, LLC

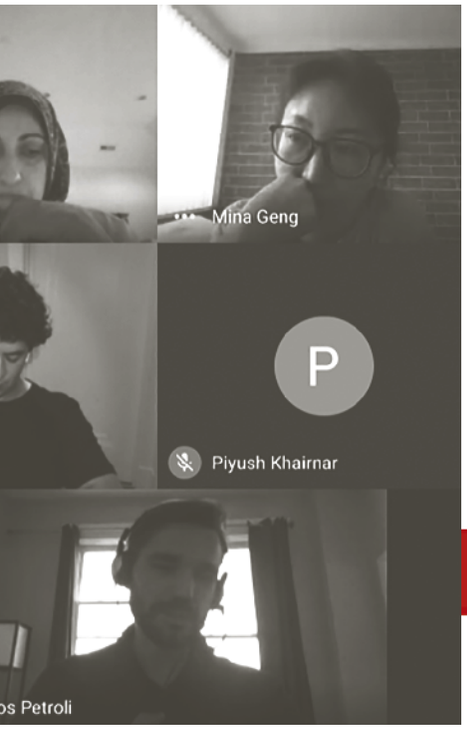
13 — April 22 "Coding Flux"
Fadi Masoud, Assistant Professor and Director of the Centre for Landscape Research at the Daniels Faculty
University of Toronto

14 — April 29 "Design and Racial Justice: The Juxtaposition Arts Campus"
Kristine F. Miller, Professor for the Landscape Architecture program at the College of Design
University of Minnesota

15 — May 6 Lecture by Hyesun Jeong
Hyesun Jeong, Assistant Professor at the School of Architecture
University of Texas at Arlington



Audience gathers shortly before Professor Emeritus Kevin Harrington and Elaine Harrington share their lectures “Henry Hobson Richardson, 1838-1886: Looking Backward Moving Forward” and “The Glessner House, Convenient & Artistic,” respectively, October 22, 2020.



Audience dutifully listens and absorbs the lecture “After a PhD: Expectation and Reality” by alumni Professor Marcos Amado Petroli, September 10, 2020.

PhD Candidate Lobna Mitkees introduces the topic of her lecture “Personal Comfort Systems” to the audience, October 8, 2020.

ANNUAL SYMPOSIUM HIGHLIGHTS

Overview

5th International Graduate Student Symposium

Human Behavior, Performance, and Built Environments

November 13–14, 2020

The annual International Graduate Student Symposium is the preceding event to this very publication. In this 5th edition, we replaced our traditional venue of S. R. Crown Hall for the less monumental computer screen. In accordance with all health and safety protocols issued by the Illinois Institute of Technology, the city of Chicago, the state of Illinois, and the U.S. federal government, the event was conducted virtually. The limitations of this en vogue modality, whilst having its limitations, also shared its numerous virtues. Guests and audiences joined our live transmission from every corner of the world. Spatial limitations were quickly overcome by a continuous flow and sharing of information from all our panelists in the shape of virtual halls. These accelerated and facilitated the interaction amongst all participants and audiences serving a unique event who's modality we hope needn't be repeated in the future. This fifth edition of the IGSS shall go in history as a unique opportunity to test the resiliency of the event itself and a unique chance to host such a large cohort of scholars from the comfort of our homes. Despite all the advantages, human interactions are still greatly missed and we cannot express our desire to go back to normal.

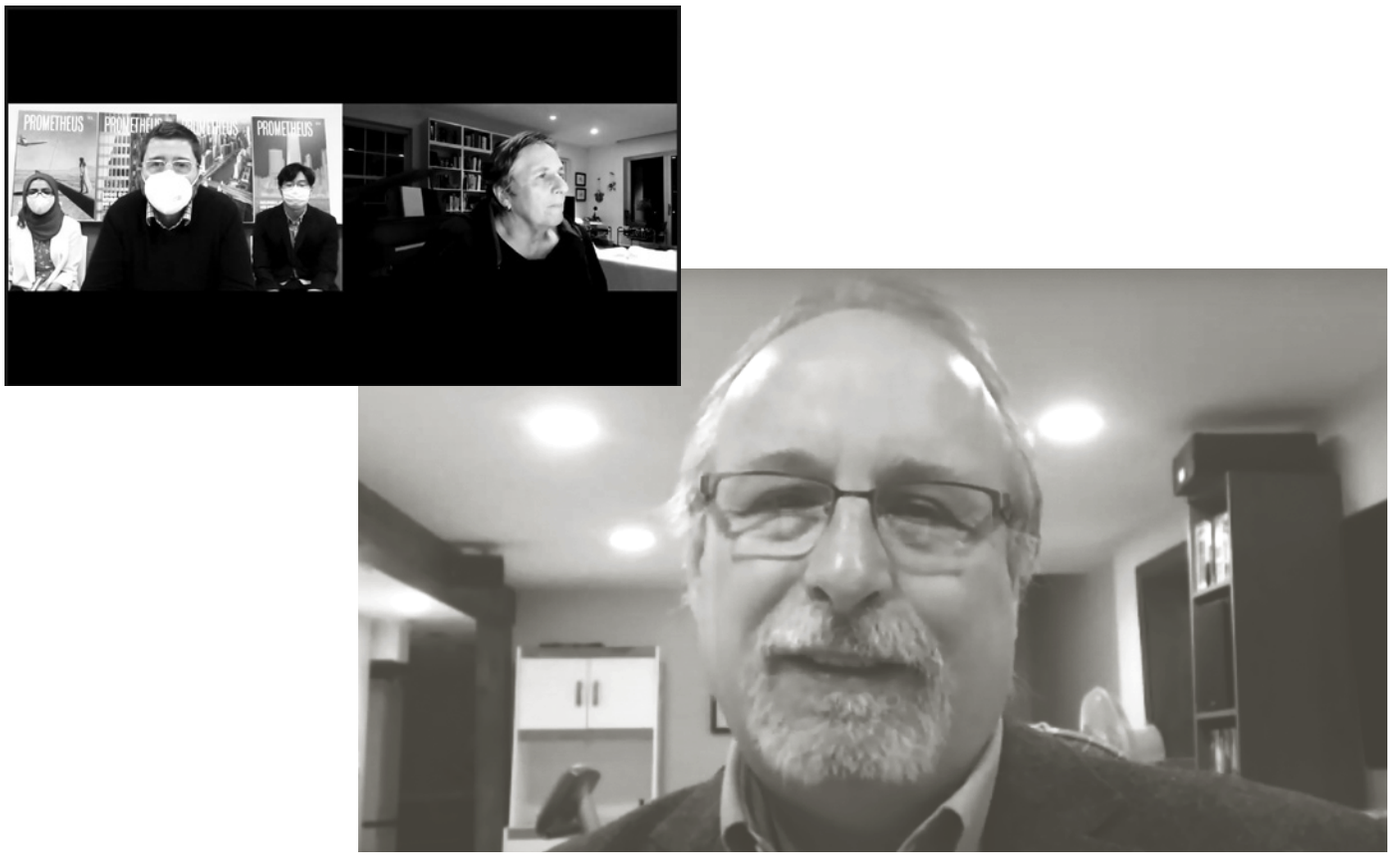
Photos courtesy of Alejandro Saldaña Perales.

From left: Vice Provost Peter Kilpatrick, Dean Reed Kroloff, Vice Provost for Research Fred J. Hickernell, PhD Program Director Professor Michelangelo Sabatino.

Upper row from left: Professors Ullica Segerstråle, Michelangelo Sabatino, and Nicole Ditchman. Lower row from left: Ralph T. Muehleisen and Vedran Mimica. During the “Human Behavior, Built Environments, and Resiliency” panel discussion.

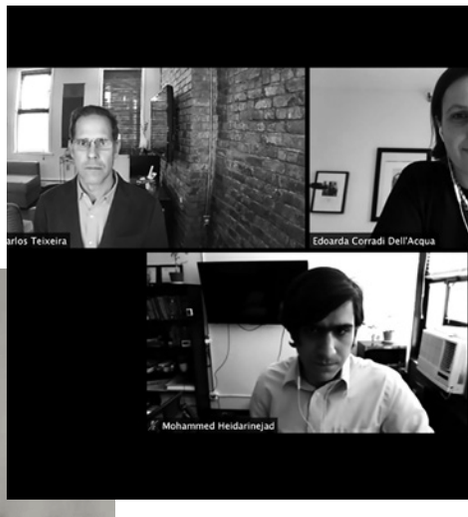
Ullica Segerstråle, Professor of Sociology at the IIT Department of Social Science, delivering a mini keynote speech.

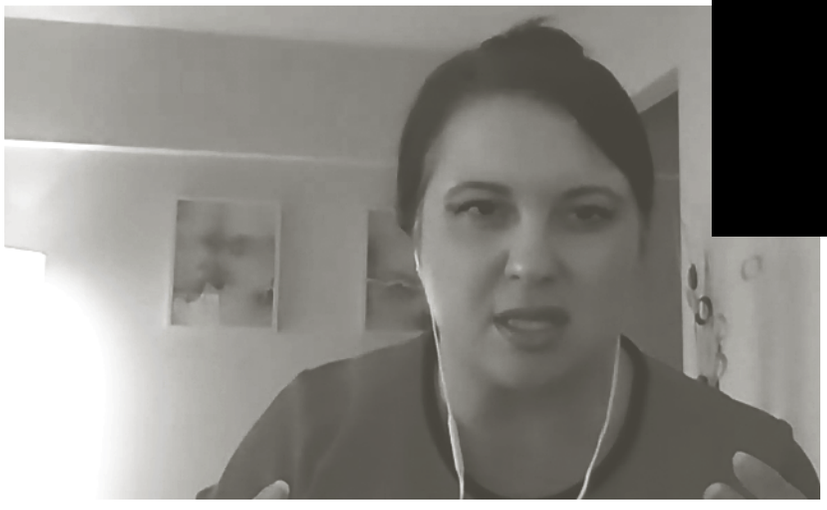
IGSS 2020 Steering Committee members. From left: Zahida Khan, Michelangelo Sabatino, and Yohan Kim during a presentation with Chicago architect Carol Ross Barney.



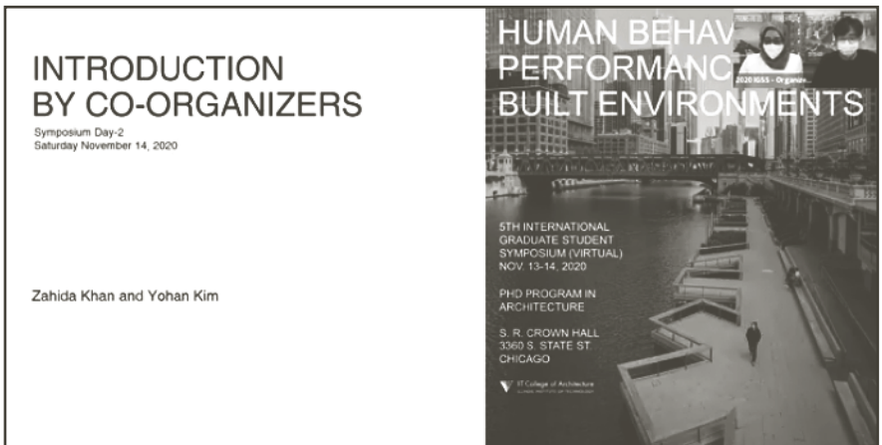
Keynote speaker Professor Ralph T. Muehleisen from Argonne National Laboratory.

From left: Narjes Abbasabadi (PhD ’18), Daniel Whittaker (PhD ’18), Mohammed H. Alkhabbaz (PhD ’17), and Ezgi Bay (PhD ’19). Previous Prometheus journal organizers/editors sharing their experiences.



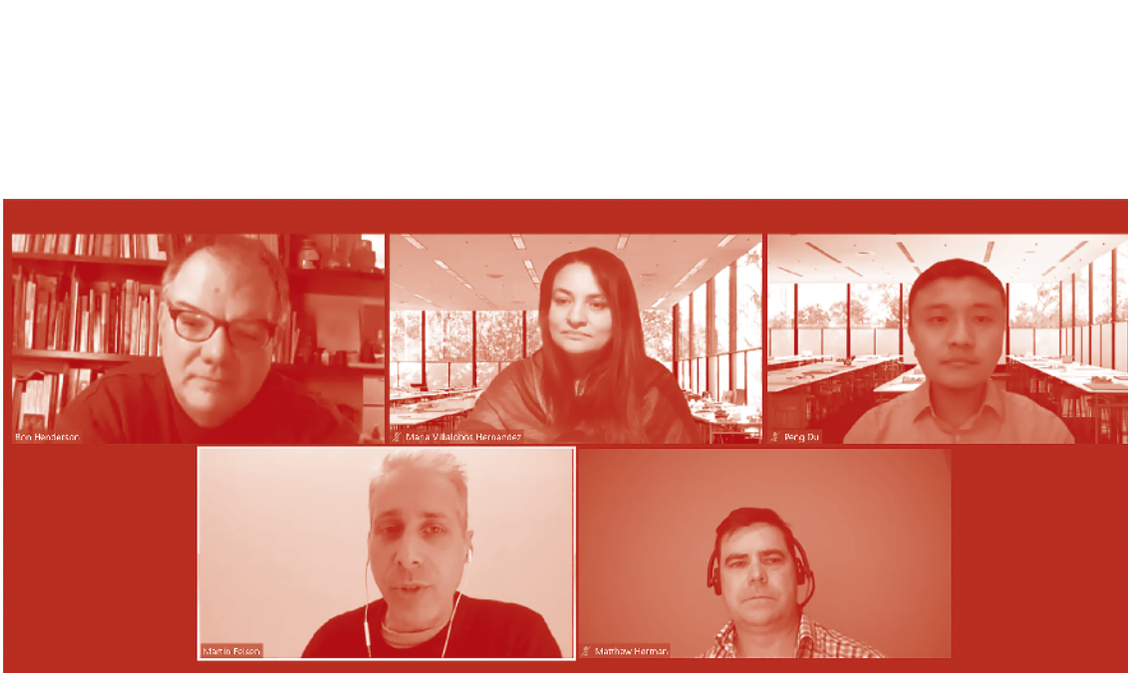


Ajla Akšamija, Associate Professor at University of Massachusetts Amherst and Building Technology Researcher/ Associate at Perkins and Will, during her keynote.



Zahida Khan and Yohan Kim, 2020 IGSS co-organizers introduce the day's agenda.

Upper row from left: Professors Carlos Teixeira, Edoarda Corradi Dell'Acqua, and Thomas Leslie. Lower row from left: Mohammad Heidarinejad and Ajla Akšamija. During the "Human Behavior and Building Performance" panel discussion.



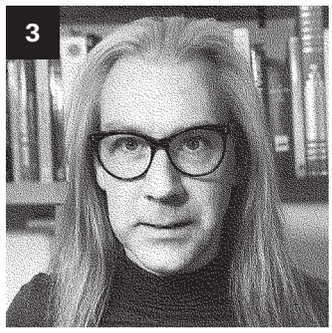
Upper row from left: Professors Ron Henderson, Maria Villalobos, and Peng Du. Lower row from left: Martin Felsen and Matthew Herman. During the 'Human Behavior in Urban Environments' panel discussion.

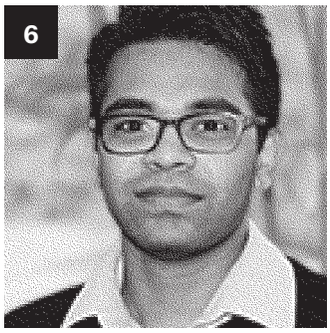
Alejandro Saldaña Perales

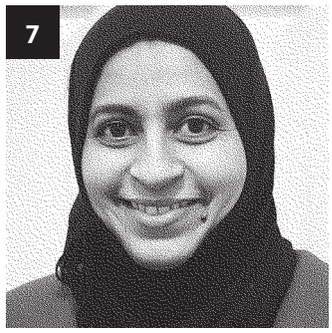
STUDENT LIFE AND RESEARCH

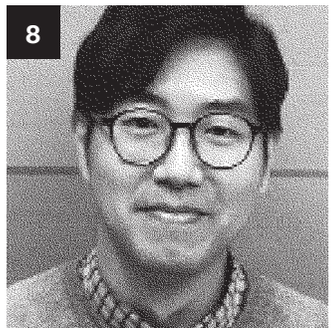
Overview of Doctoral Research

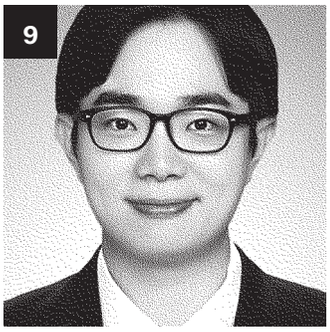
The PhD students and candidates at IIT come from diverse backgrounds. Together, they amass decades of professional and academic experiences which have shaped their research into unique and tailored academic experiences. Both as colleagues and friends, students are encouraged to spend leisure time in activities that help build strong ties with their peers as well as to contribute to their studies. Taking advantage of our privileged location, we love to take the initiative and explore. Chicago, a major global city and epicenter of architecture in North America, waits for us to wander through its streets, mingle in its neighborhoods, and linger at its parks, while it inspires us to address the contemporary dilemmas of urban environments and city life. Here, such inspiration and the students' experiences can lead them to specialize in the architectural and cultural, as well as the technological dimensions, of the discipline of architecture. The research done by our students fits well within the History, Theory, and Criticism (HTC) and the Technologies of the Built Environment (TBE) tracks. These provide our students with opportunities to work alongside highly experienced and trained faculty to better shape their work. Similarly, working close with our peers has profound impressions on one's work. Impressions which are equally as powerful as the teachings brought forward by our faculty. Crafting an environment which promotes, encourages, and facilitates such interactions is of great importance to us. Finally, our students spend plenty of time together. We become part of each other's daily routines, a vital element in our academic quest. Therefore, students perform as a family would, providing that support and encouragement that only family can ensure. Your family when away from home.

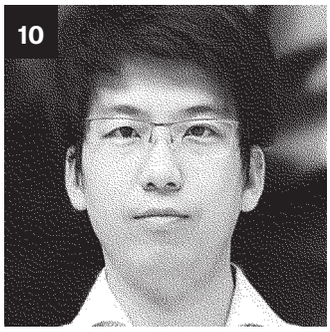


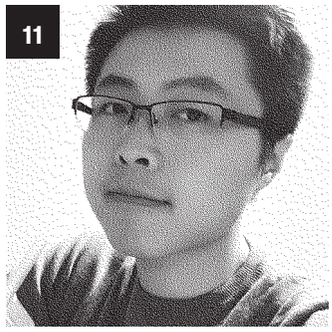


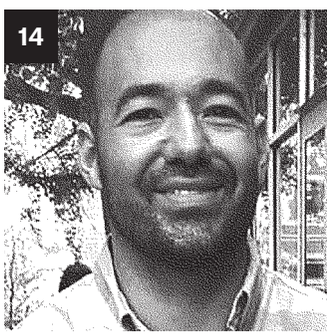












1 — Amjad Alkoud
Investigating the Impact of Ultra-Tall Building Ordinances on the Future of Major Cities; Chicago and Dubai (2015–)

2 — Alexis Arias Betancourt
The Driverless City (2020–)

3 — Syan Frey
Drawing on Darwinism: Rewriting the Origin of Louis Sullivan's Idea (2014–2021)

4 — Camélia Mina Geng
Biophilic LEED Eco-High-Rise Residential Building in Chicago (2017–)

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

6 — Piyush Khairnar
Applications of Carbon Composites: A Study in Structural and Architectural Applications of Carbon Fiber Composites in Tall Buildings (2018–)

7 — Zahida Khan
An Agent-Based Modeling approach to Simulate Human Behavior and Microclimates in Urban Public Spaces (2018–)

8 — Yohan Kim
The Feasibility of Double-Skin Facades to Provide Natural Ventilation in Tall Office Buildings (2017–)

9 — Donghyun Lee
Sustainable Facades (2020–)

10 — Tian Li
A Review of Hybrid Mode of Inpatient Care and Homecare Design Based on IoMT Technology (2020–)

11 — Lijian Ma
Archetype-Based Assessment of Embodied Energy and Environmental Impacts of Tall Buildings (2018–)

12 — Lobna Mitkees
Cultural Preservation and Energy Conservation (2018–)

13 — 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)

14 — Alejandro Saldaña Perales
Horto Urbs Est: Private Landscapes and Neighborhood Ties in Chicago's South Side (2019–)

15 — Marcos Amado Petroli
Toward a Civic Monumentality: Arches, Vaults, and Domes in Post-War American Architecture (2016–2021)

16 — Nadia Shah
From Standardization to Appropriation — A Morphological Study of a Mid-Century Mass Housing Project's Mutation in the Global South (2016–2021)

STUDENT LIFE AND RESEARCH

Our PhD Family

Throughout the school year, and despite enforced lockdown conditions in place for several months, we had opportunities to enjoy some time together. Equipped with our mandatory COVID-19 testings, odd-looking face masks, and practicing physical distancing, we set sail for some fun activities. Funtivities! Taking cues from the safety measures established at different local, state, and federal levels, we designed a mostly outdoors and local-based agenda. First, we went on a bike tour of IIT's home community Bronzeville. Then we gathered for a lovely tour of the Hyde Park/University of Chicago neighborhood. Finally, we visited Wrightwood 659 for a special, tailored visit to the *Balkrishna Doshi: Architecture for the People* exhibition. Bottom line, even through hard times it's possible to share some happy memories.

Photos courtesy of Alejandro Saldaña Perales.

PhD Bike Ride and IIT Campus Tour
September 26 and October 3, 2020
Led by Michelangelo Sabatino, Professor and PhD Program Director
Illinois Institute of Technology

Students listen to Professor Sabatino explain the neighborhood's rich architectural history.

Hyde Park/University of Chicago Tour
October 10, 2020
Led by Alejandro Saldaña Perales, PhD Student and PhD Program Administrative Assistant
Illinois Institute of Technology

At the start of the tour, students pose for a picture inside Lorado Taft's 1910 Fountain of Time at the western edge of the Midway Plaisance.

Students gathered afterward to enjoy a nice and well-deserved outdoor meal after a long walk through the Hyde Park neighborhood and University of Chicago campus.

Inside Dan Kiley's fountain at The Laird Bell Law Quadrangle in front of Eero Saarinen's 1960 D'Angelo Law Library, The University of Chicago.

Wrightwood 659 Balkrishna Doshi: Architecture for the People Tour
October 21, 2020
Led by Dan Whittaker (PhD '18), Senior Lecturer
Singapore University of Technology and Design

Photos courtesy of Michelangelo Sabatino.

Participants inside the *Balkrishna Doshi: Architecture for the People* exhibition.

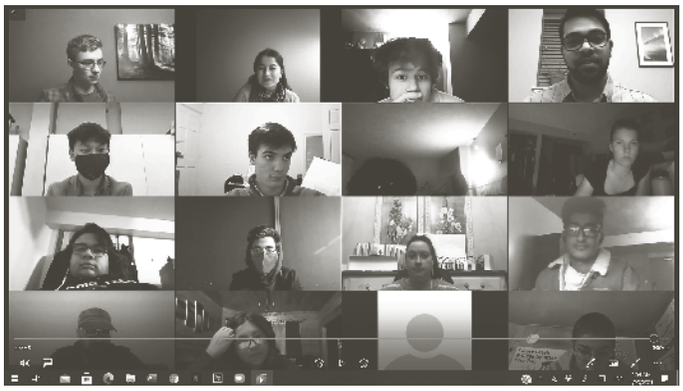
Students, faculty, and staff engage in conversation inside Tadao Ando's 2018 Wrightwood 659.

Participants inside a scaled model display, part of the *Balkrishna Doshi: Architecture for the People* exhibition.

PhD Students Teaching Experience and Studio Reviews at IIT (Fall 2020)

On-site (in person) and online teaching/reviews at IIT while maintaining social distancing for COVID-19.

Photos courtesy of Ezgi Bay and Zahida Khan.



Piyush Khairnar and Amjad Alkoud as guest critics in the final review for studio taught by Ezgi Bay.

Yohan Kim as a guest critic in the final review for studio taught by Zahida Khan.

PHD CANDIDATE DISSERTATION ABSTRACTS

DRAWING ON DARWINISM: REWRITING THE ORIGINS OF LOUIS SULLIVAN'S IDEA

Abstract

This dissertation is a study of the influence of the thesis of natural selection on American Architecture which interrogates the evidence that Sullivan had a lifelong intellectual engagement with evolutionary science. The text explores the way in which Sullivan whitewashed his legacy by publishing a fictitious book called The Autobiography of an Idea. It delineates the evidence that his life and work were shaped by the Civil War, the immigrant experience, antisemitism, racism, puritanical moralism, political corruption, and in a couple of notable moments, theft and gambling losses.

In the course of the research, I discovered a set of overlooked drawings and a lost essay by Sullivan that reveal the moment in time at which he first arrived at his architectural style. The inspiration for that method was a book by the botanist Asa Gray, who was Darwin's chief proponent in the United States. The deeper part of my research was understanding the role Gray played in educational policy and politics, particularly in relation to the abolition of slavery, the liberation of women, and the national attitude regarding the displacement of First Peoples.

In a manner that contradicts the doctrine of exceptionalism, I show that Sullivan's experience as an immigrant exposed him to just the right education to lead him to explore evolutionary science as the inspiration for his unique vocabulary of design. I argue that Sullivan's Darwinism is not a variation on the idea of nature as inspiration, but is rather a commitment to the development of architecture as a secular art. The work explores the way in which Sullivan adapted the strategy used by Darwin to champion scientific understanding and deployed them in his own writing to argue for the liberation of American Architecture from its racist and colonialist origins.

PhD Candidate

Syan Frey
Thesis Defense (Virtual)
April 14, 2021

Above: Screenshot of Syan Frey's Virtual Thesis Defense.

TOWARD A MODERN CIVIC MONUMENTALITY: ARCHES, VAULTS, AND DOMES IN POST–WAR AMERICAN ARCHITECTURE

Abstract

This dissertation studies the use of arcuated structures in post-World War II American civic buildings, which serve both to answer the practical and functional demands of the architectural program, and to communicate a distinct and hierarchical character inherent to the very genesis of civic architecture. This research demonstrates how a generation of multicultural architects, educated in the academic tradition, with the collaboration of structural engineers, participated in the expansion of the syntax and vocabulary of modern architecture at a time when the language of monumentality was also being discussed. In doing so, they moved away from a Bauhaus-German doctrine that promoted a universal, orthogonal, and homogeneous architectural language, serving all types of buildings. In this context, this research redefines the relationship between academic tradition and modern approaches to monumentality in American architecture, which are usually seen as antagonistic languages. To test the hypothesis that these new arched forms, of high structural engineering, were linked to both modern and academic aspects, and more precisely, French roots, this research addresses three main issues: (i) the mistrust of the new monumentality, which was often mystified and associated with totalitarian regimes; (ii) the analysis of this production through pioneering case studies in postwar arched structures; and (iii) the relationship between academic tradition and modern architecture, with an emphasis on the theory of "architectural character." Finally, this research concludes that the construction of this civic monumentality in the United States was not only a rational response to special programs and an opposition to the universal character of modern buildings but also the result of an immigration of more inclusive ideas, which, reacting with the local tradition and heritage of the Beaux-Arts system, gave rise to an autochthonous American production.

PhD Candidate

Marcos Amado Petroli

Thesis Defense (Virtual)
December 22, 2020

Above: Now Professor Marcos Amado Petroli thanking the audience, guests, and advisors shortly after earning approval of his work by all members of his Doctoral Committee.

REVISITING MODERNIST MASS-HOUSING: RESIDENTS AS ACTIVE AGENTS OF CHANGE

Abstract

In this PhD research I have examined the modernist approach of mid-century mass housing projects against the backdrop of post-colonial nation building and the need for housing refugees through resettlement projects after the second World War. Architectural modernism's response has been to 'generalize problems' and provide 'normative prescriptions' as solutions based on rational models. I argue that the pedagogy of both modernism and late modernism presented cultural distinction as an intermediary condition that was subject to change; it engaged with the "concept of normalcy" for the formation of society through spatial and physical organization. Using the case study of Pakistan, I present how this notion was at odds with Pakistani nationalism from the beginning, since Pakistan was created on the premise that it was a traditional society. Through the post WWII refugee resettlement project called Korangi Town in Karachi, Pakistan, I examine what was proposed, designed, and predicted by the Greek architect and planner Constantinos Doxiadis. The morphological study of the evolution of the Town in the past 60 years reflects on how the normal architecture and planning standards of the West were received in the non-Western culture. The changes that the residents made through the processes of 'adaptation', 'expansion,' and 'appropriation' show that the residents, rather than being passive recipients of a built environment, were active agents in adjusting and adding to it according to their social and cultural needs. Inhabitants' active agency in contributing to socially and culturally appropriate built environments needs attention by the planning and architecture professions. This dissertation raises questions about how the profession can support this active agency from the beginning and through the planning and design processes of mass housing.

PhD Candidate

Nadia Shah
Thesis Defense (Virtual)
April 21, 2021

Above: Screenshot of Nadia Shah's Virtual Thesis Defense with her Doctoral Committee.

STUDENT LIFE AND RESEARCH

Congratulations to our Vinci Scholars, 2020–21

Recipients of the Vinci Fellowship tuition scholarships include: Amjad Alkoud, Piyush Khairnar, Tian Li, Lijian Ma, Alejandro Saldaña Perales, Nadia Shah

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.

Shah, Nadia. *2020–2021 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 and is based upon criteria that acknowledge innovation, integrity, and scholarship in architectural and/or environmental design research.

Petroli, Marcos. *2020–2021 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.

Khan, Zahida. *2020–2021 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.

1ST IIT INTERNAL MULTIDISCIPLINARY SYMPOSIUM: COLLEGE OF ARCHITECTURE, THE CENTER FOR LEARNING INNOVATION, INSTITUTE OF DESIGN

Overview

The symposium was based on Anat Mor-Avi's (PhD '20) dissertation exploring the connection between Architecture and Education and was viewed as an opportunity to open a dialogue among IIT community members across disciplines regarding developing a collaborative culture and how it affects the practical use of space across the campus.

Photos courtesy of Anat Mor-Avi.

Learning Cultures | Learning Spaces

Empowering Collaborative Culture Through Active Learning Spaces

October 23, 2020

Link to symposium video: https://youtu.be/VC9YkNC4RWM

The symposium focused on three significant topics:

LEARNING CULTURE

Active Collaborations: How do we promote, by design, a collaborative culture within each unit and between units?

LEARNING SPACES

Active Learning: How do active spaces support active learning?

IIT SPACES

Active Legacy: Future growth informed by history

Pecha-kucha style presentations by faculty and staff explored the topics from interesting angles.

The symposium was organized by Anat Mor-Avi (PhD '20) and Kristin Jones (PhD '16) from the College of Architecture in partnership with the Center for Learning Innovation and the Institute of Design, hosted generously by Mies Society Director Cynthia Vranas Olsen (PhD '17), with synthesizing commentary by Dean Reed Kroloff, CoA, and Dean Denis Weil, ID.

This symposium will hopefully be a catalyst for meaningful discussions in the future about Learning and Architecture.

Learning Cultures | Learning Spaces: Why Design Matters — 20:21
Anat Mor-Avi, CoA / Kristin Jones, CoA / Ruth Schmidt, ID

Institutional Supports for Active Learning and Collaboration at IIT — 47:48
Carol Emmons / Kelly Roark / Lital Pascar, Center for Learning Innovation (CLI)

Space as Empowerment — 58:01
Ullica Segerstråle, Social Sciences, Lewis College of Science and Letters

Promoting Positive Well-Being: Considerations for Learning Spaces — 1:06:32
Nicole Ditchman, Psychology, Lewis College of Science and Letters

Library Space as a Reflection of Changes in Learning Culture — 1:14:31
Devin Savage, Dean of Libraries, Paul V. Galvin Library

Questions for Physical Spaces in Digital Times — 1:45:36
Lance Fortnow, Dean, College of Computing

The Entrepreneurial Mindset as a Model for an Effective Learning Culture — 1:53:12
Nik Rokop, Stuart School of Business

Models of Active Learning in Armour College of Engineering — 2:00:20
Geoffrey Williamson, Armour College of Engineering

Leading a Culture of Innovative Pedagogy Through Future Learning Spaces — 2:07:33
Einat Gil, School of Education, Seminar Hakibutzim

ACCOMPLISHMENTS

This is a summary of PhD student and PhD alumni accomplishments throughout the 2020–21 academic year:

Publications

Khan, Zahida; Azari, Rahman; Stephens, Brent. "Outdoor Thermal Comfort (OTC) in Human Interaction-Based Studies: An Overview of Reviews." *Proceedings of the 2020 Building Performance Analysis SimBuild Conference by ASHRAE-IBPSA* (2020).

Khan, Zahida; Du, Peng. "Typologies of Outdoor Public Spaces at Street Level of Tall Buildings in Chicago." *Prometheus 04*, IIT Architecture Chicago (pp. 90–97). ISSN: 2688-0776 (2020).

Khan, Zahida; Azari, Rahman. "Outdoor Thermal Comfort and Human Interactions: Models and Methodologies." Book Chapter (2021, anticipated).

Kim, Yohan; Elnimeiri, Mahjoub; Clark, Raymond; Heidarinejad, Mohammad. "The Benefits of Double-Skin Facades to Facilitate Natural Ventilation in Tall Office Buildings." *Prometheus 04*, IIT Architecture Chicago (pp. 70–73). ISSN: 2688-0776 (2020).

Kim, Yohan. ""The Feasibility of Natural Ventilation in Chicago's Tall Office Buildings Using Double-Skin Facades." *Proceedings of the ConCave PhD Symposium: Divergence in Architectural Research,* School of Architecture, Georgia Institute of Technology, Atlanta, GA, (2021).

Saldaña Perales, Alejandro. "Centro Comunitario Bicentenario de la Independencia." Orden, Unidad, Sistema: 15 años de la Cátedra Blanca. Instituto Tecnológico y de Estudios Superiores de Monterrey. ISBN: 978-607-501-591-0 (2020).

Presentations

Khan, Zahida. "Outdoor Thermal Comfort (OTC) in Human Interaction-Based Studies: An Overview of Reviews." Poster presentation at the *2020 Building Performance Analysis SimBuild Conference by ASHRAE-IBPSA* (2020).

Khan, Zahida. "Human Spatial Behavior and Microclimates in Urban Public Spaces Using Agent-Based Modeling Simulation." Paper presentation at *5th International Graduate Student Symposium of the PhD Program at IIT* (2020).

Khan, Zahida. Invited speaker for Architectural History at Judson University (2020).

Kim, Yohan. "The Impact of Double-Skin Facade Configurations on Wind-Driven Ventilation in Tall Office Buildings." Paper presentation at *5th International Graduate Student Symposium of the PhD Program at IIT* (2020).

Kim, Yohan. "The Feasibility of Natural Ventilation in Chicago's Tall Office Buildings Using Double-Skin Facades." Paper presented at the *Concave PhD Symposium: Divergence in Architectural Research,* School of Architecture, Georgia Institute of Technology, Atlanta, GA, March 5–6, 2020.

Li, Tian. "A Review of Hybrid Mode of Inpatient Care and Homecare Design Based on IoMT Technology." Presented at the *2020 Fifth International Graduate Student Symposium at Illinois Institute of Technology,* Chicago, IL, November 2020.

Mor-Avi, Anat. "Space We-Q: The Connections Between Creativity, Brain Fog, and the Intelligence of the Built Environment." *ANFA, Conference on Neuroscience and Architecture,* September 2020.

Shah, Nadia. "Post-World War II Utopia—The Case of Korangi Town." Paper presented at *The City and Complexity – Life, Design and Commerce in the Built Environment*, organized by City, University of London; AMPS and PARADE. London, England, June 19–21, 2020.

Awards, Events, Fellowships, Grants, Scholarships, and Invitations

Khairnar, Piyush. 1st Year Design Studio, Final Review, College of Architecture, IIT.

Khairnar, Piyush. Digital Fabrication, Final Review, School of Architecture, Academy of Art University, San Francisco.

Khan, Zahida. Peer Reviewer, BPAC/ ASHRAE Conference (2020).

Khan, Zahida. Adjunct Studio Professor at IIT (2020).

Khan, Zahida. Invited critic/reviewer for Design Communications at IIT (2019).

Kim, Yohan. Travel Grant, College of Architecture, Illinois Institute of Technology, Chicago, IL, (2020).

Kim, Yohan. Adjunct Professor at IIT (2019).

Kim, Yohan. Invited critic/reviewer for Studio at IIT (2019–20).

Li, Tian. Tuition Scholarship from Vinci Fund, Illinois Institute of Technology, Chicago, IL, (2020).

Mor-Avi, Anat. IIT Faculty Multidisciplinary Symposium "Learning Culture | Learning Spaces" with Kristin Jones, PhD, at the Center for Learning Innovation on Active Learning, Active Collaboration, and Active Legacy, October 23, 2020.

Mor-Avi, Anat. The Israeli Ministry of Education Grant. 2.5 years for Research and Development on Learning Environments Supporting Hybrid Pedagogy.

Defended Dissertations

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

Frey, Syan. "Drawing on Darwinism: Rewriting the Origins of Louis Sullivan's Idea." PhD diss., Illinois Institute of Technology, April 2021. Committee: Michelangelo Sabatino (co-chair), Donna Robertson (co-chair), Ullica Segerstråle, Sean Keller, and Jack Snapper.

Petroli, Marcos Amado. "Toward a Civic Monumentality: Arches, Vaults, and Domes in Post-War American Architecture (2016–20)." PhD diss., Illinois Institute of Technology, December 2020. Committee: Carlos Eduardo Comas (co-chair), Michelangelo Sabatino (co-chair), Paul Endres, Vedran Mimica, John Snapper, Thomas Leslie, and Eric Mumford.

Shah, Nadia. "Revisiting Modernist Mass-Housing: Residents as Active Agents of Change." PhD diss., Illinois Institute of Technology, April 2021. Committee: Michelangelo Sabatino (co-chair), Roberta Feldman (co-chair), Mahjoub Elnimeiri, Vedran Mimica, and Jonathan Rosenburg.

Recent Alumni News

See the following spread for "The Next Generation of Architecture Academics," originally published November 13, 2020, on the CoA website.

THE NEXT GENERATION OF ARCHITECTURE ACADEMICS

Since its founding in the 1990s, the PhD program at Illinois Institute of Technology's College of Architecture has served as a laboratory for applied research and scholarship—and a launching pad for the next generation of architectural educators. It's no surprise, then, that nine recently graduated PhD alumni have already started tenure-track professorships for the 2020 academic year at institutions the world over.

Informed by rigorous study at Illinois Tech, the graduates bring with them specialized expertise informed by the doctoral program's emphasis on building technology and performance, and architecture history and preservation. In the case of the former, many will become bulwarks in the fight against climate change by researching and teaching data-driven methods to reduce carbon emissions in the built world at large scales.

"Against the background of climate change and rapid urbanization, the cities we build today urgently need to achieve net-zero carbon emissions wherever possible, at both the building and urban scales, and both operational and embodied carbon emission reductions need to be a part of this equation," says **Peng Du (PhD ARCH '15)**. Du will explore performance-driven design research, focused on quantifying the environmental impacts of the built environment, at Texas Tech University.

Andres Pinzon (PhD ARCH '17), meanwhile, joined the Passive House Institute US where he works on high-performance buildings. Besides this work, Pinzon will teach these practices at Universidad de los Andes in Bogotá-Colombia as an assistant professor. "Architects need to find alternatives to reduce operational carbon, employ renewables, and deliver comfortable indoor environments. During my studies at IIT-CoA, I worked on the adoption of passive buildings principles that are climate specific and reduce energy consumption."

Similarly, at the University of Texas at Arlington, **Narjes Abbasabadi (PhD ARCH '19)** will explore human and energy feedback systems to develop performance-driven methods and tools for the design of sustainable built environments at the university's multidisciplinary College of Architecture, Planning and Public Affairs.

"[In the PhD program] I worked with different departments, including architecture, environmental engineering, computer science, and humanities at Illinois Tech, and the Urban Planning Department at [the University of Illinois at Chicago]," says Abbasabadi. "[It] all helped me develop my interdisciplinary research and enabled me to address the research objectives that require a wide range of theoretical and applied knowledge."

Others, meanwhile, have become specialists in building and urban performance as it relates to health and wellness in the built environment. **Mehdi Ashayeri (PhD ARCH '20),** for example, will establish a research lab at Southern Illinois University Carbondale as an assistant professor of architecture to expand his research at the crossroads of sustainability, health, and computation in the built environment. Specifically, he became an expert in sustainable and healthy built environments while in the College of Architecture's PhD program.

Similarly, **Alia Fadel's (PhD ARCH '18)** scholarly work at the College of Architecture in biophilic design and urbanism—investigating the relationship between humans and nature in the built environment—will continue as she joins Leeds Beckett University in the United Kingdom as a lecturer in landscape architecture.

"My research and teaching aim at investigating the interrelationship between design, health, and contact with nature in urban settings and the role of contact with nature and mediums of nature-simulation in evoking human positive responses, supporting health, and promoting productivity in cities, particularly in the context of the current health crises the entire world is facing," says Fadel.

For PhD graduates who studied along the College of Architecture's History, Theory, and Criticism specialization, they bring to their new universities expertise in the study of architecture's cultural implications. **Daniel Whittaker (M.S. ARCH '15, PhD '18),** for instance, focused his doctoral research on the historiographies of house museums in Chicago, attempting to broaden the scope of the narrative of early preservationist actions in Chicago in order to make them more inclusive. Whittaker is now senior lecturer at Singapore University of Technology and Design where his research continues to chronicle the individuals preserving old buildings around the world.

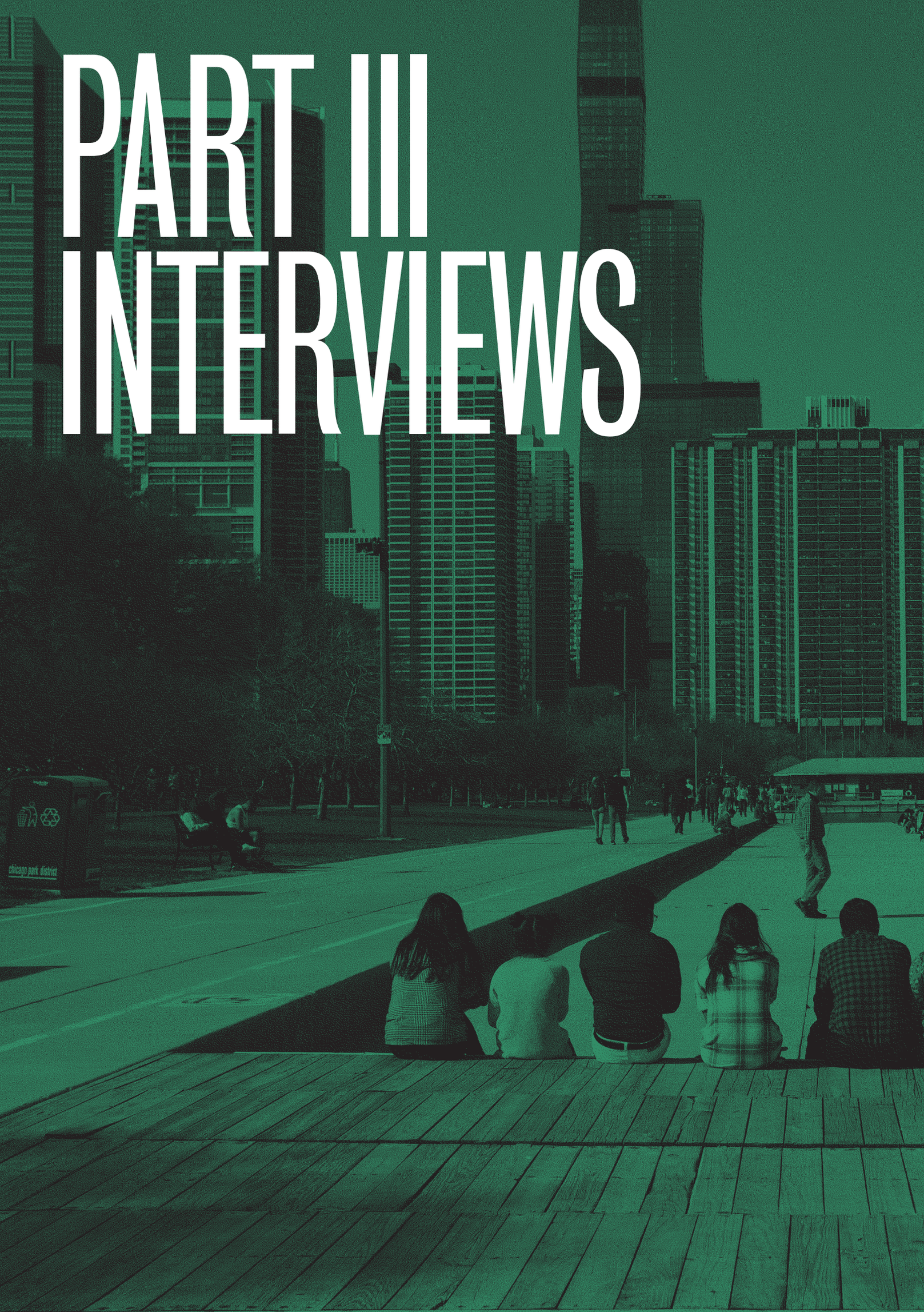
Dan Costa Baciu (PhD ARCH '18) began empirically testing his theory of "cultural life" during his doctoral studies at IIT Architecture. That is, he used his theory to predict how entire collectives of authors and audiences disseminate and receive ideas, and show how ideas grow, diversify, and leave their footprint in urban space. Baciu is now an assistant professor of digital tools at TU Delft, on the Faculty of Architecture and the Built Environment.

Similarly **Hyesun Jeong (PhD '16)** focused her research on quantifying the role of arts and culture in the sustainable growth of urban centers of global cities like Chicago, Paris, and Seoul. As Assistant Professor in Architecture at the University of Texas at Arlington, she now focuses these efforts in the metropolitan complex of Dallas-Fort Worth.

Finally, **Marcos Petroli (PhD ARCH '20)** focused his doctoral research on arcuated post-World War II structures, shedding light on how the modern reinterpretation of historical forms, such as arches, vaults, and domes, can be used as emblems of civic architecture. Now, after receiving his doctorate, he's serving as an assistant professor at Judson University in Elgin, Illinois.

"Civic building requires a particularized character that cannot be treated casually or frivolously," says Petroli. "Structures like monuments, libraries, stadiums, and terminals all demand a distinctive physiognomy that reveals their purposes, endowing them with a culturally appropriate expression. This research is a contribution to designing such buildings, helpful in a moment when the image of American civic equality in architecture seems to be lacking or incomplete."

PART III
INTERVIEWS



Chicago Lakefront. Photo courtesy of Yohan Kim.

INTERVIEWS

WITH PHD PROGRAM ALUMNI

JAMIL BINABID

Interview conducted by Alejandro Saldaña Perales, January 2021.

[ASP] Could you please synthesize the nature of the research you performed as a student and why you believe it is important?

[JB] My research was about studying the possibilities of using vegetation as an energy-saving method in hot climates, and I believe it is important as it strengthens our connection to nature, amongst the many other benefits that we gain from vegetation.

[ASP] How did your work as an IIT PhD student benefit by virtue of you being located in Chicago and at IIT through the course of your research?

[JB] Being at Chicago and IIT meant, for me, having access to leading researchers and people in the industry from sustainability, energy saving, vertical vegetation, and engineering. [Exploring] and visiting outstanding projects that implemented amazing concepts supported my theories.

[ASP] Why do you consider it important for future architecture scholars to carry on the work you've done in your research at IIT? Which fields within your research would you like to see developed by future researchers?

[JB] It is important to harmonize with nature and this is one of our key elements...using nature as a natural insulation to buildings and air purifiers too. On an urban scale, it is humanizing cities and enhancing the quality of life of its residents. I wish to see future collaborations between botanists, landscape architects, engineers, and architects, working together to develop this area more with field experiments.

[ASP] What aspects of your professional work as a scholar would you favor to be influenced by the conditions of a new normality we will be facing in a global post-COVID scenario?

[JB] Designing more vertical vegetation in projects. Indoor and outdoor, in the sense of enhancing well-being, health, and enforcing biophilia. As we all experienced quarantine and had longer times spent at home, a lot of people re-designed their spaces and have had more time to connect to nature in the simplest manners, which raised questions like wellness and health; the encouragement of using vegetation for our psychological well-being besides all the other benefits.

Jamil Binabid is an Assistant Professor in the Department of Architecture and Building Science, College of Architecture and Planning, King Saud University, Riyadh, Saudi Arabia. He is an architect, designer, researcher, photographer, and an accredited professional with LEED AP BD+C, WELL AP & Mostadam AP. He holds an undergraduate degree in Architecture from King Abdulaziz University, Jeddah, Saudi Arabia. He also holds graduate degrees from the University of Southern California in Building Science (master's) and Landscape Architecture (certificate). He obtained his PhD of Philosophy in Architecture at Illinois Institute of Technology, Chicago. His area of research is Sustainability and Energy Conscious Design. While maintaining the academic side of his career and acting as Head of Community Service Unit at the college, he was also a consultant in Sustainability, Wellness, and Biophilia for local firms. He is currently the chairman of the Industrial Design Division of the Saudi Umran Society of Architects (SUSA) and a member of the "Sustainability" group at his department. In addition to SUSA, he is a member of the Saudi Council of Engineers (SCE), American Institute of Architects (AIA), and U.S. Green Building Council (USGBC).

SYAN FREY

Interview conducted by Alejandro Saldaña Perales, February 2021.

[ASP] Could you please synthesize the nature of the research you performed as a student and why you believe it is important?

[SF] My dissertation is a study of the influence of the thesis of natural selection on American Architecture entitled "Drawing on Darwinism: Rewriting the Origin of Louis Sullivan's Idea" which interrogates the evidence that Sullivan had a lifelong intellectual engagement with evolutionary science. The text explores the way in which Sullivan whitewashed his legacy by publishing a fictitious book called "The Autobiography of an Idea." It delineates the evidence that his life and work were shaped by the Civil War, the immigrant experience, antisemitism, racism, puritanical moralism, political corruption, and in a couple of notable moments, theft and gambling losses.

In the course of my research I discovered a set of overlooked drawings and a lost essay by Sullivan that reveal the moment in time at which he first arrived at his architectural style. The inspiration for that method was a book by the botanist Asa Gray, who was Darwin's chief proponent in the United States. The deeper part of my research was understanding the role Gray played in educational policy and politics, particularly in relation to the abolition of slavery, the liberation of women, and the national attitude regarding the displacement of First Peoples.

In a manner that contradicts the doctrine of exceptionalism, I show that Sullivan's experience as an immigrant exposed him to just the right education to lead him to explore evolutionary science as the inspiration for his unique vocabulary of design. I argue that Sullivan's Darwinism is not a variation on the idea of nature as inspiration, but is rather a commitment to the development of architecture as a secular art. The work explores the way in which Sullivan adapted the strategy used by Darwin to champion scientific understanding and deployed them in his own writing to argue for the liberation of American Architecture from its racist and colonialist origins.

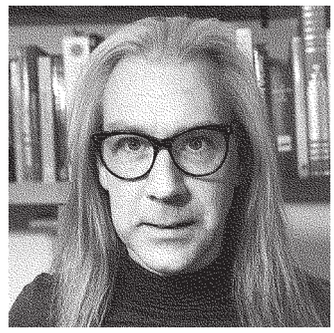
[ASP] How was your work as an IIT PhD Candidate supported by being in Chicago and at IIT?

[SF] Well the subject of my research is a Chicago architect, so it was quite helpful that when I found a new relevant project I could generally jump in the car and go look at it. More importantly, The Ryerson Burnham Library was my primary archive, which is also here. More broadly, the context in which Sullivan was working was Chicago, so there were numerous other resources (The Newberry Library, the Chicago Historical Society, archives of several religious and spiritualist organizations) that I could draw on to find or clarify details as I went along. Finally, there were community scholars and organizations that I was able to draw on for support and feedback. Perhaps the most helpful of those was the group of fellows with whom I formed the William LeBaron Jenny Society, which met once a month for lunch at The Cliff Dwellers club, up until the lockdown.

IIT has been an interesting place to be for a number of reasons. I found the deeply international makeup of the student body to be a pleasant surprise; I've had to wrap my mind around global cultures far more than I did at any of my previous institutions. The interdisciplinary nature of the various projects students are pursuing meant that I got glimpses of what the work was actually like in an array of allied disciplines. While ultimately that served to reinforce that I'm happier in my field, it also expanded my knowledge base considerably. Finally, the size of the program and the institution meant that the community was more personal, and a bit like a family, which turned out to be, generally, more beneficial than not.

[ASP] Why do you consider it important for future architecture scholars to carry over the work you've done in your research at IIT? Which fields within your research would you like to see developed by future researchers?

[SF] One of the implications of my research that is not immediately obvious is that most of the history of architecture prior to the twentieth century had a religious or spiritual origin, which is not really how we teach it. Rather, I suppose we should be approaching large parts of the history of architecture more like anthropologists — or archaeologists if you prefer. As I studied archeology as an undergrad, and anthropology for my first master's, I find this possibility intriguing on a number of levels. It also suggests a wide array of potential collaborations with those disciplines.



I have had more than a few people along my path try to discourage me from doing history, and to focus on something more empirical, as it is more employable, or because the large parts of the history of architecture have been done already. Regarding the latter, I feel that my work quite effectively contradicts that advice, as it fills a substantial hole I discovered in the existing literature. Taking that idea further, I think there is more work to be done in large parts of the history of architecture that is not just recontextualizing or refreshing, but rather examining the deep contradictions that exist in architecture, particularly in shifting social justice contexts.

There are also quite a few projects that my work touched on that would make great topics for future scholars, both in my field and beyond. Perhaps the most glaring of those, from my perspective, is the relative absence of a history of architectural engineering. There are also discrete projects in urban history that I found lacking appropriate scholarly attention — a comprehensive study of the Levee district for example, and the Second Chicago Fire of 1874. One of my committee members, Jack Snapper, has been telling me for quite some time that I'm going to have to write a better biography of the Botanist Asa Gray, and I hope that, if I don't get around to it, someone else will eventually.

[ASP] How do you think the conditions of scholarship will change in the post-COVID world?

[SF] Personally, I think it is premature to be talking about a post-COVID world. I lived with a doctor for fifteen years, and I can affirm what nearly every study of the subject can affirm — doctors are terrible at prognosis. I read this morning that at the current rate of vaccination it could take seven years before we get to the new normal. If you are paying attention to the details of this epidemic, global society has largely failed most underserved communities throughout the course of the epidemic, just as it has in the past, and there is no reason to believe this won't continue in the future. There is quite a bit of really good dystopian science fiction that is predicated on pandemics and inequality, and, while fiction may not be true, it can be good to think with.

I do believe there are practical effects that are, as yet, difficult to qualify. The wave of early retirements prompted by health concerns should eventually prompt some new faculty opportunities. Student enrollment is down because of the pandemic, but the recession that will follow it usually drives a lot of folks back to school. There are a number of obvious new areas of study related to the pandemic of course, but the impacts that it will have on how we do interior design or manage interior air quality, just as two examples, are among the many subjects that no one is even beginning to consider just yet.

My first career was in distance learning, and I expect the impact of the pandemic and the experience we all had in it will reinvigorate both research in that subject and the ethical debate that has been a part of the introduction of technology to academia since the start. I read an article by a student who discovered half way through a course that the professor teaching it had been dead for a year. For my own part, I was involved in an experiment at one point that proved you could develop methods of effectively grading short answer exams without having expert graders. Once the economic unit with which we currently measure education is reduced to costing very little, we may finally have to address how ill-suited capitalist strategies for mismanaging higher education are.

Syan Frey is an Architectural Historian interested in the origins of Modernism and the role of Race, Class, and Gender in the production of Architecture, the built environment, and Interior Design.

Prior to joining the History and Theory track of the PhD in Architecture, Frey earned degrees from SAIC, The University of Chicago, and Oberlin College. Frey has taught at all of those Institutions, as well as having been on the Faculty of Harrington College of Design.

ANAT MOR–AVI

Interview conducted by Alejandro Saldaña Perales, January 2021.

[ASP] Could you please synthesize the nature of the research you performed as a student and why you believe it is important?

[AM] My goal was to contribute to the next steps in the connection between architecture and education. Therefore, the dissertation aims to be an applied-design research connecting research to practice and influence the next generation of innovative learning environments. This topic is part of an intensive global discussion; it's an important mission to add to the scope of global knowledge.

[ASP] How did your work as an IIT PhD student benefit by virtue of you being located in Chicago and at IIT through the course of your research?

[AM] Chicago is my second home, and IIT, with its legacy, a natural place to continue my research on learning environments.

[ASP] Why do you consider it important for future architecture scholars to carry on the work you've done in your research at IIT? Which fields within your research would you like to see developed by future researchers?

[AM] There is an understanding that the fields of education and learning are the most important to economics. Since research shows, as well, that space contributes and empowers learning, continuing to explore the connection between both fields is important.

[ASP] What aspects of your professional work as a scholar would you favor to be influenced by the conditions of a new normality we will be facing in a global post-COVID scenario?

[AM] Technology became a major platform for delivering learning and dramatically changed the domain of education during the challenging days of the pandemic. Since I was focusing on my research on the physical learning space, I was concerned that the dissertation is not relevant, literally, on the day of graduation. However, it was very inspiring to find ways to apply the new knowledge when discussing the new situation and understand that the skills, the tools, and the intellectual maturity we gain during the PhD journey will carry us through the dynamic future.

Anat Mor-Avi is an architect and interior designer with a master's degree in architecture from IIT Chicago, earned with honors and with an AIA Gold Medal. Her thesis was awarded in a "Unique Learning Environment" category by the American Institute of Architects competition in 2001. Today, she is pursuing her research toward PhD on the subject "Empowering Learning Environment." Anat is a lecturer in the field and has designed schools, kindergartens, offices, banks, and residential projects in the U.S. and Israel.

Anat is also an acclaimed artist. Her art works are presented in many exhibitions in her country and abroad. As an artist she was selected to represent her country at the World EXPO in Shanghai in 2010 with her now iconic paintings. Her artworks are presented in lobbies, public places, offices, and private homes.

Anat's concept of "Talking Walls" "uses" art and architecture as a cultural and marketing tool, contributing added value to the image of a space...a well-thought connection between the space and the art which will support the vision and the message in a unique and sophisticated way — connecting the visitors to one's universe, brand, and vision.

MARCOS AMADO PETROLI

Interview conducted by Alejandro Saldaña Perales, January 2021.

[ASP] Could you please synthesize the nature of the research you performed as a student and why you believe it is important?

[MP] My doctoral research analyzes arcuated post-World War II structures, investigating how the modern reinterpretation of historical forms, such as arches, vaults, and domes, can be used as emblems of civic architecture. Through the theory of "character," a system of ideas that look for an appropriate and distinctive physiognomy in buildings, this dissertation argues that there is a continuity between the classical tradition and such autochthonous production in the U.S. Civic buildings require a particularized character that cannot be treated casually or frivolously. Structures like monuments, libraries, stadiums, and terminals all demand a distinctive physiognomy that reveals their purposes, endowing them with a culturally appropriate expression. This research is a contribution to designing such buildings, helpful in a moment when the image of American civic equality in architecture seems to be lacking or incomplete.

[ASP] How did your work as an IIT PhD student benefit by virtue of you being located in Chicago and at IIT through the course of your research?

[MP] The triumph of modern architecture is inseparable from ideas in the practice of the German Bauhaus, which arrived in Chicago mostly through the image of Mies. The Bauhaus system replaced the French educational system that had evolved for over 200 years, a system that directly opposed that buildings should have a distinctive physiognomy, yet have a universal character. The old French architecture defined itself as the design of public buildings which quite naturally must be grand.

[ASP] Why do you consider it important for future architecture scholars to carry on the work you've done in your research at IIT? Which fields within your research would you like to see developed by future researchers?

[MP] This research was carried out in a College of Architecture that was founded by faculty who, having worked alongside architects and engineers such as Fazlur Khan and Myron Goldsmith, had a keen understanding of the necessity for collaboration between the two allied disciplines. By focusing on the history of ideas along with building construction and technology, this dissertation builds upon a unique IIT history. Unfortunately, explicit recognition of contributions by engineers is problematic. Much still needs to be done until we unveil issues of authorship, interdisciplinary teamwork, and the embracement of multiculturalism that this doctoral research aimed to address.

[ASP] What aspects of your professional work as a scholar would you favor to be influenced by the conditions of a new normality we will be facing in a global post-COVID scenario?

[MP] The current pandemic scenario certainly will impact the issue of collective identity. In the post-war period, after the massive destruction of numerous territories and the collapse of old ideas of political expansion, new efforts on consolidating civic values were rising on a global scale, ultimately impacting the role of public buildings in terms of character and symbolic expression. Today, when public remembrance is in constant confrontation, monuments, old and new, hold an ambiguous power capable to oppress, and capable to rescue the use of public spaces. Building a theoretical framework upon collective memory is undoubtedly an important tool in the reconstruction of the image of the city.

Marcos Petroli is Assistant Professor of Architecture at Judson University, Elgin, Illinois. He earned two Bachelor's degrees from the College of Architecture, Federal University of Rio Grande; his Master's from the History and Theory of Architecture from the Federal University of Rio Grande; and a PhD in the History and Theory of Architecture from Illinois Institute of Technology, where he also worked as the PhD Program Administrative Assistant. His thesis, titled "Toward a Modern Civic Monumentality: Arches, Vaults, and Domes in Post-War American Architecture," explores the use of classical forms to communicate a distinct and hierarchical character inherent to the very genesis of civic architecture. Petroli has publications written in both English and Portuguese in several countries and his research is focused on the modern civic buildings in the Americas. He has also participated in the Board of Directors of Docomomo Chicago and Florida.

INTERVIEWS

WITH AFFILIATED FACULTY

EDOARDA CORRADI DELL'ACQUA

Interview conducted by Alejandro Saldaña Perales, January 2021.

[ASP] Which is the missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to be so ill prepared to deal with a phenomenon as the current pandemic?

[ECD] Years ago I attended a lecture in Crown Hall by Herman Hertzberger titled "Why architecture?" Showing a picture of the old reading room of the Bibliothèque Nationale de France in Paris, Herman Hertzberger expressed his view on architecture, that architecture is about space and space is about "togetherness," a concept that I share. Forcing us to lead more isolated lives, the COVID-19 pandemic has challenged our ability to be together and thus this fundamental notion of architecture.

This new reality provides a moment of reflection and there are important lessons that architects and urban designers can learn from the current health emergency. At the urban scale, I believe that the pandemic has underlined the importance for all neighborhoods to have access to outdoor public spaces and parks. Regarding the design of buildings, I believe that a focus should be placed on flexibility in the interior layout (when possible). Furthermore, confronted with an airborne virus, the effective ventilation of indoor spaces through mechanical and natural means and the use of high-efficiency filters are critical to ensure a healthy indoor environment. In general, I believe that there is a strong relationship between sustainable design practices and occupants' health and well-being, making it even more pressing for our discipline to move toward a more environmentally conscious future.

[ASP] Which element in our built environment has been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[ECD] Access to outdoor public spaces, such as plazas and parks, has been extremely important to mitigate the effects of isolation. Due to their large urban scale and being outdoors, these spaces allow for social distancing and provide a safer environment for people to exercise, meet, or go for a walk. In the past months we have been observing a change in our relationship with nature and outdoor public spaces. Restaurants, for example, have expanded the indoor dining space to the outdoor areas, reclaiming the city's streets, as people are more willing to stay outdoors even in cold climates such as Chicago.

[ASP] How will energy consumption be distributed in the future if current trends constrain the use of office spaces and avoid common retail practices? What about energy production?

[ECD] If the trends concerning remote working and online shopping will remain even after the pandemic emergency is over, we will observe a shift in energy consumption in the residential and commercial building sectors. For example, there will be an increase in energy consumption in the residential sector and the peak energy demand in residential buildings could potentially change if people spend more time at home and work from home.

[ASP] Triggered by the current pandemic, and considering the present state and performance of the different layers of urban infrastructure (parks, public transit, public schools and libraries, housing, etc.), what effect could we expect in terms of energy management in North American cities?

[ECD] The current health emergency has forced us to change our lifestyles; in particular, we are spending more time in our homes. Also, in the past months, residents of big cities who had the possibility have moved out of dense urban environments to less dense areas. While these are temporary responses to the health crisis, it is hard to predict if some of these changes in our lifestyles will continue and which will be the long-term effects on our cities. As of now, I think that there will be more flexibility in the way we work with more people working from home and this will change the energy consumption of residential buildings. Moving toward the design of high-performance and energy-efficient buildings will be critical to make our cities more resilient.

Edoarda Corradi Dell'Acqua teaches architectural design at the Illinois Institute of Technology. Her research interests lie at the intersection of architecture and engineering with a focus on energy conservation.

Edoarda completed an M.S. in Architectural Engineering at IIT after graduating in Architecture in Italy at the Politecnico of Milan. She studied one year in England at the Bartlett Faculty of the Built Environment and attended a summer program in Boston at the Harvard Graduate School of Design.

Her background in both fields allowed her to develop a broad set of skills in architecture, engineering, and interiors. Her work experience in Milan and Chicago includes office, commercial, and residential building design with Box Studios and studio Bandello 6, and integrated design with dbHMS. Edoarda also serves as a member of the board of directors of the Chicago Architectural Club.

NICOLE DITCHMAN

Interview conducted by Alejandro Saldaña Perales, February 2021.

[ASP] In a post-pandemic world, what could be the new focus on the way our urban societies are organized?

[ND] It will be interesting to see how people's experiences of their spaces and sense of place shift after the pandemic. The pandemic has led us to being more mindful and evaluative of where and how we live; there is a need to understand what is meaningful to people and what connects them to a community or place. Depending on an individual's personal pandemic experience, community connections may be strengthened with a shared sense of meaning and resilience that may foster meaningful engagement with neighbors and a shared sense of community. On the other hand, social isolation and loneliness may impede development and access to social capital. Additionally, continued concerns about virus transmission will probably always be with us, and many aspects of city life, such as eating out and public transportation, may continue to be threatening to people. Cities and governments will also need to focus on meaningful policies and strategies to address the inequalities and employment, housing, safety, digital access, and financial and health disparities that will be further amplified from COVID-19.

[ASP] Which element — or elements — in our cities, and the way we make cities, will have to change to cope with these new focuses?

[ND] I expect we will see more people having an option to work remotely even after the pandemic, with home residences serving a dual function as work spaces for many. This may lead to increased considerations for spaces and residence features that foster work-life balance. In addition, if people spend more time at home, there may be preferences for neighborhoods and living areas that offer amenities and resources, such as access to shopping, work spaces, food, green spaces, etc. Social connections will remain important for many people. Strategies to balance fostering social engagement and safety will be essential. For example, having virtual options for community events may be one way to promote participation by allowing people flexibility to choose formats they feel most comfortable with to connect with others. Cities will need to address unemployment, housing inequality, and digital access disparities. These issues are complex and will require prioritization and adequate funding for research on best practices and policies to meet the unique needs facing a city and its diverse residents.

[ASP] How will energy consumption be distributed in the future if current trends constrain the use of office spaces and avoid common retail practices? What about energy production?

[ND] If the trends concerning remote working and online shopping will remain even after the pandemic emergency is over, we will observe a shift in energy consumption in the residential and commercial building sectors. For example, there will be an increase in energy consumption in the residential sector and the peak energy demand in residential buildings could potentially change if people spend more time at home and work from home.

[ASP] Which social and personal phenomena, seen throughout this pandemic, has best potential to forge new concepts or ideals of urban living?

[ND] Perhaps one of the biggest changes is increased use of technology and virtual formats. The pandemic has hastened the use of tele-health practices, and my hope is that virtual options for physical and mental health services will promote access and early intervention. Virtual options also can be more accessible for people with health conditions or disabilities who might experience challenges with traveling to a specific location. On the other hand, internet connectivity and digital access is a challenge that will need to be addressed more effectively. The pandemic has also led to a collective sense of community and resilience. We are seeing neighbors pull together and support each other. With people spending more time at home they are getting more opportunities to connect with neighbors. Adults and children are having to tap into their strengths to get through this situation. Communities should consider how they can leverage social capital and collective and individual strengths to enhance the well-being of community members. An important consideration will be how to balance in-person social interaction and safety/risk mitigation. For example, mask use and hygiene practices/expectations/norms may impact how people interact or the extent to which they feel comfortable to do so in large groups. It will also be important to consider new partnerships that can be formed, such as organizations working together that may have not had a relationship before the pandemic (e.g., cultural heritage groups, public health organizations, etc.).

Dr. Nicole Ditchman is an Associate Professor at Illinois Institute of Technology in the Department of Psychology, Division of Counseling and Rehabilitation Science. She is a licensed clinical professional counselor and certified rehabilitation counselor. Her research focuses on community engagement, employment, and well-being of individuals with disabilities.

[ASP] Will city authorities in the U.S. prioritize mental health as a major index of successful city life?

[ND] Awareness and interventions to address mental health and well-being is vital given the overwhelming mental stress the pandemic has put on everyone, and the high rates of depression, anxiety, and suicide being documented. I hope we will see more attention to developing well-thought-out policies to promote mental health and well-being of city residents. If we indeed see more remote work options in the future, people will not be restricted by geography and be able to choose which cities they want to reside in. In this case, indicators of happiness and well-being within cities may become an important consideration in their decisions for where to live. As cities plan and implement changes, it will be important to consider different aspects of well-being. Drawing on positive psychology literature, Seligman's PERMA model may be a good framework for conceptualizing the multi-faceted nature of well-being and specific domains to be considered. These include: positive emotions, engagement, relationships, meaning, and accomplishment. For instance, how can designers create spaces that promote flow and concentration for people working in non-traditional work settings? How can cities provide opportunities to foster positive emotions and enjoyment despite restrictions that might be in place for social gatherings? How can people find ways to use their talents and time to contribute to their communities? These are important questions that require understanding the varied lived experiences of diverse residents during and after the pandemic.

PAUL ENDRES

Interview conducted by Alejandro Saldaña Perales, February 2021.

[ASP] Which may be one missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to aid our built environment to be so ill prepared to deal with a phenomenon as the current pandemic?

[PE] Our natural inclination as human beings is with social interaction, most architecture tries to recognize this and design buildings with this in mind. We focus on the aspects of a building we are comfortable with but leave other issues such as technology to solve problems we create. Usually discussions about structural, mechanical, and other technical systems are designed as an "as built" and submitted sometimes after permit review. Well-integrated buildings from inception are always preferable but require more time and cooperation and trust of the members of the team. Louis Kahn is a great exemplar of this method. Imagine removing the structure or air circulation or lighting from any of his buildings and the result is dismal.

In the time of COVID, research has proven one strong issue: that is the air exchange with the outdoor environment, and the adaptability of this is key. Providing natural ventilation or at least three air changes per hour greatly reduce COVID transmission.

[ASP] Which element — or elements— in our built environment has been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[PE] Technology has helped us deal with isolation during the pandemic through communication in both auditory and visual forms, most humans crave social interaction and touch. This feels missing at the moment and [so does] the feeling of being in a group. Architecture should respond to ways of human contact that is safe for all people at risk.

[ASP] Which recent architectural trends or practices might be accelerated as a response to the current pandemic in the United States and the rest of the world?

[PE] I would steer clear of "trends" and focus on the qualities and methods that worked in the past and use technology as a design tool in search of those prior needs.

[ASP] What shifts can we expect to see in architectural and urban research performed by private firms? Which areas of research ought to be prioritized?

[PE] A great deal of time, effort, and expense has been given to barriers in architecture. As we progress and germs evolve at a faster pace, it will be our duty to protect those that need to be isolated. We will begin to fall into categories by our susceptibility to biological danger. It should be our goal in architecture to find ways to reduce these barriers and create an environment that "equalizes" the world for all individuals.

Paul Endres FAIA, SE, LEED AP. As the principal in charge of design, Paul leads a team of architects and engineers to create the quality designs that clients have come to expect from Endrestudio. His goal is to perfect innovative structural concepts appropriate for each project and to work closely with clients to help them develop their projects both nationally and internationally from initial concept to final realization. As a licensed architect and structural engineer in fifteen states, with a three decade-long career of creative experiences, Paul has collaborated with the nationally and internationally acclaimed artists and architects Andy Goldsworthy, James Turrell, and Enrique Norton among others. His career portfolio spans over 1,000 buildings and projects which include public parks, pedestrian bridges, community centers, sciences museums, and education facilities. He has pioneered such structural concepts as the first Catenary ring cable bridge, self-anchored ring cable bridge, torquing spiral helix and ziggurat bar stair designs, floating roofs of cable and wood, and a record-breaking structural glass bridge.

He earned acclaim as a winner of the eighth annual MoMA/P.S. 1 Young Architects Program in New York City and led the office to an international victory at the West End Bridge Competition in 2006. He has worked in the offices of Arup and has headed his own firm from 1994 onward. He received master's degrees in architecture and structural engineering from UC Berkeley and earned his bachelor's degree in civil engineering at the University of Illinois Urbana-Champaign. He was the Morgenstern Chair at Illinois Institute of Technology in 2010, received the 2012 Association of Collegiate Schools of Architecture Creative Achievement Award, received the 2013 National Council of Structural Engineers Association Award for Excellence in Structural Engineering, and received the 2014 American Institute of Steel Construction Ideas2 Award for the San Diego Main Library Dome and in 2019 for the Helen Diller Civic Center Playground. His work is featured in the cover project of "Architectural Record's" Houses for 2014, "Dwell" in 2018, and "Structure" in 2021. He is past director of technology at the Illinois Institute of Technology where he teaches architecture and engineering.

ROBERTA FELDMAN

Interview conducted by Alejandro Saldaña Perales, February 2021.

[ASP] Which may be one missing focus in contemporary architecture? What have architects and urban designers done wrong so far to aid our built environment to be so ill prepared to deal with a phenomenon as the current pandemic?

[RF] Our profession has been remiss in attending to the SOCIAL IMPACT of our work. Aesthetics, finances, and efficiencies are all too often the key drivers of contemporary, and dare I say past, architecture. We often pay lip service to the individuals and communities who inhabit our projects, or we rely on our own experiences about social impact without knowledge of the "other" or hard evidence.

[ASP] Which element — or elements — in our built environment has been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[RF] Clearly, one of the important impacts of the pandemic, after health, is the impact on social life. Since COVID's contagion is less in the outdoors, imagine if our urban fabric had more open space of varied scale. Imagine if our parks in Chicago had not been closed. I could have had a picnic with friends last summer at a socially safe distance. We have considerable park space in Chicago to accommodate many people safely. But we have a shortage of smaller scale green spaces. And if we had larger balconies that can be occupied, public outdoor habitable spaces could expand upon not only public interaction but also a sense of being part of a community without immediate contact. And shared gardens where people can grow food while socializing — at a distance of course. These and other simple green strategies would also help relieve, in a modest way, climate change.

Indoor spaces are more difficult; although in larger multi-family buildings, outdoor spaces on top of garages, roofs, or within buildings would be helpful during a pandemic. Cooperative social distancing or time-sharing scheduling might be necessary at times as these, but would benefit the inhabitants under so-called "normal" circumstances. We also have improved air circulation and sanitation mechanisms that are available, but not often spaced especially in lower cost housing. I view measures that create livable spaces for the long term more important, especially in dense urban environments.

[ASP] Which recent architectural trends or practices might be accelerated as a response to the current pandemic in the United States and the rest of the world?

[RF] None of these above ideas are new. I learned them when I was a student in the late '60s. Yet generally they are not the norm. If we don't begin to act on these and related ideas, dense, highly populated cities will empty out every time there is a pandemic, increasing suburbanization. Our dense cities are, and if not can be adjusted to be, best suited to combat climate change.

[ASP] What shifts can we expect to see in architectural and urban research? Which areas of research ought to be prioritized?

[RF] There is much research that needs to be done. There is no doubt that we need to improve our air handling equipment, using cost-effective strategies. We need to improve the distribution of health care, requiring smaller scale and less costly building types. We need research on mobile and temporary health care structures. And we need attention on improving everyday environments — garages, food stores, streets. These and other neglected spaces that we must use during COVID and other times, require our thoughtful and creative attention.

We need to become educators and activists. We must remove the barriers to designing environments to effectively increase social impact as well as other meaningful priorities that block outstanding projects, not only to satisfy the architect but also the inhabitants.

There are amazing architects, and architecture faculty and students that are engaging in social impact work. I would like to see the support for this increased. I believe the only way to have such impact is to play a larger role in the production of our built environment. We can become developers. We may have to sit on corporate boards and city commissions, or become mayor, maybe even governor. Let's do it.

Roberta Feldman is an architectural activist, researcher, and educator committed to democratic design. As co-founder of the UIC City Design Center, Dr. Feldman has been engaged in community design and research with over fifty community organizations and development corporations in Chicago's low-income neighborhoods. She has published books and articles, curated exhibits, and hosted conferences to promote quality housing design for all. Feldman is currently Director Emerita of the City Design Center and Professor Emerita at UIC, and Adjunct Professor in the PhD Program in Architecture at IIT.

MOHAMMAD HEIDARINEJAD

Interview conducted by Alejandro Saldaña Perales, February 2021.

[ASP] Which may be one missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to aid our built environment to be so ill prepared to deal with a phenomenon as the current pandemic?

[MH] While the current pandemic situation and inaction to control the spread of the pandemic are not directly related to buildings, I believe lack of investment in our older existing buildings over time, maintaining the status quo for the design of our new construction buildings, and insufficient attention to the urban design of our built environment have exacerbated the current pandemic situation. We should have continuously looked for opportunities to improve our buildings over time to meet the current needs and future challenges. For example, the City of Chicago has approximately 143,000 multi-family buildings, over 75% of which are in buildings that were built before 1942 when no modern building codes existed. Looking into these multi-family buildings what did we do over time to ensure these buildings meet our current and future needs? Similarly, what did we do for our public buildings such as schools, healthcare facilities, or grocery stores to make sure our essential buildings are not closed due to insufficient ventilation and filtration? Why do we need to consider major changes in some situations to reopen our buildings? Why can't people easily use public places with social distancing and face masks to exercise outside? These are just a few example questions, and we can fill the list with similar questions. Our collective responses to these questions can be used as new visions to design, build, operate, and retrofit buildings during and after the pandemic.

[ASP] Which element — or elements — in our built environment has been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

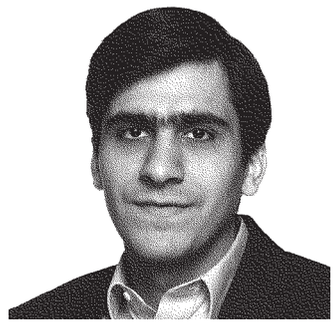
[MH] A few elements in the built environment have been effective in mitigating the effects of isolation and forced lockdown to ensure humans can cope with the pandemic situation. We all have done or heard of people paying attention more to their interior spaces to meet the new norm of working from home. People are using dining tables or even replacing their appliances to make sure their spaces are accommodating their needs. The versatile nature of interior spaces has been one of the effective coping mechanisms for people in this isolation or lockdown. In major cities, accessibility for people to outside spaces for socially distanced exercise and proximity to grocery stores and walkability have been important. How many of us have been outside for socially distanced exercise and wished there were better designs of outdoor spaces such as bike trails or wider sidewalks?

[ASP] Which recent construction and building techniques' employment might be accelerated as a response to the current pandemic in the United States and the rest of the world?

[MH] I believe an integrated approach focused on buildings needs to include architects, engineers, public health, and urban designers, other relevant experts to learn from the successes and failures in the past year to combat the current pandemic. Example questions that we need to ask as a team are how can we design and install air cleaning technologies embedded in our interior spaces? How can we improve ventilation, both mechanical and natural, in our buildings? Did we learn to invest in our buildings and avoid deferred maintenance in our buildings, especially essential ones? With involving all stakeholders (not only a few), we should be able to expedite allocation of resources in the right direction.

[ASP] What changes can we expect to see in our built environment in the U.S.? Do public buildings need some sort of immediate retrofitting? Which ones should be prioritized?

[MH] Various short-term changes can be expected, but the long-term changes are unclear at the moment. The changes that we can expect depends on our desire to learn from our success and failures during this pandemic to prepare us for future. This is certainly not the first pandemic, and hopefully it is the last pandemic, but we need to think of a long-term plan that engages all the experts to ensure we are prepared for any challenges in future.



We need to seek data-driven and effective plans to retrofit buildings rather than immediate retrofit plans without any clear guidance. A lot of cities in the U.S. have recently passed climate action plans (or are in the process of passing new legislations) with buildings being in the center of these plans. Any retrofits without a long-term roadmap will create limitations in our future capabilities and open doors for the use of unproven technologies in our buildings. Buildings usually last longer than people who reside in them and the use of any unproven technologies or lack of being aggressive in meeting our current and future needs will render the building ill prepared for future challenges in terms of sustainability and resiliency. The questions that we need to find responses to are how the current climate action plans learn from the current pandemic situation? Are they only relying on a plan that was established before the pandemic? How will the new climate action plans incorporate our lessons learned in their roadmaps? Similar questions can be compiled to find data-driven, effective, and immediate retrofit plans.

We also need to rethink our priorities in terms of essential buildings to prioritize our building retrofits. Imagine if our school buildings were code compliant in terms of ventilation and filtration and we were able to open them safely. Another essential building type were grocery stores and their staff. What did we do for these buildings pre-pandemic and what are we planning to do post-pandemic? This is a unique opportunity for us to collectively aim to compile a comprehensive list of questions from different stakeholders and plan to push the boundaries to design new buildings or retrofit existing older buildings to meet the future challenges.

Dr. Mohammad Heidarinejad is an Assistant Professor in the Department of Civil, Architectural, and Environmental Engineering (CAEE) at Illinois Institute of Technology (Illinois Tech). Dr. Heidarinejad's research interests center on building energy and environmental systems and air quality. Dr. Heidarinejad has substantial laboratory and building simulation experience, including building energy and airflow modeling, building control, optimization, and ventilation. At Illinois Tech, he co-directs with Dr. Brent Stephens the Built Environment Research Group (BERG), which includes undergraduate students and graduate students.

Within three years of his appointment at Illinois Tech, he received about $251,000 as Principal Investigator (PI) and served as co-PI on approximately $1.37 million across all PIs. Dr. Heidarinejad is a registered professional engineer and has published more than 36 peer-reviewed journal articles. He is the recipient of the ASHRAE New Investigator Award in 2019 to support his work on "Improving control sequences in existing buildings using virtual and physical testbeds."

Dr. Heidarinejad is currently an Associate Editor for the "Journal of Architectural Engineering" and an Editorial Board member of "Journal of Advances in Building Energy Research." Currently, he is a voting member and Handbook Chair of ASHRAE Technical Committee 4.10: Indoor Environmental Modeling. He is the Secretary of the International Society for Indoor Air Quality and Climate (ISIAQ) Technical Committee (STC) 21 on Ventilation.

At IIT, he teaches courses entitled "Instrumentation and Measurements in Building Science," "Energy Conversion Design in Buildings," "Design of HVAC Systems," "Indoor Air Pollution," and "Control of Building Environmental Systems." Prior to joining IIT, Dr. Heidarinejad was a research associate and research assistant professor at the University of Maryland.

RON HENDERSON

Originally published in the “Chicago Tribune,” May 22, 2020. Shared with permission of the author.

Commentary: With a closed lakefront, a chance for underappreciated parks to be Cinderella

Chicago’s sparkling lakefront may get all the attention. But many of Chicago’s legacy neighborhood parks remain open during the coronavirus pandemic: Humboldt Park, Riis Park, Washington Park, Douglas Park, Sherman Park, and the boulevards among them.

The more recent public-private partnership parks such as Millennium Park and Maggie Daley Park have been closed. Also closed have been the linear trail parks such as the Lakefront Trail, The 606 and the Riverwalk. These “long and narrow” parks and trails are popular with joggers and bicyclists because of their continuous travel path uninterrupted by streets and cars. But they’re currently closed because they are now too narrow for social distancing.

What are the differences between these landscapes? The legacy parks were designed as places of healthy respite and for personal encounters with trees and water and birds. The new parks were built for other purposes: spectacles of art, social density, crowds and active recreation. These new parks are also about commerce and capitalism — parks that, especially under former Mayor Rahm Emanuel, were expected to be profit centers leveraged by concessions and tourism.

Many of the legacy parks that are now open, which have suffered from underinvestment and neglect, could emerge during this time of social distancing to, again, be the model for the kind of public landscape that we need in the future.

Riis Park on Chicago's Northwest Side is a good example. A unique natural feature of Riis Park is a long, linear ridge that divides the park in half and is a welcome respite from the flatness of Chicago. This ridge is an ancient beach line from glacial Lake Chicago, which preceded Lake Michigan. Walking along this shallow rise gives a sense of the long arc of geological time while also providing a prospect to the west through loosely spaced trees to the watery lagoon below.

Walking around the lagoon and up and down the ridge provide a rich landscape experience in a small space. Riis Park was named after the social reformer, Jacob Riis, who advocated for neighborhood parks in the early part of the 20th century. Many cities have parks named after Riis. Our Riis Park was designed by landscape architect, Alfred Caldwell, in the late 1930s and constructed with Works Progress Administration workers during the Depression — a challenging time like our current COVID-19 pandemic.

Sherman Park on the city's Near Southwest Side is another legacy neighborhood park with generous space. The Olmsted Brothers, sons of Frederick Law Olmsted, designed a ring of water that surrounds an island with a large clearing. Four elegant, arched bridges connect the outer park to the island and establish a rich variety of paths and vistas adjacent to the lagoon that are perfect for long walks.

These legacy parks, Riis Park, Sherman Park, and others — with generously scaled fields and mature canopy trees, free and open just for the sake of it, and space for social distancing — have proved to be our parks for this moment. We must protect them and invest in their spaciousness. They are, and will continue to be, as valuable in the future as they have been in the past.

Let us take this time to experience the quietude and expanse of these parks. It is a walk in the park. Frederick Law Olmsted and his sons, along with Jens Jensen and Alfred Caldwell, would approve.

Ron Henderson is Professor and Director of the Landscape Architecture + Urbanism Program at Illinois Institute of Technology (IIT) in Chicago and has held previous appointments at Harvard, Pennsylvania State University, Tsinghua University, and Rhode Island School of Design. He is founding principal at LIRIO Landscape Architecture whose work in North America, Asia, and Europe has been widely recognized with international, national, and regional landscape architecture and urban design awards. Recent and current projects include the Gardens of the Isabella Stewart Gardner Museum (Boston, MA), Historic Newport Town Spring (Newport, RI), Elizabethan Theater at Chateau d'Hardelot (Condette, France), Yinzhou Central Park Master Plan (Ningbo, China), and City Walk (Providence, RI).

Ron is Senior Fellow of Garden and Landscape Studies at Dumbarton Oaks, a Japan-U.S. Friendship Commission Creative Artist Fellow, U.S. National Park Service Artist-in-Residence, and a Fellow of the American Society of Landscape Architects. He is author of "The Gardens of Suzhou," which was published in 2013 by University of Pennsylvania Press and co-primary investigator for The Driverless City Project, a 3-year, $750,000 investigation funded by the National Science Foundation. An exhibition of his sketchbooks of Japanese cherry blossoms, "Sakura Orihon," was installed at the U.S. National Arboretum, Washington, D.C., in Spring 2018 and re-installed in Spring 2019, 2020, and will, again, be on exhibition in 2021.

MATTHEW HERMAN

Interview conducted by Zahida Khan, February 2021.

[ZK] How has the pandemic changed the way we design our built environments?

[MH] Based on the active project work in our office, we are seeing the pandemic's effect in the following ways:

A greater awareness of indoor air quality issues. While the short-term driver is the pandemic, most building owners and operators are confident that the vaccines are the only way out of this. Most anticipate the vaccines to be widely distributed within the next year. If they are making upgrades to the HVAC systems (more outside air, increased filters, UV, etc.), then they want to be sure there is a long-term benefit beyond the short-term response to the pandemic. This is where Indoor Air Quality comes in and ties nicely with general concepts of Health and Well-being.

In multifamily buildings, we are seeing an increase in amenity/community spaces as people spend more time at home. This includes work spaces and conference rooms like spaces that are outside of the individual residential units.

We are seeing an expansion of exterior eating spaces, such as sidewalk cafés, as well as an increase in bike/scooter use as people look for alternate personal transportation options. This has been helped by a general decrease in the total volume of automobile traffic in many cities. It is unclear if this will remain a long-term trend. However, it is an interesting opportunity to understand the relationship between the choice to use a bike or scooter vs. a car in the public realm.

[ZK] How do you think research contributes to innovation and growth of a design practice?

[MH] Research is critical for firms to keep a competitive edge; however, it can be difficult in a professional environment which is why the link between academic institutions and professional firms is so important. Research can help a firm solve problems for their clients in new and more efficient ways. There are different types of research. Typically, in the design industry two to five types listed below are prevalent.

— **FUNDAMENTAL RESEARCH:** *How or why something works regardless of application.* Fundamental research means experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct practical application or use in view.
— **APPLIED RESEARCH:** *What do we do to solve problems based on our understanding of how or why something works the way it does?* Applied research refers to scientific study and research that seeks to solve practical problems. This type of research plays an important role in solving everyday problems that often have an impact on life, work, health, and overall well-being.
— **KNOWLEDGE SEARCH:** *aka literature review or precedent study, helps avoid reinvention.* Pulling together existing knowledge sets to evaluate the current state of research, development, thought, etc. This type of search provides context while reducing perceived risk.
— **KNOWLEDGE CONVERGENCE:** *Knowledge clumps, knowing where is important.* Knowledge tends to build on itself through human interaction in close proximity toward shared goals. Research universities take advantage of this. Companies do as well. Successful cities have learned this also.
— **INTELLECTUAL CAPITAL:** *Converting knowledge to goods and services.* Knowledge that can be exploited for some money-making or other useful purpose. The term combines the idea of the intellect or brain-power with the economic concept of capital, the saving of entitled benefits so that they can be invested in producing more goods and services.

There are several models where we see professional firms engage in research:

— **ENGD OR CERTIFICATE:** Low cost entry point, student works for a firm as a placement, firm pays and has input into research topics. Similar to the co-op model but tends to have a higher level of innovation and research than training.
— **PHD SPONSORSHIP:** High price point, but a lot of control and input on research topics. Key is to align students and university to firm goals.
— **PHD INDUSTRY ADVISOR:** Firm representatives contribute as an advisor to give industry perspective to the research path.
— **ACADEMIC CENTER SPONSORSHIP:** Pay into a general pot for access to research on a general topic or area of relevancy. Firms may not have a lot of control over topic but a good way to stay informed, i.e, Center for the Built Environment.
— **INTERNAL R&D:** Some firms allocate internal research funding. Some great work has come out of this but there are more failures than successes. Company pays for internal time to be spent on a project. Accountability can be an issue.

— **PROJECT BASED:** Very relevant but often constrained by time and commercial realities. Risk can be an issue.
— **COMPETITIONS AND INTERNS:** High level innovation and brainstorming, risk levels are lower due to the ubiquitous nature of a design competition. However over time a knowledge base can be built up.

[ZK] Which, in your opinion, is a pressing issue in the applied research for urban and building designs and requires attention?

[MH] The number one theme is addressing the climate crisis. In my opinion, the building industry is currently chasing too many rabbits related to this topic. My recommendation would be to focus on electrification of the building stock (new and existing) and supporting a focused effort to decarbonize electricity generation at the source. While there are many other topics and paths of interest, I currently consider other topics as distractions from the primary focus of getting fossil fuels out of the energy systems powering our buildings.

[ZK] How do computational models contribute to informed design decisions? What aspects of computational models should a researcher consider in human behavior studies for buildings and urban spaces?

[MH] There are a wide variety of computational models and tools available. I see all of these as useful to some extent, however, transferring data into and out of the tools remains a barrier. Interoperability is a key area of research needed to improve how we structure and manage data related to the complex systems composing the built environment. There is some convergence happening, such as the ability to track Environmental Product Declarations (EPDs) and embodied carbon in the Building Information Modeling (BIM) tools, but there is much work to do. I see computational models and tools as "enabling technologies" to help us understand these complex systems. Given my response to question number three, I fear some computational tools and modeling can be a distraction to addressing the core issues of the climate crisis which is carbon emissions. For instance, using an embodied carbon calculation tool to define that one material has less embodied carbon than another is useful, but the issue is that there is still embodied carbon in both products' supply chain and life cycle. The trick is to know where that carbon comes from, where are fossil fuels burned in the supply chain, and can they be replaced with carbon free electricity? I believe we should focus on using carbon-free electricity instead of natural gas to power the manufacturing of the products rather than spending computational efforts tracking that one product is slightly less bad than another.

An area that we have seen computational tools be effectively used to significantly reduce carbon emissions while informing the design of the urban environment is in urban mobility modeling. Specifically, mobility platforms that do not use an internal combustion engine. These tend to be pedestrian focused, meaning electric scooters, short trips in electric vehicles, bikes, walking, etc., within urban settings. Modeling the mobility patterns of individuals across these multiple platforms can inform urban development patterns and needs new and novel ways while reducing CO_2 emissions related to automobile use. This is a trending area we see at the intersection of large car companies, city officials, and urban planners and developers. There is the potential to use the change in behavior patterns due to the pandemic to make lasting changes to mobility in our urban environments. Computational models simulating these changes can help inform policy and design choices.

Matthew Herman is a principal who leads Buro Happold's Chicago office and is responsible for the day-to-day operations of the MEP and environmental design teams. Matt's experience includes a variety of projects ranging in scale from system component design to master planning, primarily in the cultural and civic, commercial, residential, and education sectors. Matt's extensive experience brings an interdisciplinary approach to all of his projects, balancing architecture and engineering in a cost-effective and sustainable manner. He is especially interested in low-energy design and energy analysis, including energy modeling, post-occupancy monitoring, and life cycle assessment for existing buildings and new construction. Matt is also an ongoing Research-Based Advisor for PhD Candidates at the Illinois Institute of Technology.

FRED HICKERNELL

Interview conducted by Zahida Khan, February 2021.

[ZK] What, in your view, are the core challenges and opportunities of interdisciplinary research?

[FH] Interdisciplinary research facilitates holistic solutions to important problems. By including expertise from multiple disciplines, we are more likely to find solutions that do not create additional problems.

The challenge often starts with the vocabulary used to describe the problem and possible solutions. Different disciplines may use different words to describe very similar things. Experts in one discipline must become conversant with other disciplines in order to collaborate in a meaningful way. It is like when someone leaves their home country and must become familiar with the language and customs of their new country.

Then there is the measure of what makes a good solution. We may tend to discount a solution that does not meet the stringent standards of our own discipline. But it may be helpful because it meets important criteria from other disciplines.

[ZK] How do academic and professional collaborations foster research and innovation within the student communities?

[FH] Let me use a cooking analogy. Students in the classroom learn "basic cooking skills" shared by many. Research with a mentor teaches them to prepare "specialty dishes" known only within their close circle. Collaborations with other academics or practicing professionals provide students the opportunity to "exchange specialty recipes." This collaboration produces new "dishes" or "menus" that neither research group could create on its own. Students involved in these collaborations have a greater repertoire than if they had stayed only in the "kitchen" of their mentor.

[ZK] How has the pandemic impacted the research and development activities in academic settings?

[FH] The pandemic has made it difficult to meet in person with our collaborators, but we have become more comfortable meeting over video chat, even with those that we might not normally visit. Research that involves a physical setup, such as field work or laboratory work, has become more difficult. However, people isolated due to the pandemic have had time to think creatively. We have seen a greater spectrum of research proposals submitted at Illinois Tech during the pandemic.

[ZK] What initiatives have (so far) and can (in future) enhance research infrastructure at IIT? And how does it contribute to the city's economic development?

[FH] At Illinois Tech we have identified three multidisciplinary research themes: 1) Computation and Data, 2) Health and Wellness, and 3) Urban Futures. All of these can contribute to the well-being of our city. We hope to see more interdisciplinary research in these thematic areas. The Office of Research is reaching out to teams of investigators and helping them prepare proposals for external funding. Our research institutes and centers are being encouraged to energize our research. We need to broaden our search for resources to support research to agencies and foundations that we have not asked before.

Fred Hickernell is Vice Provost for Research and professor of applied mathematics at the Illinois Institute of Technology (Illinois Tech). Fred works on elevating Illinois Tech's research. This includes connecting faculty with external funding opportunities, promoting the formation of interdisciplinary research teams, supporting the preparation and submission of proposals, and ensuring that research is conducted with integrity. Fred has been an Illinois Tech faculty member for 16 years. Prior to being Vice Provost for Research, he served as chair of the Department of Applied Mathematics and director of the Center of Interdisciplinary Scientific Computation.

Among his many awards are his fellowship in the Institute of Mathematical Statistics; his membership in the International Statistical Institute; Dean's Excellence Award for Research in 2007 and 2017; and the 2016 Joseph F. Traub Prize for Achievement in Information-Based Complexity. He received his B.A. in mathematics and physics from Pomona College and his PhD in mathematics from Massachusetts Institute of Technology.

PETER KILPATRICK

Interview conducted by Zahida Khan, February 2021.

[ZK] What, in your view, are the core challenges and opportunities of interdisciplinary research?

[PK] One of the main challenges of performing truly interdisciplinary research is that we all come from our main core discipline with a certain scientific or scholarly language that may not translate well into another discipline. We also come from our disciplines with a certain set of presuppositions, core knowledge, and types of research questions that we ask. In order to properly engage with an expert in another discipline, we have to be willing to learn the language of our colleague, as well as their presuppositions, and perspective. This requires great openness and humility. The primary reason for overcoming these challenges to pursue truly interdisciplinary research is that the results can be truly transformative to both or all disciplines and great progress can often be made. Just as physics must borrow very heavily from philosophy to truly advance, so too other disciplines can truly benefit from this openness to transdisciplinary ideas.

[ZK] How do academic and professional collaborations foster research and innovation within the student communities?

[PK] There is an old saying that the mind is like a parachute: it works best when it is open. Academic and professional collaborations among colleagues with varying points of view fosters openness to new ideas among students and this in turn leads to innovations in research. Similarly, conferences in which ideas are cultivated and shared openly and with interest leads to innovations.

[ZK] How has the pandemic impacted the research and development activities in academic settings?

[PK] Clearly, the pandemic has hindered to a degree our ability to openly engage in collaborations and to open and intimate dialogue. However, we are all learning to use the internet, technology, and modes of technical communication that will enable us to be much more collaborative in the future. Many people believed that "many-person" video conferencing was clearly inferior to "live, in-person" conferences. However, the time and expense saved in air travel, hotels, and conference fees have created opportunities in the future for wiser, more efficient, and prudent use of precious resources. Video conferencing can be very effective when used well in a "flipped classroom" mode in which ideas are shared in advance and then debated and discussed.

[ZK] What initiatives have (so far) and can (in future) enhance research infrastructure at IIT? And how does it contribute to the city's economic development?

[PK] This is a very broad question with many avenues that can be pursued in responding. With regard to experimental research, the university is actively looking at launching "core facilities" in which specialized instrumentation is made available to everyone on campus and for which the university provides support in maintaining and operating the equipment.

Another element of "research infrastructure" is offering what are called "red team reviews" to principal investigators in which subject matter experts review proposals before they are submitted to funding agencies. These red team reviews have been shown to nearly double the success rate of proposals at other universities in which they are employed.

Another tool the university is exploring with regard to enhancing research infrastructure is to foster much more interdisciplinary dialogue on campus by hiring senior faculty as endowed chairs who are explicitly interdisciplinary. For example, the inaugural Michael P. Galvin Endowed Chair in Entrepreneurship and Legal Technology has been recently appointed: Ms. Nancy Kim, JD. Her appointment is intended to engender deep collaboration between the Chicago-Kent Law School and the Kaplan Institute as well as our technology-focused schools and colleges. We intend to hire more interdisciplinary endowed chairs and, indeed, this is a SMART goal in our University Strategic Plan.

Peter Kilpatrick joined Illinois Tech as provost and senior vice president for academic affairs on August 1, 2018. He previously served as professor and McCloskey Dean of Engineering at the University of Notre Dame. He is the author of more than 100 refereed journal articles in the areas of colloid and interfacial science, emulsion science, and molecular self assembly, particularly as they apply to energy and to bioseparations. According to Google Scholar, his work has been cited nearly 6,600 times, largely in the areas of emulsions and interfacial and colloidal phenomena. He is also the holder of 12 patents and has been actively engaged in two startups. Kilpatrick received his A.B. in chemistry from Occidental College (summa cum laude) in 1978 and his PhD in chemical engineering from the University of Minnesota in 1983. He served on the faculty of North Carolina State University in chemical engineering from 1983 to 2007, the final eight-plus years as the department head. He served as chairperson of the Global Engineering Deans Council from 2015 to 2017.

VEDRAN MIMICA AND MARYA KANAKIS

Interview conducted by Alejandro Saldaña Perales, February 2021.

[ASP] Which may be one missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to aid our built environment to be so ill prepared to deal with a phenomenon such as the current pandemic?

[VM-MK] When contemplating a missing focus in contemporary architecture, a multifocal and multidisciplinary discussion revolves around the relation of architecture and key phenomena of this current moment in history. We might question the extent of global urbanization, exponential development of informational technology, and climate change as inevitably influencing the production of social realities. Architecture itself has adapted to accommodate various forms of social life. However, if we seek one summarizing focus or one preliminary discourse then we should study and try to understand how our discipline relates to the anthropocene as an age of human impact on earth's environment. Anthropocene cannot be understood simply as a new geological era anymore, rather more widely as a context for ecological and urbanistic inquiries, as a socially and politically constructed idea. We should treat this epoch as an opportunity for creativity and hopeful speculation; focusing on the outcome of long-standing global political and socio-economic inequalities. In such a manner, many scientists associate the recent pandemic with the anthropogenic impact on climate change.

Since the onset of the epidemic, architects have been quick to respond. From realizing pop-up health care clinics to imagining dystopian futures, our profession has ceaselessly derived solutions for our 'new normal.' Through the lens of architectural research, the Master of Science in Architecture program at IIT is structured around examining our presence in the current geological age, where human activity has been the dominant influence on urban ecologies. The current pandemic, a cancer of the Anthropocene, identifies urgencies that can be approached at different scales, from cities to domestic environments. The pandemic ultimately revealed that a new organization of the world is possible, and not just spatially but economically. In a mid-pandemic interview with "The Guardian," Bruno Latour noted "we have actually proven that it is possible, in a few weeks to put an economic system on hold everywhere in the world." Recent events have also led us to question the democratization of finance and trade decline. However strange we may perceive these changes in society, privacy, and boundaries, we must explore new ways to organize ourselves. By studying geopolitical landscapes during a pandemic, we notice new relationships between architecture and governance such as surveillance, contact tracing, and digital passports.

[ASP] Which element — or elements — in our built environment has been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[VM] The most crucial element in our built environment that has helped mankind mitigate the difficulties of the pandemic was in fact invisible. As a society, we have underestimated our dependency on technology. This added layer to cities has allowed us to continue life despite lockdowns. The virtual mobilization of workforces and classrooms is simply one component of how technology has assisted us. Rise in surveillance, contact tracing by local authorities, widespread use of telehealth, and mobile commerce have all enforced a house-centric society.

[ASP] Which recent architectural trends or practices might be accelerated as a response to the current pandemic in the United States and the rest of the world?

[VM-MK] As architects we like to argue that the history of civilization is the history of cities and civic spaces. Cities are the future, statistically more so today than ever before. However, "the future ain't what it used to be" to quote American baseball legend, Yogi Berra. In the period since the start of this virus, it might seem as if everything has become different and changes are fundamental, but in the long term, we could agree with Lord Foster's suggestion that "rather than changing anything, the pandemic has merely hastened and magnified trends that were already apparent before the virus struck."

With respect to anthropogenic impacts amidst the pandemic, legislation on mitigating effects of climate change have accelerated. As various cities declared mandatory lockdowns, traffic and trade came to a pause. Scientists studied these conditions, identifying the scale of emission and pollution drops. With this data, city officials plan on reducing car use in the post-pandemic society and limiting manufacturing emissions. As architects, this shows us how cities have been strained by mass tourism, poor public transportation, overdependence on non-renewable resources. Within the discourse of architecture, we must restructure urban fabrics and reform our own practice to be more sustainable and socially responsible. Architecture, when identified as an anthropogenic output and extension of the terrestrial biosphere, must be studied as an ecology.

One example of this ecology might be the resurgence of neighborhoods seen as the main components of the "15-minute city": the ideology of being able to live, work, sleep, shop, dine, be educated, entertain, and be entertained — with all the venues within walking distance of each other. The attraction of neighborhood living is not new, but it has been given a timely and welcome boost by the pandemic. It is now opportune to build on that through a combination of design interventions — hybrid programming will ideally replace outdated zoning logics.

[ASP] What shifts can we expect to see in architectural and urban research? Which areas of research ought to be prioritized?

[VM-MK] We could say that our civilization, founded on the genealogy of science of enlightening provenance, is still prone to the identification of individual phenomena on the principle of binary opposition. One of the fundamentals of such oppositions is nature. Today it is quite clear that very notion of nature is culturally produced. If we borrow an excerpt from Michael Foucault, "history needs to become natural." The very concept of our reality, the Anthropocene, can provide the ground for new research where humans understand their existence. The past, present, and future define the narrative scope of the Earth's entire historical arc.

When addressing 'contemporary architecture' one must not forget about academia and how this pandemic affects curricula and coming generations. We can expect to see certain shifts that are dependent on the continuance of the pandemic, as an imminent constant of our future, and some shifts that will happen as the pandemic comes to an end. First and foremost, we will see studies into restructuring life based on experiences in the COVID-19 pandemic. Studies in housing will interrogate societies centered around domestic living and limits of mobility. Architecture must address digital components and our dependence on technology for everything from wi-fi to grocery shopping. With a dual presence, physical and virtual, we will see these two identities merge with complexities in the coming years. Within academic discourse and research, architects and urbanists will project future ecologies that calibrate posthuman conditions with cultural, political, and social dimensions.

Vedran Mimica is a Croatian-born Dutch architect and educator currently working as Professor at IIT College of Architecture in Chicago. Mimica graduated from the University of Zagreb with honors as an architect-engineer in 1979 and continued his postgraduate education and research at the Technical University in Delft, with Herman Hertzberger. He joined the Berlage Institute Amsterdam in 1991, where he assumed the position of Course Director in 1995. From 2007 to its closure in 2012, he was directing the Institute, responsible for educational and curriculum programs in addition to guiding research activities. Mimica's reach has extended over the past 30 years across multiple pedagogical, cultural, and intellectual realms, including the publication of several books and numerous articles, as a juror at architectural competitions around the world, and as a head of the curatorial team for the 3rd International Architecture Biennale Rotterdam in 2007. His latest book "The Berlage Affair" was published by ACTAR in 2018.

Marya Kanakis is a Chicago-based designer currently working as Research Coordinator for IIT's Master of Science in Architecture program under the direction of Professor Vedran Mimica. Prior to this, she also served as a research assistant and adjunct professor, assisting in teaching an advanced studio. In 2019, she graduated with honors from the Illinois Institute of Technology's Bachelors of Architecture program with a specialization in History and Theory. She has also studied at Università Iuav di Venezia. During her studies, Marya's project research interrogated art history, relationships between museology and urbanism, digital media, and ekphrastic design methods. Her work contributions include Yeezy, Skidmore, Owings & Merrill, Dirk Denison Architects, and various international studios. She also assisted on the editorial team for the publication, "Future Tempos: Conversations Across Time and Media" with ACTAR press.

ULLICA SEGERSTRÅLE

Interview conducted by Alejandro Saldaña Perales, January 2021.

[ASP] Which is the missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to be so ill prepared to deal with a phenomenon as the current pandemic?

[US] Nobody was prepared to deal with this pandemic, including the medical establishment, and various safety and security oriented governmental agencies, so it is not surprising that architects and urban designers were not prepared. But why should architects and urban planners be expected to be prepared, and what would it even mean to "be prepared"? Certainly it cannot mean to have built "better" buildings, communities, or road or transportation systems (from the COVID-19 pandemic point of view), since this threat has not been on the horizon strongly enough to have been considered by most people. It cannot mean either that architects should have been educated about this possibility and how to deal with it. It is only now that the pandemic can become a serious issue to consider for the architecture and urban planning curricula, and it is indeed a serious consideration for present and future planning, potentially upsetting a lot of what has been taken for granted as being "good" design. This self-criticism might of course mean that architecture and urban planning has anyway been on the wrong course, e.g., building too tight, or too high, or not taking into account people's actual needs or behavior, etc., etc., and this becomes now glaringly obvious with the COVID pandemic. But one could object and say that there has indeed been some attention to people's wishes, and attempts to build good communities — and that it is, ironically, just this kind of social network, and "bumping into each other" thinking that is now responsible for some too-tight environments.

A fair target is of course tall buildings, and we will get to this later. Those who discouraged tall buildings might have been "right" but for other reasons than the pandemic. Finally, it would have made no sense to build defensively in a fashion suitable for a potential pandemic condition just in case, because this would presumably have involved lots of considerations that would seem awkward or impractical from a normal point of view to normal people. People do not typically want to live in pandemic-suitable spaces, I would suggest. Indeed, if architecture is now planning to go in this direction, it will be a creative exercise to combine such thinking with more traditional design considerations. There may indeed exist optimal solutions that would also "feel right" to people. (And of course, in regard to other building types like schools, hospitals, and factories of various kinds, a complete rethink may be needed.)

Now to your question. I think that one missing focus might be the paucity of parks and green spaces in many built environments. This is not really the problem of Chicago, where there is plenty of space where you can move around rather freely without running into other people, and people have taken advantage of this during this pandemic. There is the long walkway or bikeway along the lake and special bike lanes in many places. So, a good solution which serves common interests and human health and can be good preparation for any future pandemic is an abundance of green space. Also, various types of public plazas and broad sidewalks (which Jane Jacobs recommended for other reasons) would serve well as areas for proper distancing during a pandemic.

[ASP] Which element in our built environment has been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[US] I have two obvious answers here, and neither is really dealing with the built environment in a technical sense. One is the existence of parks and green spaces, see above, and broad sidewalks in many places, making it easy to avoid running into people. The other is the internet and various social media, Zoom, and the like, which people have been using in amazingly creative ways. I have actually a third, too — the car, and the bike — not built environments in themselves but using the open road to get a sense of freedom. These are all ways to work around the situation. But at the same time people are badly missing face-to-face interaction, seeing and touching each other. In fact, all this social distancing is highly abnormal for people, who have certain automatic expectations of the proper distances and voice levels for various types of communication (see Edward Hall's classic observations on this). This is why it is such an effort for us all to act "correctly" during COVID, and why people quickly snap back to regular behavior with family and friends especially. It is even harder for cultures where touching and kissing is an expected part of regular greeting and communication. To get a sense of genuine human-to-human communication and emotion — even at a distance — I recall people (in Italian apartment buildings, say) opening their windows and singing together at a particular time, and even some kind of coordinated mass yoga in the open in an American neighborhood. So, windows and balconies, too, would qualify as important elements. And finally, the idea to closed streets and bringing restaurants onto the sidewalk (i.e., using the built environment in new ways) has probably created relatively COVID-safe opportunities for social interaction.

[ASP] Which ongoing urban trends will be accelerated by local governments in response to the current pandemic in the United States and the rest of the world?

[US] Decentralization and emphasis on community. One ongoing trend in Chicago is the support of urban neighborhoods (e.g., small grants from Mayor Lori Lightfoot to organize neighborhood gatherings and plan initiatives), and run-down neighborhoods are being slowly restored. But it is also a question of functionality. In some cities in the world, inhabitants have taken over some areas and turned these into community plazas or other types of blatantly missing public places. Meanwhile some suburbs in the U.S. are being retrofitted and given the elements of a functional downtown area which can be reached on foot. And whole small, new village-like communities can be built in abandoned areas, say the parking lots of former mega-malls.

During the pandemic, lots of people have actually fled the city and taken up residence in smaller communities (this is the case in New York, for instance). At the same time, companies have figured that their employees can actually work from home, and this trend may be continuing, since it may suit many employees too. This leaves existing tall office buildings largely empty, and the question is what to do with all this empty space. Turning it into spacious apartments or hotels? Of course, some kind of gathering places will be needed for some things needing face-to-face communication (brainstorming, say) so suitable spaces need to be found or built — spacious enough and with good air circulation, one would assume. An interesting challenge is the repurposing of existing tall buildings.

[ASP] Triggered by the current pandemic, could regional development (supply chains) replace global markets in cities as the main strategy toward the assembly of a sustainable urban framework? What would be the future of Chicago and its immediate midwestern region?

[US] This is an interesting question. Indeed, we have seen a kind of symbiosis developing between producers and consumers, for instance in the form of farmers markets. During the pandemic, after much hassle, an obvious connection was finally made between, on the one hand, a group of farmers who had run into problems of overproduction, and on the other, empty food pantries in neighboring communities. This looked like an obvious way to go, but it took the mass media to report on it and make it happen.

Meanwhile, I believe that many informal arrangements may already exist between producers and local shops. Another case was a fresh market made out of a burnt down old liquor store; this employed local youth and provided groceries for people living in a food desert after the usual stores had burnt down in a looting. So initiatives have been taken at a small scale in regard to food. As for regional development of other things, it is possible that a system of an urban framework could be developed and sustained — but is this advisable? If we are concerned about future pandemics we have to remember that Chicago is a global city, in contact with the wider world, and what happens in Chicago does not stay in Chicago.

Ullica Segerstråle is a Fellow of the World Academy of Art and Science and a member of the European Academy of Sciences and Arts and the Finnish Society of Sciences and Letters. Her research has been supported by the John Simon Guggenheim Foundation, the American Philosophical Society, and the Rockefeller and Sloan foundations, among others. She is the recipient of the Illinois Tech Board of Trustees Outstanding Undergraduate Teaching Award (2017), the Julia Beveridge Award, and other awards for teaching, leadership, and research.

At Illinois Tech she has served as chair of the Social Sciences Department and co-director of Illinois Tech's first Summer in Paris program. Earlier positions included acting chair of sociology at Abo Akademi University, Finland; Distinguished Senior Researcher at the National Academy of Finland; fellow of the Center for Interdisciplinary Research (ZIF) in Bielefeld, Germany; visiting professor of the Swiss Federal Institute of Technology (ETH) in Zurich; and Fulbright Fellow. She currently serves on the editorial boards of a number of academic journals.

Segerstråle has given more than 150 academic presentations, including keynote addresses at international conferences and lectures in academic lecture series, among others to the International Council of Science (ICSU), the Royal Swedish Academy of Science, the Royal Society of New Zealand, the Swiss Federal Institute of Technology (ETH), and the European Microbiological Laboratory (EMBL). Her topics lie typically at the intersection of the Two Cultures: They include science and values; collaboration between scientists, humanists, and social scientists; the ethics of research, social aspects of architecture and design; the social impact of emerging technologies; and the future of human nature. Among her current interests is education for the twenty-first century, and identifying and nurturing creativity.

She is the author of more than 100 academic publications. Her books include "Defenders of the Truth: The Battle for Science in the Sociobiology Debate and Beyond" (Oxford, 2000), "Beyond the Science Wars: The Missing Discourse about Science and Society" (SUNY Press, 2000), and "Nonverbal Communication: Where Nature Meets Culture" (Erlbaum, 1997). "Defenders of the Truth" has been translated into Japanese, "Beyond the Science Wars" into Chinese, and "Nonverbal Communication" into Hungarian. Her newest book, "Nature's Oracle," an intellectual biography of the evolutionist W.D. (Bill) Hamilton ("Darwin of the 20th century"), was published by Oxford University Press in 2013 (paperback 2015).

KEVIN HARRINGTON

Interview conducted by Alejandro Saldaña Perales, April 2021.

[ASP] Which is the missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to be so ill prepared to deal with a phenomenon as the current pandemic?

[KH] The neighborhood, enhancing what works, mitigating what doesn't.

[ASP] Which elements in our built environment have been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[KH] The sidewalk, even behind a mask we see one another, if at a longer distance than we'd prefer.

[ASP] What design values and principles will thrive in the post-COVID world of architecture and the built environment?

[KH] Flexibility, soft order.

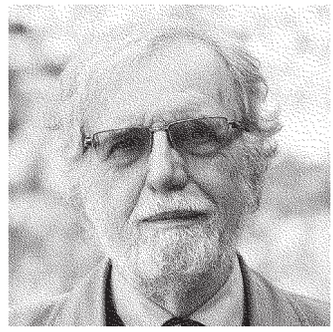
[ASP] Will COVID-19 be the cause of an enduring paradigm shift in the production of architecture? How?

[KH] Probably not, as prior plagues, wars, terrors have failed in disrupting the humanizing character of people living and working together. We like each other, and the civility cities promote encourages us to treat others as we wish to be treated — with respect to start, with affection over time, with love in the end.

Kevin Harrington is Professor Emeritus of Architectural History at the Illinois Institute of Technology in Chicago, where he began teaching in 1978. Born in Rochester, NY, he majored in history at Colgate University (BA) and studied the History of Architecture & Urban Development at Cornell University (MA, PhD). His research and publications have focused on Chicago's architectural and urban development in relation to modern architecture and the modern city, especially considering the ways Chicago is typical or unique. He has taught for IIT in its architecture programs in Italy and France, and he has been a visiting professor at the University of Texas-Austin, where he held the Ruth Carter Stevenson Chair; Escola daCidade, Sao Paulo, Brazil; and Brandenburg Technical University, Cottbus, Germany. He is co-author, with Franz Schulze, of Chicago's famous buildings, and with Edward Windhorst, of Lake Point Tower: a design history. He edited Mies van der Rohe: architect as educator, to which he also contributed the essay "Order, space, proportion: Mies's curriculum at IIT." He also wrote "Ideas in action: Hilberseimer and the redevelopment of the South Side of Chicago," for *In the shadow of Mies: Ludwig Hilberseimer, architect, educator and urban planner*.

JOHN SNAPPER

Interview conducted by Alejandro Saldaña Perales, April 2021.



John Snapper. Professor Emeritus. IIT faculty in Philosophy 1978–2020. Research concentration on the foundations of intellectual property. Instruction on the theory of the fine arts.

[ASP] Which is the missing focus in contemporary architecture? What have we (architects and urban designers) done wrong so far to be so ill prepared to deal with a phenomenon as the current pandemic?

[JS] Architects have too often failed to appreciate the need for private and semi-private space. The recent demand for sheltering makes more obvious what should have been obvious all along. Neither the boss nor the employee, neither the parent nor the child, neither the competitor nor the colleague wants to be very visible to the other. In the lockdown, we lost access to our escape refuges, upon which we should never have been so dependent in the first place.

[ASP] Which elements in our built environment have been most effective in helping humans mitigate the effects of isolation and forced lockdown? Why?

[JS] What helps make isolation comfortable, peaceful, and (within limits) desirable? A well-designed easy chair? Humane lighting? Comfortable yoga mats? Balanced acoustics?

[ASP] What design values and principles will thrive in the post-COVID world of architecture and the built environment?

[JS] In the short term, we build within wealth inequalities. Building for the wealthy is easy. Building for the penniless is challenging.

[ASP] Will COVID-19 be the cause of an enduring paradigm shift in the production of architecture? How?

[JS] No. There has never ever been such a thing as a 'paradigm shift' in architecture. The newer is always a variation within the older. Forget that silly paradigm metaphor and look to work that, within the culture, expands, enhances, designs spaces for our time as it is a-changin.

IN MEMORIAM

The PhD Program in Architecture is saddened by the loss of Professors Robert “Bob” J. Krawczyk and Peter Land, both of whom dedicated considerable time and effort to mentoring our PhD students. David Sharpe is also remembered as a faculty member who played an instrumental role in the MS in Architecture that was the precursor to the establishment of our PhD Program in Architecture.

ROBERT KRAWCZYK

Originally published on the IIT Architecture website, February 11, 2021. Shared with permission of the author.

Robert "Bob" J. Krawczyk, designer, professor, and associate dean at Illinois Institute of Technology's College of Architecture for 36 years, passed away on January 27, 2021.

As a professor at the College of Architecture, Krawczyk focused on digital craftsmanship and design, an area in which he was nationally renowned. Before coming to teach at Illinois Tech, he pioneered digital graphic, architectural, and engineering applications in the office of Murphy/Jahn under design partners Gene Summers and Helmut Jahn during the 1970s. In 1996, Professor Krawczyk also founded BitArtWorks, a studio for digital art.

"Professor Krawczyk was a pioneer in the research and development of computer technology who always explored new territories. His students produced outstanding work," says Professor Mahjoub Elnimeiri. "He had a strong work ethic, and he pushed his students to appreciate that quality work can only result from sustained effort. He was, by all counts, a very valuable teacher."

Professor Krawczyk's research into digital systems in the disciplines of science, mathematics, architecture, art, and technology was published and presented internationally in a body of work spanning more than 120 exhibitions, 70 conference and journal papers, multiple book chapters, and a textbook.

He was also the recipient of a number of notable awards, including the American Institute of Architects Young Architect Award in 1984 and the Association for Computer Aided Design in Architecture Award for Teaching Excellence in 2010. He was also nominated multiple times to be a United States Artists Fellow.

In addition to his teaching, Professor Krawczyk also served, at various points, as director of the undergraduate program, associate dean, and as adviser to numerous students in the PhD program. He also founded art@IIT, a campus gallery exhibition.

"I always admired Bob's commitment to supporting the college over the years. He consistently advised over 50 students each semester and was delighted when his former PhD advisees would stop by for a visit with him," says Cynthia Torres, director of academic affairs.

"Bob had a quick wit and generous spirit, and was a singular personality in the College of Architecture," says professor and former dean Donna Robertson. "A trusted colleague and wise counselor, he gave success to many, many students."

As the son of Polish immigrants who came to Chicago after World War II, Professor Krawczyk was the first in his family to pursue a college education, and his long academic career was a deep source of pride for his family. Further, his stepson, James Pierog Sheehan (CHE '14), and stepdaughter, Catherine Battista (LAW '05), would go on to complete their degrees at Illinois Institute of Technology.

Professor Krawczyk is survived by his wife, Corinne Pierog; brothers Konrad Krawczyk and wife Evelyn, and Albert Krawczyk and wife Kathleen; daughter Alexis (Krawczyk) Grabel and husband Scott; stepdaughter Catherine Battista and husband Jeff; stepson James Pierog Sheehan and wife Summer; granddaughter Makayla Martel; step-grandchildren Brooklyn, Francesca, and Benedetto Battista; nieces Kimberly Krawczyk, Lauren (Krawczyk) Glazier and husband Ryan, Kristen (Krawczyk) Flaherty and husband Colm; and nephew Matthew Krawczyk. Bob is predeceased by his mother, Wladyslawa "Lottie" Dolega Krawczyk; father, Jan "John" Krawczyk; and stepmother, Irmina Krawczyk.

PETER LAND

Originally published on the IIT Architecture website, August 14, 2020. Shared with permission of the author.

Peter Land, professor at the College of Architecture for more than four decades, passed away on August 2, 2020, at the age of 92.

An expert in housing, urban planning, and structures for electrical energy generation, Land taught at Harvard University and other institutions before becoming a tenured faculty member at Illinois Institute of Technology, where he contributed greatly to the program and to the architecture profession as a whole. As evidence of his impact at the College of Architecture, he received the university's distinguished teaching award twice, first in 1977 and then again in 2015. He retired as professor emeritus in 2018.

"Peter was a singular member of our faculty: extremely knowledgeable, of the highest curiosity, generous to students, and an inspiration to all," says Professor and Former Dean of the College of Architecture Donna Robertson. "I remember so many unique projects from Peter's teaching. He was a trusted confidant, a most valued colleague, and a friend. I will miss him greatly."

Land was born in Norwich, a medieval English city that, along with his grandfather, a stone mason, influenced his interest in architecture at a young age. Land studied at the Architectural Association and Royal Academy Schools in London, where he was awarded a Grand Prix for his graduate studies of urban design. He received a master's degree in urban planning from Yale University and a master's degree in architecture from Carnegie Mellon University.

Following his education, Land practiced in both the United Kingdom and the United States. He was also Yale's field director for an inter-American graduate program in urban and regional planning at the National University of Engineering in Lima, Peru, in the late 1960s and early '70s.

While in Lima, he became the director for the United Nations's Experimental Housing Project, PREVI, a high-density, low-cost neighborhood made up of 450 low-rise social housing units. Lands's directorship of the project culminated in a competition that invited top architects from around the world to propose unit designs for the development. PREVI is home to hundreds of individuals to this day.

Land contributed to other innovative architecture and planning projects throughout his lifetime, including relief efforts for rural schools in Peru following a devastating earthquake there, and even the design of a proposed lunar base in the 1980s. He also supported the study of environmentally friendly and socially progressive architecture. Over the years, Land's research-based studios pertaining to the performance of high-rise and long-span architecture helped solidify the college's reputation as a leader in the subjects, and his impact lives on through the students he mentored.

"Peter Land epitomized the kind of outstanding professor-practitioner that led IIT Architecture to prominence," says College of Architecture Dean Reed Kroloff. "His seemingly boundless curiosity, balanced by a rigorous devotion to research and teaching, meant that Professor Land and his students enjoyed the reciprocal joys of discovery and invention for decades. He will remain a model for those who succeed him here."

DAVID SHARPE

Originally published on the IIT Architecture website, June 26, 2020. Shared with permission of the author.

Renowned architect and educator David Sharpe (B.ARCH. '60; M.S. ARCH '62) passed away on June 20, 2020. For decades Sharpe worked as an architect at Skidmore, Owings & Merrill while also teaching at Illinois Institute of Technology's College of Architecture, where he became the architecture program's first Black professor.

"His being an African American was so important to the College—and to me," says College of Architecture Professor Mahjoub Elnimeiri, a long-time colleague and friend of Sharpe. "In this difficult time, one looks back to see that David helped bring in African-American students, championing inclusion and diversity."

Sharpe received a bachelor's degree from Tuskegee University. Following a tour of duty in the United States Air Force, he then came to Illinois Institute of Technology, where he completed a Bachelor of Architecture in 1960 and a Master of Science in Architecture in 1962. As a student, Sharpe was taught by Myron Goldsmith and was classmates with Phyllis Lambert (M.S. ARCH '63), founder of the Canadian Centre for Architecture.

"David and I were good friends," says Lambert. "We did our master's theses on long-span structures together—his on steel, for which I did the historical research, and mine on self-supporting concrete roof structures, for which David did the drawings. Many a night we stayed to work at Crown Hall, and I had dinner with Ruth [Sharpe's wife] and David at their apartment. This was a key time for me, with so many happy and fine memories."

After receiving his graduate degree, Sharpe practiced at Skidmore, Owings & Merrill, where he rose to associate partner by 1967. Working alongside fellow IIT Architecture faculty members such as Goldsmith and Elnimeiri, Sharpe contributed to some of the firm's most significant large-scale projects.

At the same time, and at the suggestion of Goldsmith, Sharpe began a nearly 50-year-long teaching career at the College of Architecture, beginning as a drawing instructor in fall 1962 and becoming a tenured professor in 1982. Sharpe's working experience, wealth of architectural knowledge, and personal investment in the success of his students made him a deeply admired member of the IIT Architecture community.

"David had a complete command of architectural and planning issues," says Elnimeiri. "He stressed and demanded quality work, but he always taught with a sense of humor. He never told students what to do, but guided them toward logical and meaningful solutions."

Though he taught across the curriculum and even served as acting chair of the program, Sharpe achieved his greatest academic distinction working with his mentor Goldsmith and fellow professor Elnimeiri to build the department's renowned graduate program. Noted for its research in structures and building systems, the program was an incubator for daring innovations in tall and super-tall buildings.

"Beginning as teacher and student, Goldsmith and Sharpe established an intellectual and academic partnership at Illinois Institute of Technology that effectively spanned an astonishing 50 years. The two combined as principal advisers for 280 graduate thesis projects, over half of all theses completed in the College of Architecture during that time," writes alumnus Ed Windhorst (M.ARCH. '93) in the book "High-Rise and Long-Span Research at Illinois Institute of Technology: The Legacy of Myron Goldsmith and David Sharpe."

Sharpe retired from the College of Architecture in 2010. A year prior, the American Institute of Architects Chicago chapter recognized him with its Distinguished Service Award. Sharpe continued to teach, advise students, and do research almost until the day he died.

"David was a thoughtful and reassuring mentor to hundreds of young people who are now successful practicing architects," says College of Architecture Dean Reed Kroloff. "In that, and so many other ways, he embodied the best of this institution, and we will miss him greatly."

Above: Photograph of David Sharpe (left) and Mahjoub Elnimeiri with a proposed high-rise design for Hyundai Engineering and Construction Company.

DEAN AND DIRECTOR BIOGRAPHIES

Reed Kroloff is Dean of the Illinois Institute of Technology's College of Architecture. He previously directed Cranbrook Academy of Art and Art Museum in Bloomfield Hills, Michigan, and was Dean of the Tulane University School of Architecture in New Orleans, Louisiana, which he led through Hurricane Katrina and its recovery. The recipient of the American Academy in Rome's Rome Prize Fellowship, Mr. Kroloff was also Editor-in-Chief of "Architecture" magazine, then the world's largest circulation professional design magazine. Mr. Kroloff is a principal at jones|kroloff, a unique advisory practice that develops strategy for clients in the design industry. The firm's projects include the High Line, the Los Angeles County Museum of Natural History, the Whitney Museum of American Art, the National Library of Mexico, the Yale University School of Management, the Motown Museum, programming on the History Channel, and many others. Mr. Kroloff holds degrees from the University of Texas at Austin and Yale University, and has practiced architecture in Texas and Arizona.

Michelangelo Sabatino directs the PhD program in architecture and is the inaugural John Vinci Distinguished Research Fellow at the Illinois Institute of Technology. Trained as an architect, preservationist, and historian, his research broadly addresses intersections across culture, technology, and design in the built and natural environment. He has authored and coauthored numerous books, including "Pride in Modesty: Modernist Architecture and the Vernacular Tradition in Italy" (2011), recipient of the Society of Architectural Historians' Alice Davis Hitchcock Award, in addition to "Canada: Modern Architectures in History" (with Rhodri Windsor Liscombe, 2016), "Avant-Garde in the Cornfields: Architecture, Landscape, and Preservation in New Harmony" (with Ben Nicholson, 2019), "Making Houston Modern: The Life and Architecture of Howard Barnstone" (with Barrie Scardino Bradley and Stephen Fox, 2020), "Modern in the Middle: Chicago Houses 1929–75" (with Susan Benjamin, 2020), and "Carlo Mollino Architect and Storyteller" (with Napoleone Ferrari, 2021). www.michelangelo-sabatino.com

EDITOR BIOGRAPHIES

Zahida Khan is an architect, an educator, and a researcher. She is an Adjunct Professor and a PhD Candidate at the College of Architecture, Illinois Institute of Technology (IIT) in Chicago. She received her Masters in Architecture (M.Arch) from IIT in 2017. With more than 13 years of international professional experience in Africa, the Middle East, Asia, and the U.S., her current academic pursuit envisions human-centered design toward the future of sustainable cities. She is a recipient of academic merit scholarships at CoA-IIT for her Master's and PhD programs, as well as a full travel scholarship for an international doctoral workshop at Shanghai. She is a registered architect at Council of Architecture in India and a LEED AP (BD+C) at USGBC. She was a winner of the Brothers Finfer Scholarship for graduate students at IIT and was nominated for the Archiprix International award and the AIA Chicago award in architecture for students.

Her areas of interest includes outdoor public spaces, tall urbanism, microclimates, human behavior algorithms, data-driven research, computational simulation, and artificial intelligence in architecture. Her doctoral research '"Human Spatial Behavior and Microclimates: An ABM approach to integrate Urban Morphology, Outdoor Thermal Comfort, and Human Behavior" explores methodologies and research framework toward understanding the interrelationship between human behavior, microclimate, and urban morphology of outdoor public spaces. The research aims to develop human spatial behavior algorithms through a pilot study of outdoor public spaces around tall buildings in Chicago. She has presented her work in various conferences including the ASHRAE/IBPSA Building Performance Analysis Conference. She was a co-curator of the 5th annual international graduate student symposium of the IIT College of Architecture. She has been a peer reviewer and an invited critic and is currently serving as a co-editor to *Prometheus 05*.

Yohan Kim is an architectural designer, researcher, and educator. He is a PhD candidate in architecture at Illinois Institute of Technology (IIT). He served as an adjunct professor in the fall of 2019 and has served as a teaching assistant at the College of Architecture, IIT. He is also a LEED Accredited Professional in Building Design + Construction. Kim's research centers on high-performance building facades, natural ventilation in tall office buildings, and computational fluid dynamics (CFD) modeling and analysis. His dissertation, entitled "The Feasibility of Double-Skin Facades to Provide Natural Ventilation in Tall Office Buildings," investigates the impact of double-skin facade configurations on the indoor airflow behavior in tall office buildings and the integration of computational simulation into the design process. The research also identifies practical considerations in the design and application of double-skin facades for tall office buildings. The main objective of the research is to develop a performance-based double-skin facade design guideline that helps predict the performance of double-skin facades in the early design stage.

Kim was the recipient of the 2018 CCHRB Scholarship at Chicago Committee on High Rise Buildings for his research proposal, "Exploring the Application of Double-Skin Facades for High-Rise Office Buildings in Chicago." He recently co-organized the 5th annual international graduate student symposium on Human Behavior, Performance, and Built Environments at the College of Architecture, IIT and has co-edited *Prometheus 05*. Prior to pursuing his PhD, he earned his master's degree in architecture from IIT and bachelor's degree in architecture from Inha University, South Korea. During his academic career, he received several awards and fellowships, including the Jerrold & Ruth Weil Loebl Fellowship Prize at the College of Architecture, IIT, and Ahn Gilwon Fellowship for Academic Excellence at Inha University.

CURATOR BIOGRAPHY

Alejandro Saldaña Perales is a Mexican-born architect and aspiring urban scholar. He holds a Bachelor of Arts in Architecture (2011) from ITESM in Monterrey, Mexico, a Master of Science in Architecture (2018) from the Illinois Institute of Technology in Chicago, and is currently a PhD student at IIT conducting research on the role parks at private planned developments play in crafting healthy neighborhood scenes on Chicago's South Side. Alejandro worked for the government of Nuevo Leon, Mexico, designing, constructing, and managing the largest community center built to date in one of the most disadvantaged neighborhoods in the country. He served as mediator between government and community and his labor was considered essential for the center's program implementation and optimal operations.

He has worked in several architecture firms in both Mexico and the U.S., and managed his own firm focusing on residential and institutional architectural design and construction. Alejandro has experience as an architecture scholar at CEDIM and as a high school social science teacher in Monterrey. He has lectured in Mexico, Chile, and the United States, collaborated on the Mexican Pavilion for the 2016 Venice Biennale of Architecture, and has published several articles and essays for different digital publications and books.

He was coordinator for the Mies van der Rohe Society, and has served as the architectural guide for S. R. Crown Hall and Robert F. Carr Memorial Chapel of St. Savior (known as the "God Box") during the Chicago Architecture Center yearly Open House (2017–2019). Alejandro has also worked as an intern for the City of Chicago Department of Planning and Development on projects related to the Englewood neighborhood in Chicago. He is currently the PhD Program Administrative Assistant. He also serves as Teaching Assistant and is assisting Professor Michelangelo Sabatino with the publication of *More than Mies: The Illinois Institute of Technology and the South Side of Chicago.*

CALL FOR PAPERS: 2021 INTERNATIONAL GRADUATE STUDENT SYMPOSIUM AT IIT

Metropolis in Crisis: Tall Buildings and Urban Environments

A thriving metropolis has been at the epicenter of every great civilization throughout history. From the Great Pyramids of Giza and the exquisite Hanging Gardens of Babylon, to the magnificent Parthenon of Greece and the mesmerizing dome of the Pantheon, these capital cities were made eternal by their monuments. Skyscrapers rising today are not short of monuments for the cities that we inhabit now in the twenty-first century. These tall buildings have become the identities of our cities, our culture, and our global presence. Last decade witnessed the most significant rise in the number of skyscrapers around the globe. Our cities are quickly becoming more vertical than ever before and one can start to see the effects of such rapid change on our environment. From man-made crisis to the unforeseen weather phenomena, our built environment is faced with many challenges.

Tall buildings are an integral part of our cities. Design, construction, and operation of tall buildings is complex and often requires interdisciplinary collaboration from experts. To resist the forces created by high winds, as well as reducing the impact of seismic movements, structural performance of a tall building is studied. New structural systems are invented along with studies related to structural materials. Environmental studies are performed to study the facade design to develop a more sustainable design. Life cycle analysis is a relatively new way of describing the environmental impact of tall buildings. New policies are made related to the design of skyscrapers. City ordinances are updated so that new developments are part of the existing urban fabric. What are the challenges in designing structural systems of tall buildings? How do we make decisions related to structural materials? What are the effective research methods for energy analysis? How can simulation help us understand the environmental impact of buildings? What are the policy goals that we need to address? How does zoning ordinance help in shaping the development of a city? What did we learn from civic, health, and natural crises throughout modern history? As designers, engineers, planners, and thinkers, how can we address these issues for our metropolis in crisis?

We seek to answer similar questions and many more at the 2021 International Graduate Student Symposium in its 6th consecutive year. Organized by the students of the PhD Program at College of Architecture, IIT, the symposium is a platform for researchers and professionals to come together and interact to find answers related to Design, Construction, and Operation of Tall Buildings in a contemporary metropolis.

Selected full papers will be published in *Prometheus 06,* the journal of the PhD program in Architecture at IIT. Authors of accepted extended abstracts will be invited to present their papers at the symposium.

Student Organizers
Amjad Alkoud, Piyush Khairnar, and Lijian Ma

Contact
iit.igss2021@gmail.com

Symposium Website
https://www.iit-igss.com/

Key Dates

- **MAY 1, 2021** Call for papers
- **JUNE 15, 2021** Extended abstract submission deadline
- **JUNE 15, 2021** Poster submission deadline
- **JULY 15, 2021** Notification of inclusion in the program
- **AUGUST 15, 2021** Full paper submission deadline
- **AUGUST 15, 2021** Registration begins
- **NOVEMBER 19, 2021** Opening event
- **NOVEMBER 20, 2021** All-day paper presentations
- **NOVEMBER 21, 2021** Chicago downtown tour led by PhD students
- **DECEMBER 15, 2021** Final (updated) paper submission deadline
- **MAY 2022** Estimated publication of *Prometheus 06*

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Chicago is a global metropolis in which exemplary academic and cultural institutions coexist with leading professionals in the fields of architecture, design, landscape architecture, and urbanism. Founded in the late 1990s as a laboratory of applied research and scholarship, the PhD Program in Architecture offered by the College of Architecture at Illinois Institute of Technology is the only one of its kind in Chicago. We are proud to attract students from around the world who converge on our landmarked Mies-designed campus to address a broad range of cutting-edge research issues within an interdisciplinary environment.

For detailed information about our faculty, current students, and how to apply, please visit the PhD webpage of our College of Architecture website, arch.iit.edu, and write to: Michelangelo Sabatino, Professor + Director of the PhD Program at msabatin@iit.edu.

ILLINOIS INSTITUTE OF TECHNOLOGY
College of Architecture

Why did we select Prometheus as the symbol and masthead of our journal? He was the irreverent Titan who stole fire to pave the way for the advancement of humankind. From our vantage point in Chicago, we understand fire as a tool for both destruction and creation. The Great Fire of 1871 leveled our city but also provided Daniel H. Burnham and Edward H. Bennett with a reason to devise the widely influential "Plan of Chicago" (1909). Without the fire of modern blast furnaces, the fabrication of the distinctive steel girders and columns of our Ludwig Mies van der Rohe-designed S. R. Crown Hall (and many of the other buildings on the IIT campus) would not have been possible.

Michelangelo Sabatino, Professor + Director PhD Program in Architecture,
Inaugural John Vinci Distinguished Research Fellow

Recipient of the 2020 AIA NYC Center for Architecture Douglas Haskell Award for Student Journals.

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