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A Penn Institute For Urban Research Publication

# Penn IUR Researches Nature-Based Solutions for Global Cities



Nature-based solutions are critical to mitigating climate change in cities. Photo by Andre Furtado.

**A**s cities around the world grapple with climate change, nature-based solutions (NbS) offer a promising way of mitigating and adapting to the effects of extreme heat, flooding, and other disasters. The United Nations Environment Program (UNEP) asked researchers at Penn IUR to track the financing of urban NbS. Penn IUR's findings were presented at COP15 in Montreal, with key takeaways shared here.

Penn IUR will continue to study nature-based solutions both domestically and internationally as they offer one of the best ways of multiplying the effects of green infrastructure and are deserving of more research and data to better understand the advantages of their implementation.

(CONTINUED ON P. 7)

## Monthly Special Briefings Chart Cities' Fiscal Challenges

How should cities adapt to fiscal challenges? To answer this question, Penn IUR and the Volcker Alliance launched *Special Briefing*, a monthly panel discussion and podcast where local and state officials and experts discuss topics that are critical to the future of American cities. The following are key takeaways from the Fall 2022 discussions. In-depth recaps and video recordings of each panel are available on [our website](#).

### WORK FROM HOME REALITIES

July 21, 2022

Featuring: Nicholas Bloom, Stanford University; Stijn Van Nieuwerburgh, Columbia University; Andrew Rein, Citizens Budget Commission; and Lauren Weber, Wall Street Journal.

- Pandemic spurred sixfold increase in working from home in U.S.
- New York office valuation dropped 33 percent as workers vacated
- Biggest hit is on Class B and C office properties
- MTA ridership is stuck at 55 percent of pre-pandemic levels

(CONTINUED ON P. 11)

## Faculty Spotlight

# Jamaal Green

**JAMAL GREEN** joined Penn Weitzman as a postdoctoral fellow in 2020, was named an assistant professor in July 2022, and became a Penn IUR fellow this fall. He is a planner and geographer interested in the ways that the organization of our built environments exacerbate or inhibit social inequality. His research interests include exploring the connections between land use and economic development planning, specifically concerning the role of industrial lands in urban labor markets and greater labor market restructuring, and the application of spatial analysis to policy problems. For the Department of City and Regional Planning, he has taught Land Use & Environmental Modeling and Modeling Geographical Objects, an introductory course on geographic information systems (GIS).



**YOUR RESEARCH EXPLORES THE INTERSECTION OF HOUSING, LAND USE, AND ECONOMIC DEVELOPMENT POLICY AND THE WAYS THAT PLANNING AFFECTS SOCIAL INEQUALITIES. WHAT DREW TO THIS WORK?**

I've always been interested in wrong and right, in justice. I grew up in the Washington, D.C. metro area where my parents were physicians dedicated to getting the best quality care to Black patients, in particular patients who lacked resources or had been mistreated in other institutions. So I was raised in a household where I was aware of the life and death consequences of racial inequalities.

When I came into college, I was really concerned about job access and decided to major in economics. But questions about job access were not treated as important questions in formal economics. Those kinds of questions were being asked in the planning department.

**IT SOUNDS LIKE THE STANDARD ECONOMICS APPROACHES MAY NOT BE HELPFUL IN ANSWERING THESE QUESTIONS. WHAT MIGHT BE HELPFUL?**

Any set of tools can be used to attack these questions, it's about what questions are being asked, right? There have been Black economists and Black social scientists who for over a century have been raising up these questions, but it's only very recently that the rest of the field of economics has decided to listen to them and care about discrimination and racism. It's not that no one was asking these

questions on the margins, but that the field was generally indifferent to them.

**IN OTHER WORDS, TO ADDRESS TOPICS OF SOCIAL AND RACIAL INEQUALITY, THE TOOLS MATTER LESS THAN THE QUESTIONS YOU'RE ASKING.**

Exactly. You can attack these questions using any variety of tools. I love spatial analysis and making maps. I think they're very informative for trying to better understand the world around you. But you don't need a map to discuss racism.

**IN ADDITION TO BEING A FELLOW AT PENN IUR, YOU ARE A FELLOW AT THE HOUSING INITIATIVE AT PENN. TELL US A BIT ABOUT YOUR WORK RESEARCHING HOUSING CONDITIONS IN PHILADELPHIA.**

In Philadelphia, there is a program called the Basic Systems Repair Program (BSRP), which gives out grants to low-income homeowners to repair electrical, plumbing, and heating systems. There are 12,000 households who have participated in the program that can be studied over 10 years. The city has spent nearly \$100 million on this, but still has miles-long waitlists. There seems to be a really large demand for this program, yet we still don't know the extent of that demand or how safe or adequate Philadelphia's housing is.

The American Housing Survey estimates that 2 to 4 percent of housing needs work, but I suspect it's more than that. In Philadelphia, the average repair cost in Philadelphia is \$8,500. For

low-income households, it's just not possible to spend three-quarters of a household's yearly income on home repairs.

The argument [Housing Initiative at Penn Faculty Director Vincent Reina and I] are trying to make in our paper is that there's tremendous demand for home repairs, particularly in weak-market or rust belt cities that may have higher proportions of homeowners with lower income and years of deferred maintenance. Thinking about our housing policy and thinking about how we keep people in their homes: How do we help people maintain their own homes over time as opposed to primarily focusing on getting people to buy homes?

**DO YOU ASPIRE TO HAVE YOUR RESEARCH INFORM POLICY MAKING?**

Planning is an applied profession. I think all planners want to have a positive impact on the built environment itself. Philadelphia and other cities should proactively do a survey to try and figure out what the actual burden of deferred maintenance is. They shouldn't assume their housing is ok based on the data from the American Housing Survey.

A survey like that could inform not just housing, but other policy areas like education. If you're too cold or too hot, you can't think properly. So if children are living in an unheated house, it's going to affect their ability to learn. For many low-income homeowners, they can't afford to make repairs and it starts a vicious cycle of degradation. The city or the state could actually step in and

address that cycle of degradation either through loans or grant programs like BSRP.

**YOU BECAME AN ASSISTANT PROFESSOR IN JULY 2022. WHAT KINDS OF TEACHING OR MENTORSHIP HAVE YOU EXPERIENCED THAT YOU HOPE TO EMULATE AS A PROFESSOR?**

My thesis advisor Professor Lisa Bates [at Portland State University] was formative in shaping and disciplining my thinking around equity planning and research design. She always had sharp questions and attention to issues of construct validity and argumentation, linked with a strong passion for people who have traditionally been ignored. People who care about others can be caricatured as unserious, whereas Prof. Bates is very rigorous by anyone's measure, while also asking very trenchant and important questions. That to me is one of the highest examples of how you can be an academic.

Finally, Associate Professor Nichola Lowe [at UNC-Chapel Hill] said this thing that has stuck with me ever since: You let the question guide the method. When people introduce themselves, they say: I'm an ethnographer, or I'm a spatial analyst. When you do that, you limit the kind of questions you allow yourself to explore. Ideally, there should be some openness to working across disciplines or finding people who are experts and collaborating with them to try and answer the questions that you think about.

# Faculty Fellow Updates

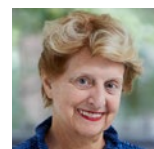
## BARNETT AND BOUW PUBLISH NEW BOOK



**Jonathan Barnett**, Emeritus Professor of Practice in City and Regional Planning and **Matthijs Bouw**, Professor

of Practice in Landscape Architecture, are the authors of *Managing the Climate Crisis: Designing and Building for Floods, Heat, Drought, and Wildfire*, published in July 2022 by Island Press. The authors take a practical approach to addressing the inevitable and growing threats from the climate crisis using constructed and nature-based design and engineering and ordinary government programs. They discuss adaptation and preventive measures and illustrate their implementation for seven climate-related threats: flooding along coastlines, river flooding, flash floods from extreme rain events, drought, wildfire, long periods of high heat, and food shortages.

## BIRCH RESEARCHES NATURE-BASED SOLUTIONS AND MORE



**Eugenie L. Birch** has recently completed several studies: "State of Finance for Nature in Cities:

Time to Assess, Quantifying Urban NbS Investments and Co-Benefits," for United Nations Environment Program (UNEP) (with Samuel Geldin, Amanda Lloyd, and Mauricio Rodas); "Powering the Slum II: Alternative Sources of Energy in Accra's Informal Settlements," for the Kleinman Center for Energy Policy, (with James Kwame Mensah); "A Standardized Approach to Analysis of Enabling Conditions Related to Cities' Ability to Access Climate Finance: Blueprint for a Tool," for the City Climate Finance Leadership Alliance (CCFLA); "Expanding the Covered Bonds: Enhancing the Rental Housing Market in Korea?" for the Wilson Center and Korea Housing

and Urban Guarantee Corporation (with Amanda Lloyd); and "Time for a New Social Contract: Rebuilding Trust in Government" for the UCLG World Assembly.

Other work contributions include: "A New Urban Narrative for Sustainable Development," *Nature Sustainability* (October 2022); "Legislation, Policy and Governance for Healthy Places," *Making Healthy Places, Second Edition: Building for Well-Being, Equity, and Sustainability*; "Realigning the Governance Architecture After COVID-19: City Diplomacy and Multilateral Institutions (with William Burke-White), *Journal of International Affairs*; and "How Philly Can Stay Ahead of the Curve in Addressing Climate Change," (with Mauricio Rodas), *The Philadelphia Inquirer* (November 2022). Birch made presentations at COP 27, the World Urban Forum 12, and a number of events on financing climate resilient infrastructure for the OECD, the United Nations, Interamerican Development Bank, and UrbanShift.

## BROWNLEE WINS PAUL CRET AWARD

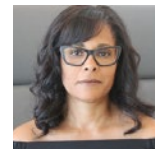


**David Brownlee**, Frances Shapiro-Weitzenhoffer Professor of the History of Art Emeritus, co-edited

a special issue of *Context*, the magazine of the Philadelphia AIA, devoted to the gigantic projects that are now transforming the city. In November he keynoted the international conference "Designing Libraries IX: Libraries for the 21st Century," hosted by Temple University. He continues to serve on the boards of the Preservation Alliance for Greater Philadelphia, the Athenaeum of Philadelphia (where, as chair of the building committee, he helped to oversee the recently completed \$2.5 million renovation project), and the Beth Shalom Preservation Foundation (whose "Automobile Invitational" on October 23 filled the driveway of the Frank Lloyd Wright-designed

National Historic Landmark with big-finned cars of the 1950s).

## CHARLES PUBLISHES BOOK ON THE NEW BLACK ELITE



**Camille Z. Charles**, Walter H. and Leonore C. Annenberg Professor in the Social Sciences, Professor

of Sociology, Africana Studies & Education, published her new book, *Young, Gifted and Diverse: Origins of the New Black Elite*. Despite their diversity, Black Americans have long been studied as a uniformly disadvantaged group. Drawing from a representative sample of over a thousand Black students and in-depth interviews and focus groups with over one hundred more, *Young, Gifted and Diverse* highlights diversity among the new educated Black elite – those graduating from America's selective colleges and universities in the early twenty-first century. Differences in childhood experiences shape this generation, including their racial and other social identities and attitudes, and beliefs about and interactions with one another. This internal diversity alongside political consensus among the elite complicates assumptions about both a monolithic Black experience and the future of Black political solidarity.

## DRAKE RODRIGUEZ RECEIVES GRANT



**Akira Drake Rodriguez** was one of the recipients of a Penn "Projects for Progress" grant, which awards

\$100,000 to interdisciplinary teams to implement a research project in the community. Rodriguez, along with Weitzman faculty and Penn Praxis Executive Director Ellen Neises, GSE PhD student Elinor Williams, Netter Center staffer Anna Balfanz, and Weitzman and

Environmental Studies alum Corey Wills (MCRP 22, MES 22) received funding for the project "Public Schools as Equity: Studio+" which partnered with West Philadelphia High School's architecture course to train students in design and fabrication skills to update their school's courtyard. Rodriguez also received funding with Dorit Aviv (Architecture faculty), Mrinalini Verma (MCRP '22), Anna Balfanz and Corey Wills to continue work at Hamilton Elementary School and Robeson High School through the Provost's Environmental Innovations Initiative. Rodriguez also co-authored a piece with Erika M. Kitzmiller at Barnard College for *Educational Reporter* on the need to invest in toxic school facilities to create healthy communities, and published an article in *Antipode: A Radical Geography Journal* on her work on housing justice and tenant organizing. During the summer, Rodriguez completed a four-week residency at Hedgebrook, a women's writing residency on Whidbey Island, Washington, where she worked on a new book project.

## DÜPPELMANN PUBLISHES NEW VOLUME, WINS AWARD



**Sonja Düppelmann**, Professor of Landscape Architecture, Department of Landscape Architecture, Weitz-

man School of Design, published her latest edited volume *Landscapes for Sport: Histories of Physical Exercise, Sport, and Health* (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2022). The essays in this volume explore the relationships between more and less agonistic sport and body cultures, their politics, and some of the outdoor sites and spaces that have accommodated them in different parts of the world since the early modern period. Frequently overlooked and taken for granted, these landscapes for sport often constitute significant areas of open space in and outside

our cities. The volume uncovers their relevance and meanings. Her book *Seeing Trees: A History of Street Trees in New York City and Berlin* (Yale University Press, 2019) won the 2022 Elisabeth Blair MacDougall Book Award (Society of Architectural Historians).

## GUERRA PUBLISHES TRANSIT RESEARCH



**Erick Guerra**, Associate Professor in City and Regional Planning, published recent articles on ride-hailing services

(*Transportation and Case Studies on Transport Policy*), behavioral responses to Mexico City's *Hoy No Circula* driving restrictions (*Transportation Research Part D*, and commuter rail transit use (*Transportation Research Record*). He is currently writing a book on U.S. highway policy since 1991 and leading a multi-institutional team examining the role of new technologies in improving shared and informal mobility services in low- and middle-income cities.

## HARKAVY KEYNOTES CONFERENCES, CELEBRATES NETTER CENTER ANNIVERSARY



**Ira Harkavy**, Founding Director, Barbara and Edward Netter Center for Community Partnerships, gave

the Coss Dialogue Keynote address to the Society for the Advancement of American Philosophy 49th Annual Conference, "Dewey, Implementation, and Creating a Democratic Civic University." In June, Harkavy addressed delegates in Dublin at the Global Forum on Higher Education Leadership for Democracy, Sustainability and Social Justice, co-sponsored by the Council of Europe, the International Association of Univer-

sities, the International Consortium for Higher Education, Civic Responsibility, and Democracy, and the Organization of American States. In September, Harkavy gave a Schemel Forum lecture at the University of Scranton, "Higher Education's Indispensable Role in Preserving and Advancing Democracy." Harkavy co-authored three articles, "[Higher Education and COVID-19: Global and Local Responses](#)" for *Change: The Magazine of Higher Learning*; "[Higher education institutions are anchors for democracy](#)" for *University World News*; and "A Global Movement for Democratic Civic Universities" for *IAU Horizons*. The Netter Center is celebrating its **30<sup>th</sup> anniversary year** with a full calendar events both on and off campus.

## IVERSEN PUBLISHES NEW BOOK ON LABOR MARKET INDUSTRIES



**Roberta Iversen**, Associate Professor, Penn Social Policy & Practice, interviewed 1,200 workers to present

stories about their labor market jobs since 1980 for her new book, *What Workers Say: Decades of Struggle and How to Make Real Opportunity Now*. Iversen shows that for employees in labor market industries – like manufacturing, construction, printing – as well as those in service-producing jobs, like clerical work, healthcare, food service, retail, and automotive – jobs are often discriminatory, are sometimes dangerous and exploitive, and seldom utilize people's full range of capabilities. Most importantly, they fail to provide any real opportunity for advancement. Iversen reveals how transformations in the political economy of waged work have shrunk or eliminated opportunity for workers, families, communities, and productivity. And she also offers an innovative proposal for compensated civil labor that could enable workers, their communities, labor market organiza-

tions, and the national infrastructure to actually flourish

## JACKSON IS NAMED PROVOST



**John L. Jackson, Jr.** has been selected to serve as the Provost at Penn, effective June 1, 2023, following grati-

fication by Penn's Board of Trustees. Jackson is currently the Walter H. Annenberg Dean of the Annenberg School for Communication and Richard Perry University Professor at the University of Pennsylvania. He was previously dean of the School of Social Policy & Practice and senior advisor to the provost on Diversity at Penn. Jackson is also currently chairing the Red and Blue Advisory Committee, which is leading a University-wide effort to inform the strategic next steps for Penn. Therecommendations from the committee will go to President Liz Magill and will underpin the framework for Penn's future.

## LANDIS PUBLISHES NEW BOOK ON MEGACITIES



City Planning Professor Emeritus **John Landis'** new book, *Megaprojects for Megacities: A Comparative Case-*

*book*, was published by Edward-Elgar in December 2022. With case studies on high-speed rail, urban metro systems, bus rapid transit, roadway tunnels and bridges, new and improved airports, waterfront redevelopment projects, new towns, urban parks and renewable energy projects undertaken during the last 10 years in North America, Asia, and Europe, it goes beyond previous megaproject books to explore how and why each project was conceived, planned, engineered, financed, and delivered, and how particular planning and delivery

practices shaped successful and unsuccessful outcomes. Landis' article, "Minority travel disparities and residential segregation: Evidence from the 2017 national household travel survey," an analysis of whether Black and Latino trip makers who live in segregated metropolitan areas make longer duration or longer distance trips than their white and non-Latino neighbors, was published in *Transportation Research D: Transport and Environment* in November 2022. Landis also wrote the introductory chapter for *Handbook on Smart Growth: Promise, Principles, and Prospects for Planning* published by Edward-Elgar in July 2022. Entitled "Smart growth: introduction, history, and an agenda for the future," it takes a critical lookback at the 40-year evolution and practice of smart growth with an eye to making it more effective at dealing with contemporary issues like gentrification, housing affordability, NIMBYism, and climate change.

## PERNA RECEIVES THE FACULTY AWARD OF MERIT



**Laura Perna**, GSE Centennial Presidential Professor of Education and Executive Director of the Alliance for

Higher Education and Democracy (AHEAD), received the Faculty Award of Merit at Homecoming 2022. She was recognized for her motto, "Never stop learning." This principle informs not only her distinguished scholarship, but her engagement with fellow Quakers. Among her many accolades, she is well known for her expertise in college access, affordability, and success, especially for low-income, first-generation, and nontraditional students. She is known for her strong commitment to mentoring and advising students, and has chaired doctoral and dissertation committees for more than 60 students who have gone on to become educational leaders themselves.

### RICHTER PREMIERS NEW ANIMATED VIDEO



Simon Richter, Class of 1942 Endowed Term Professor of Germanic studies, Director of Project

Poldergeist, and Joshua Mosley, Professor of Fine Arts, launched a new animated video called “[How will the Netherlands defend itself against climate change?](#)” Richter featured prominently in *De Klimaatverkenner*, a documentary film on managed retreat, which was broadcast on Dutch national television in October, 2022. The film included three clips from the Poldergeist series. In “[Introducing Dr Poldergeist: Using Animated Video to Motivate New Attitudes towards Climate Adaptation in the Dutch Water Sector](#),” an article published in *Water Governance Tijdschrift*, Richter articulated the goals of Project Poldergeist. Also in October, Richter organized an international workshop called “Imagine a Just and Climate Resilient Transboundary Region: An Experiment in the Politics of Humility and Radical Generosity.”

### SKEEL SERVES ON PUERTO RICO OVERSIGHT BOARD



David Skeel, S. Samuel Arshat Professor of Corporate Law at the University of Pennsylvania Carey Law School,

has served on the seven-member oversight board for Puerto Rico since its inception in 2016, and has been chair since Oct 2020. The federal judge overseeing Puerto Rico’s bankruptcy confirmed the board’s plan of adjustment on behalf of Puerto Rico – which restructured roughly \$35 billion of debt and shored up the pension system (\$55 billion of almost completely unfunded obligations) in January, 2022. The plan of adjustment went into effect in March 2022.

### SHARKEY ASSUMES NEW ROLE



Heather J. Sharkey is now Chair of the Department of Near Eastern Languages and Civilizations. In 2021, she published

a volume of essays with Jeffrey Edward Green, director of Penn’s Andrea Mitchell Center for the Study of Democracy and professor in Political Science, entitled, *The Changing Terrain of Religious Freedom* (University of Pennsylvania Press).

### STINER PUBLISHES BOOK ON MEGAREGIONS



Frederick Steiner, Dean of the University of Pennsylvania Stuart Weitzman School of Design, and co-authors,

Ming Yang and Bob Yaro, published the book *Megaregions and America’s Future* (Lincoln Institute of Land Policy) in March 2022. With lecturer, Rebecca Popowsky, Steiner taught a joint City Planning-Landscape Architecture studio on the transportation and environment infrastructure of the Philadelphia to Baltimore corridor. Additional recent publications include: “Accept Your Dispensability” and “The Last Week of the Year” in *Places Journal*; “Environment” in *The Landscape Project* (edited by Richard Weller and Tatum Hands); “Ian McHarg and Representing Complex Landscapes” in *Representing Landscapes* (edited by Nadia Amoroso and Martin Holland); “Reflective Socio-Ecological Practice” in *Socio-Ecological Practice Research*; “The Olmsteds and Land-Grant Universities” in *Landscape Journal*; and “Touching Time” in *Re-Vista*.

### VITIELLO PUBLISHES NEW BOOK



Domenic Vitiello, Associate Professor of City Planning and Urban Studies, published his latest book, *The Sanctuary City: Immigrant, Refugee, and Receiving Communities in*

*Sanctuary City: Immigrant, Refugee, and Receiving Communities in*

*Postindustrial Philadelphia* (Cornell University Press, August 2022).

Thanks to generous support from Weitzman School Dean Frederick Steiner and the Mellon-sponsored Humanities + Urbanism + Design initiative, the book is open access, free to [download](#). In a related [article](#) in the *Washington Post*’s “Made By History” segment (September 2022), Domenic discusses “how a very old concept [sanctuary] remains a key part of navigating our broken immigration system.” Domenic’s most recent article on urban agriculture, “The highest and best use of land in the city: Valuing urban agriculture in Philadelphia and Chicago,” published in the *Journal of Agriculture, Food Systems, and Community Development* in June 2022, is also [open access](#). Both *The Sanctuary City* and this article reflect on more than fifteen years of Domenic’s research and practice with immigrant communities, community gardeners, and urban agriculture support organizations.

### VOITH PAPER TO BE PUBLISHED



Cityscape has accepted a [new paper](#) co-authored in part by Richard Voith and former Econsult Solutions

Associate Director Jing Liu. The paper examines the impact of Low Income Housing Tax Credit (LIHTC) financed development on neighborhood house prices. Research typically shows that LIHTC-financed properties generate positive spillover impacts in their surrounding communities as reflected in neighborhood house values. Yet some critics suspect that the overall positive effects obscure the properties’ negative impacts for a significant subset of neighborhoods. On the contrary, this research demonstrates that, regardless of the property or neighborhood characteristics, LIHTC developments in Los Angeles have positive impacts on their neighborhood.

### WACHTER RECEIVES GRANT TO STUDY ZONING



Susan M. Wachter received a grant from Freddie Mac to develop a land use restrictiveness index. The index

will have national coverage and will be available to researchers. Wachter additionally co-authored “[Lending Competition, Regulation and Non-Traditional Mortgages](#)” and “[The Price Effects of Greening Vacant Lots: How Neighborhood Attributes Matter](#),” both published in *Real Estate Economics*, and co-edited a forthcoming special issue of *Journal of Housing Economics* on the impacts of COVID-19 on housing markets. The special issue features a curated collection of topical research and is slated for publication in March 2023. Throughout the year Wachter was frequently sought for comment on key issues in the post-pandemic economy and housing markets, including media and articles in *Barron’s*, *Bloomberg*, *Analytics at Wharton*, *Knowledge at Wharton*, *Wharton Business Daily*, and *the Wall Street Journal Marketplace* [time](#) and [again](#).

## Penn IUR Covers Nature-Based Solutions in Cities in the Climate Change Fight (continued from page 1)



Urban NbS are undercounted and underfunded. Photo by Nancy Bourque.

To date, understanding the extent and value of NbS as a tool to address climate change relies on the aggregation of national data to global levels as indicated in UNEP’s pioneering study, *State of Finance for Nature (SNF)*. The SNF calculations do not address NbS applications in urban areas, despite the demographic and economic might of cities today and tomorrow, especially in rapidly urbanizing places in the Global South where an enormous amount of infrastructure and building investment will occur in the coming decades.

1

#### Globally, urban NbS investments are severely undercounted.

Current NbS models rely on data drawn from rural areas, national coastlines and riverine valleys, forests, and agriculture based on land use as the unit of analysis. Cities that cover some 2 to 3 percent of global land are non-existent in these data. In addition, except for ecosystem services for urban watersheds, funders, donors, and city budget officials generally do not track urban NbS investment data as a separate category but nest them in larger projects encompassing one or more city systems.

2

#### Two methods of assessing funding for urban NbS are emerging:

a system-based taxonomy, which calculates the amount of money spent on interventions, or a system of evaluating the financial benefits of interventions.

3

#### Efforts to inventory and evaluate urban NbS are emerging, especially in the biodiversity community.

For example, Singapore developed the Singapore Index on Cities’ Biodiversity in 2008 and updated it in 2021 to assist public and private sector decision-makers in formulating, financing, and monitoring programs that not only promote biodiversity (e.g., native bird species) but also provide quantifiable sustainable development benefits (e.g., recreational services).

4

#### The absence of global, national, and local urban NbS databases and metrics is clear.

Needed is a combination of basic counts integrated or supplemented with such other methods as cost-benefit analysis and natural capital accounting to assist funders, donors, and public and private decision-makers to develop policies and programs that meaningfully engage well-coordinated urban NbS in addressing global warming.

5

#### An accounting framework, natural capital accounting (NCA), is also emerging.

According to the UN, natural capital accounting allows to measure and report on flows and stocks of natural capital in a systematic manner. This concept assumes that the environment should be recognized as an asset that must be managed and preserved and that its services should be integrated into national accounts frameworks.

# 2022—2023 Penn IUR Fellows in Urban Leadership

The Penn IUR Fellowship in Urban Leadership program provides an exceptional group of Penn undergraduates with the unique opportunity to engage with established urban leaders in dialogues and site visits. Each month, the fellows hear from featured speakers, such as Michael Nutter, former Mayor, City of Philadelphia; Matt Bergheiser, CEO, University City District; and Rebecca Rynhart, Controller, City of Philadelphia, among others. Through these no-holds-barred discussions, fellows gain insight into the role of visionary leadership and action in urbanization that is both equitable and sustainable.

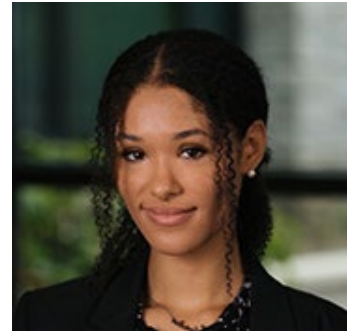
“Through monthly meetings with innovators throughout the year, the fellows learn how urban leadership is truly spread across the public, private, and nonprofit sectors,” says Penn IUR Co-Director Eugénie L. Birch. “The opportunity to connect with an array of local leaders helps prepare students for their own futures as leaders in an increasingly urban world,” says Penn IUR Co-Director Susan M. Wachter.

In addition, the fellows traveled to New York in Fall 2022 and will travel to Washington, D.C. in Spring 2023. In both cities Penn IUR Advisory Board Chair, Mark Rosenberg, Principal, MHR Fund Management LLC, and Penn IUR Advisory Board Member, Melanie Franco Nussdorf, Partner, Steptoe & Johnson, have curated a series of site visits and learning sessions with local leaders. “The field trips allow the fellows to see a variety of different approaches to urban issues and see these issues through a national lens,” says Nussdorf.

Rosenberg notes, “By increasing these connections to leaders in Washington, D.C. and New York, the fellows will have greater exposure to the issues facing cities and the people addressing them. While each city’s issues may be unique, there is much to be gained by broadening the focus to compare and contrast specific approaches and outcomes from multiple cities.”

The 2022-2023 Penn IUR Fellows in Urban Leadership are:

## Christin Clyburn



Christin is a junior majoring in economics and minoring in sustainability and environmental management. She has performed her social justice and environmental poetry on the TEDx stage and at the World Bank and received two New York Emmy Awards nominations for her work with an educational youth news program. At Penn, she’s a Black Wharton consultant, Robeson Cooper Scholar, Admissions Dean Advisory Board member, and Director of Operations for Ase Academy - a mentoring program for inner-city students. Recently, she worked with PwC doing consulting for an urban education non-profit.

## David Garnick



David is a senior studying urban studies and political science at Penn. Since his first year at Penn, David has been fascinated by grappling with issues of urban (in)equity and development and thinking about solutions to build future sustainable, inclusive, and innovative cities. David collaborated with SEPTA’s strategic planning team on the trolley modernization and bus revolution projects

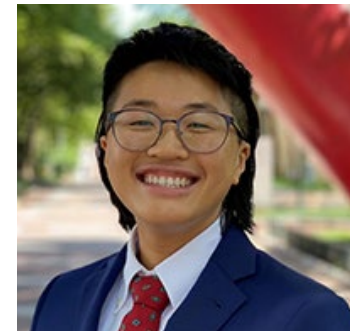
in the spring of his junior year. And, during summer 2022, David traveled to Jerusalem to research the Jerusalem Light Rail and its impact on the lives of Israelis and Palestinians.

## Adam Goudjil



Adam is a junior from Staten Island, N.Y. majoring in urban studies and minoring in urban education policy. As a member of the Netter Center for Community Partnerships’ Student Advisory Board, he has supported capacity-building efforts to expand ABCS courses. He participated in Penn IUR’s Undergraduate Urban Research Colloquium, where he researched the impact philanthropies have on revitalizing small legacy cities. This summer, he was a research intern at the Urban Institute’s Center on Nonprofits & Philanthropy.

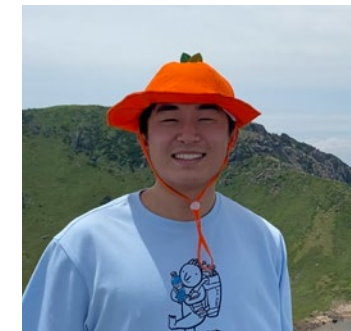
## Emily Huynh



Emily is a senior from the Washington, D.C. metropolitan Area. She majors in health and societies, and minors in bioethics. Emily previously worked at the National Hospice and Palliative Care Organization and in a policy and eco-

nomics lab researching end-of-life care. Currently, Emily is a consultant at BerryDunn supporting Hawaii’s Medicaid Division. She is the president of Penn Benjamin’s Peer Counseling and a member of the HSOC Student Advisory Board. As an avid fan of biking and sustainable urban living, Emily is a strong advocate for improving the bikeability and public transportation of communities.

## Joey Jung



Joey is a junior in the College of Arts and Sciences majoring in urban studies and political science, minoring in public policy and data analytics. He grew up in Tallahassee, Fla., and is interested in urban development, public policy, history, and data science. He is conducting research on gentrification measurements through the Undergraduate Research Colloquium with Yeonhwa Lee. This summer he was in Seoul for Penn Global’s International Development Program, interning at a small M&A firm dealing primarily with education technology and software companies. He would like to work in real estate, public finance, or a startup focused on urban issues in the future.

## Tessa Kong



Tessa is a junior in the College of Arts and Sciences studying visual studies, with a minor in architecture. Passionate about sustainability and bio-architecture, Tessa took a gap year between her sophomore and junior years at Penn to work for Julia Watson, a nature-based designer and author of “Lo-TEK: Design by Radical Indigenism.” Before her year off, she held the Marketing Chair position for the Spire Social Impact Business Accelerator and was a senior board member of the Penn Social Entrepreneurship Movement. This year, she hopes to focus her studies on sustainable and creative urban development in architecture, infrastructure, and design.

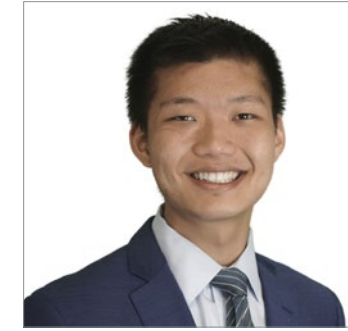
## Elijah Levine



Eli is a junior raised in Park City, Utah at the Wharton School of Business. He has been a member of the Wharton Undergraduate Real Estate Club, Penn Mock Trial, Quaker Finance Group, First Generation Investors, Akpsi, and other professional organizations and interned at Sotheby’s International Realty in Park City. In 2020, he took some time off from school to work full time at Bridge

Investment Group and several start-up companies and funds. Elijah is passionate about real estate, finance, proptech, politics, urban and city planning, as well as sports such as hiking, surfing, skateboarding, and lacrosse.

## Rain Liu



Rain is a senior from New York, N.Y. in the College of Arts and Sciences majoring in economics and political science and minoring in statistics. At Penn, his academic interests lie in sustainable urban development through financial and public policy tools. Previously, Rain has interned within different local government offices in the New York City Council and State Assembly and has served as Consulting Director of 180 Degrees Consulting on campus. This past summer, Rain joined BofA Securities in its public finance investment banking division.

## Tani Madichetti



Tani is a junior at Wharton concentrating in business economics and public policy (BEPP) and minoring in urban studies. She is very passionate about educational justice and

equity, and she hopes to one day pursue a career in education policy. On campus, she is the VP of Diversity, Equity, and Inclusion for Wharton Women, she serves as a National Advising Fellow Leadership Team member for Matriculate, and she dances on an all-girls Bollywood fusion dance troupe called PENNaach. This summer, she worked for the DC-based Partnership for Public Service’s Leadership Development Team as well as Ashoka’s research team.

## Katrina Murray



Katrina is a senior from Seattle, Wash. She is majoring in health and societies (with a concentration in public health) and earth sciences (with a concentration in environmental science). She has participated in research projects surrounding COVID-19 and HPV vaccination hesitancy, interned in the Environmental Lab at Philadelphia’s Public Health office, and participated in other health-related activities and research projects. She is passionate about public health, specifically disease, environmental exposure, and gender equality in urban environments. She hopes to eventually work in law and policy with the goal of making Americans healthier.

FACULTY & STUDENTS

Connor Nakamura



Connor is a sophomore from California, pursuing a major in urban studies in the College of Arts and Sciences. Stemming from his experience in the community land trust and food sovereignty movements in the Bay Area and Philadelphia, he is interested in alternatives to traditional conceptions of urban planning. He recently completed a summer fellowship at the Othering & Belonging Institute where he wrote a case study on cities that are incorporating affordable housing into their local reparation programs. At Penn, he writes for 34th Street magazine where he covers local activism on campus and in the broader Philadelphia community.

Cancer Work Group. She previously worked as a phlebotomist at Beth Israel Deaconess Medical Center and as a Health Policy Fellow for the Michigan Democratic Party. At Penn, she is a part of SHOP as a volunteer and a member of their Policy and Outcomes Committee.

Justine Seo



Justine is a senior from New Jersey studying philosophy, politics, and economics. She has a deep interest in the environment and hopes to pursue sustainability management or environmental law after graduation. After doing research with Professor Simon Richter on sea-level rise mitigation in the Netherlands, she became interested in learning more about how cities are adapting to the effects of climate change, specifically through the intersection of sustainability and technology. This past summer she interned at 4EN, a Seoul-based green tech company.

editor for The Daily Pennsylvanian and has previously served as deputy news editor and a politics reporter at the newspaper.

Jack Starobin



Jack is a junior from Olney, Md. pursuing majors in political science and economics and minoring in Hispanic studies. He has a strong interest in the influence of media on public opinion and political outcomes, as well as an interest in voting rights and voting access. Last summer, Jack worked for the High School Voter Project to support West Philadelphia high school students in organizing their peers to vote. He is currently working to launch a Youth Advisory Board at Penn's Netter Center for Community Partnerships to center West Philadelphia youth voices in the development of university-community partnerships.

Jonah Schenk



Jonah is a senior, concentrating in finance and real estate at Wharton. Growing up in downtown Chicago shaped his interdisciplinary interests in politics, economics, and urban real estate. At Penn, Jonah is on the Real Estate Investment Team in Wharton Investment and Trading Group, he's served as a representative in the Undergraduate Assembly, he is a writing tutor in the Marks Family Writing Center, and he is a leader for Pennquest. This past summer, Jonah interned at Blackstone in their Real Estate Acquisitions group, which he will rejoin full-time next year after graduation.

Victoria Sousa



Victoria is a senior at Penn where she studies politics, philosophy, and economics, with a concentration in public policy and governance. As a Philadelphia native, Victoria is passionate about education equity and local change making. She spent the summer in Buenos Aires as a student reporting fellow for the Pulitzer Center on Crisis Reporting, where she reported on the impact of COVID-19 on education systems in the region. She is currently a news

Thrusha Puttaraju



Thrusha is a junior from Hopkinton, Mass. majoring in neuroscience and minoring in healthcare management. As an outreach coordinator for the American Lung Cancer Screening Initiative (ALCSI) non-profit, she conducts monthly webinars on cancer screening awareness with town Departments of Health and represents ALCSI on the Massachusetts and Connecticut State

FEATURE

# Monthly Briefings Chart Cities' Recovery and Ongoing Challenges (continued from page 1)

**STAGFLATION AHEAD?**  
September 15, 2022  
Featuring: Alison Premo Black, American Road & Transportation Builders Association; Mary Beth Ann Bovino, S&P Global Ratings; Hughey Newsome, Wayne County, Michigan; Gabriel Petek, State of California; and Mark Zandi, Moody's Analytics.

- "We're at the precipice of a wage-price spiral" economist warns
- Rising costs for labor and materials constrain infrastructure projects
- California sees flat revenue growth ahead
- Competition for staff heats up in tight labor market

**BIG CITIES, BIG CHALLENGES**  
November 17, 2022  
Featuring: Shirley Clarke Franklin, Former Mayor, Atlanta; Greg David, City University of New York Craig Newmark Graduate School of Journalism; Heather Gillers, Wall Street Journal; Farhad Omeyr, National League of Cities

- City governments are being "super cautious and fiscally conservative"
- Growing cities in the southeast see "no huge downturn" in revenue
- New York City faces "enormous budget stress" in the next two years
- Chicago is in a better position with Moody's investment grade rating

**THE INFLATION REDUCTION ACT: INVESTMENT OPPORTUNITIES AND CHALLENGES**  
October 20, 2022  
Featuring: Ben Beachy, BlueGreen Alliance; Sarah Gimont, National Association of Counties; Justin Marlowe, University of Chicago Harris School of Public Policy; and Richard Prinszano, Penn Wharton Budget Model, University of Pennsylvania

- The Inflation Reduction Act said to create more than 9 million jobs over next decade
- Direct pay subsidies will empower local governments in implementing climate action
- Act may shift \$4 trillion municipal market from tax-exempt debt to direct pay financing

**2023 OUTLOOK FOR STATES AND CITIES**  
Featuring: Mayor Kate Gallego, Mayor, Phoenix; Emily Brock, Government Finance Officers Association; Natalie Cohen, National Municipal Research; Julia Coronado, McCombs School of Business at the University of Texas at Austin; Mark Zandi, Moody's Analytics.

- Tight labor markets, rising costs, housing shortages loom
- Economists say "unusual elements" may help avert US a recession
- Phoenix reaps benefits of COVID-19 stimulus, CHIPS and Science Act
- Out-migration trend may challenge bigger cities
- Finance officers prepare to defend municipal bonds in divided congress



Photo by Wisnu Phaewchimplee.

## Forum on Urban Informality

The Penn IUR Forum on Urban Informality is a space for graduate and post-graduate researchers and practitioners to exchange ideas on the topic of urban informality. As part of the Penn IUR Lab on Sustainable Development and Informality, the goal of the Forum is to convene early-career experts across different disciplines and institutions to explore the way informality is shaping sustainable urban development.

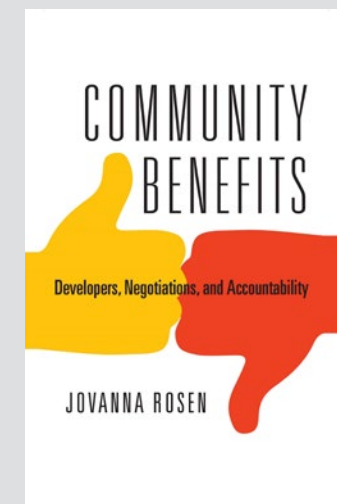
By encouraging interactions between academic and professional settings, the Forum seeks to foster greater collaboration and coordination between public and private institutions working on informal urban issues.

The Forum features regular student researcher work-in-progress presentations for peer input and review, as well as a shared resource directory for group members to access relevant data and studies.

Coming Spring 2023

## COMMUNITY BENEFITS

by Giovanna Rosen



The 50th Book in Penn IUR / Penn Press's The City in the 21st Century Series

For the complete list of titles, visit [PennPress.org](http://PennPress.org)



## Book Talk: Urban Planning in a World of Informal Politics

In Collaboration with Penn Press, [Penn IUR Forum on Urban Informality](#) hosted Chandan Deuskar for a discussion of his new book “[Urban Planning in a World of Informal Politics](#)” published in August 2022. Deuskar is an urban planning researcher and international development practitioner whose work focuses on urbanization in the Global South. In 2020-2021, he was a postdoctoral fellow at the Penn Institute for Urban Research as well as a fellow at the World Economic Forum’s Global Future Council on Cities of Tomorrow. Deuskar currently works at the World Bank as an urban development specialist. He completed a Ph.D. in City and Regional Planning in 2020 at the University of Pennsylvania’s Weitzman School of Design. He also has degrees in Architecture from Columbia University, and City Planning from Massachusetts Institute of Technology.

In his book, Deuskar discusses how informal political dynamics, particularly the provision of benefits to the poor in exchange for political support (‘clientelism’), impacts urban growth and planning in democracies of the Global South. The book examines the relationship between clientelism and urban growth through a detailed case study of Ghana, statistical analysis at the global scale, and the literature on clientelism

and urban informality from across disciplines. It also explores how planners can take a more politically adaptive approach when working in context of urban informal politics.

In his talk, Deuskar presented the case of demolitions in the informal settlement of Old Fadama in Accra, as a political response to the dual tragedy of floods and fire in Accra in 2015. The demolitions antagonized the residents and incited protests against the political party in power. The book uses this example among others to discuss how informal politics in Ghana determine its urban growth and the ability to plan for, or respond to, environmental challenges such as floods. He speaks about how clientelism is antithetical to formal urban planning but can be used as an entry point by planners. He also highlights the importance of utilizing existing channels of planning and service delivery to make more coordinated and sustainable planning decisions. This book is especially relevant to urban planners and international development experts working in the Global South, as well as researchers, educators, and students of global urbanization who will find it informative and thought-provoking.



Cities around the world are racing to address extreme heat and air quality. Photo by антон-хаткевич

## Penn IUR Hosts Events to Address Extreme Heat and Air Quality During Penn Climate Week

As the global climate meetings (COP27) opened in Sharm el Sheikh, Egypt, a new report revealed that the past eight years have been the hottest the world has experienced. What's worse, the extreme heat that comes with globally rising temperatures is felt most acutely in cities, where 7 billion people live, due to urban heat island effect.

Extreme heat isn't just uncomfortable, it's deadly. It kills more people than any other kind of climate hazard; and in many countries, extreme heat kills more than all other climate hazards combined.

And yet, extreme heat has only recently gotten the attention it deserves as a serious threat to people and the planet. In 2021, the Adrienne Arsht - Rockefeller Foun-

ation Resilience Center (Arsht-Rock) funded a new kind of leadership role in cities – Chief Heat Officers – to bring attention to and manage the problem of extreme heat. The organization has funded the appointment of eight CHOs so far, in cities from Miami to Athens.

Meanwhile, in the United States, the National Oceanic & Atmospheric Association is partnering with American cities to better understand urban heat island effect and track urban air quality. In July 2022, Philadelphia's Academy of Natural Sciences worked with local community leaders to track the city's heat and air quality.

Penn Institute for Urban Research hosted two recent events to spread understanding of how urban leaders are addressing heat around the world.

## Mapping Heat and Air Quality

Philadelphia just recorded its warmest summer ever. To better understand how to mitigate and adapt to this weather, the National Oceanic & Atmospheric Administration has been funding cities to study heat across their municipal boundaries. In 2022, Philadelphia was one of 16 American cities to perform a study, and one of two cities to measure air quality as well. Over the course of one day at the end of July, the Academy of Natural Sciences of Drexel University led a campaign to measure urban heat island effect across the city. With 50 community volunteers driving cars with mounted sensors along prescribed routes, the group was able to measure heat and air three times over the course of one day. Richard Johnson, Director of Community Science at the Academy, said that Philadelphia's campaign was unique in that a majority of the routes were driven by groups working in their own neighborhoods, including community leaders, college students and retirees. "The goal was to raise understanding of communities' experience with heat and air pollution and explore equitable solutions to these issues," Johnson said.

In Philadelphia, the temperature can vary up to 22 degrees from one neighborhood to the next. Low-income communities are disproportionately affected by extreme heat, due to their lack of tree cover and green space. The results from the heat and air mapping campaign will give Philadelphia a better sense of how neighborhoods differ and what new interventions might be needed to address heat and air quality in the future.

One local community leader, Meeka Outlaw shared her experience working with the Academy on the campaign. She grew up in Grays Ferry, where many people have attributed their elevated rates of asthma and cancer to air pollution from nearby refineries.

"Doing this project, a few things came full circle for me," Outlaw said. It raised her awareness of the poor air quality in her neighborhood. "Doing this project made me see how important it is to know what you're breathing in every day." The project also made her aware of the ways that climate change is altering the city. She realizes that her own children have never experienced a snowstorm. "Not the kind where you can jump off a stoop and fall deep into the snow," she said.

Outlaw now sees herself partnering with other local organizations, disseminating information to Philadelphians about how to get involved in projects like the heat and air quality survey, and encouraging others to focus on nature and connect with green space.

"Having Meeka's perspective was such a huge value in this project," Johnson said. "[Community leaders] are the ones carrying on this work once we have this information about heat and air quality."



Philadelphia is mapping heat and air quality throughout the city. Photo by Kelly.

## Chief Heat Officers Take the Lead on Climate Change

To contend with extreme heat, Chief Heat Officers are deploying a range of approaches to raise awareness of the threat of extreme heat, improve the resilience of urban landscapes, and help keep residents cool.

In the summer of 2021, record high temperatures brought drought and hundreds of fires to the Athens region. "It was kind of post-apocalyptic those days in Athens," Global Chief Heat Officer, Eleni Myrivili, said. The extreme heat coincided with Myrivili's appointment as a Chief Heat Officer that July, and she was able to begin quickly implementing new measures to address a threat that she contends could make Athens uninhabitable if not properly managed.

Since then, Athens has focused on informing the public about the threats of extreme heat. The city now names heat waves to heighten awareness about them. This year Athens deployed a three-tier alert system to help people understand not just how hot it will be, but what health threats the heat could bring to human lives.

In Monterrey, Mexico, extreme heat has caused a water crisis in the city. The city has responded with an ambitious plan to create "green corridors" that will help provide shade, retain groundwater, and prevent water shortages. Additionally, the city is creating a 20-acre public space, Parque Lago, that, with the corridors, will add thousands of trees to cool the city and add shade.

While these ambitious initiatives often rely on large amounts of funding, in Santiago, Chief Heat Officer Cristina Huidobro pointed out the importance of being resourceful since there is a lot of "energy poverty" in the city. "We don't have big budgets. We have a lot of restrictions on governance and funding," she said. But she hopes to inform residents of traditional ways of keeping cool, like white roofs, shutters, and cross-ventilation instead of air-conditioning, which can be beyond the budget of the average Chilean. "What if our cooling centers are churches? We have lots of them and they're really cool inside."

For all the chief heat officers, having a cohort of peers who are similarly focused on extreme heat has been essential to sharing best practices. "If the cities are part of the problem of climate change and emissions, how can we make cities part of the solution?" Huidobro asked.



# Penn IUR Fellow Kyung-Hwan Kim Lectures on Housing and Quality of Life

On September 9, 2022, Penn IUR hosted Professor Kyung-Hwan Kim for a lecture on South Korean urbanization, quality of life, and affordable housing. Kim was an ideal person to hold forth on these topics, given his career as a leading scholar and government official.

Kim received his PhD in economics from Princeton University in 1987. One year later, he began his career as a professor of economics at Sogang University, continued as a faculty member until 2006, and served as academic dean from 2003-2006. He has also taught at the University of Wisconsin-Madison and Singapore Management University.

Kim has been a longtime Penn IUR Scholar and has [co-authored papers](#) with Penn IUR Co-Director, Susan Wachter, and contributed to [Global Urbanization](#), part of the City in the 21st Century book series. With his experiences as president of Korea Research Institute for Human Settlements urban finance advisor at the UN Centre for Human Settlements (Habitat), and president of the AsRES, he has become a recognized as a leading expert on global housing issues.

More recently, Kim worked in the public sector, serving as vice minister of the Ministry of Land, Infrastructure and Transport of the Republic of Korea from May 2015 to June 2017.

All of these experiences were brought to bear as Kim began his lecture with a sweeping overview of the impacts of urbanization during the past 60 years. He called cities “engines of growth,” with major cities having outsized GDPs; for example, Los Angeles has a GDP nearly the same size as all of Australia. Additionally, he noted that there is a positive correlation between human productivity and city size. “Bigger cities provide greater opportunities to learn from more people,” Kim said.

But cities also come with challenges; in particular, inequality tends to grow with city size. Megacities often attract top talent with big salaries, and they also attract the very poor because of megacities’ numerous job opportunities.

After setting the stage with this introduction on the effects of urbanization, Kim then gave



“Many indicators have improved, with life expectancy now exceeding that of the United States. Kim’s favorite indicator – the height of a 14-year-old boy – has increased by 6 inches since 1960.”

an overview of the impact of urbanization on South Korea. South Korea is now 92 percent urbanized, and it is the 10th largest economy in the world. Many indicators have improved, with life expectancy now exceeding that of the United States. Kim’s favorite indicator – the height of a 14-year-old boy – has increased by 6 inches since 1960. “What is the goal of cities?” Kim asked. The answer, he says, is “making cities safer, more inclusive, sustainable, and resilient.”

Additionally, Kim shared indicators that show improvements in South Korean housing as well as key infrastructures. Housing, he said, was given a low priority until the 1980s when people rallied to increase the amount of housing in the country. In 1988, the country adopted a five-year plan to build 2 million new units and achieved that goal ahead of schedule. That said, housing prices have still gone up in recent years, and between 2016 to 2021, the price-to-income ratio for housing has nearly doubled in Seoul.

Affordable housing is not the only sector with room for improvement. South Korea has the longest average commute times among OECD countries. Air quality is low and South Korean cities rank low on rankings of self-reported happiness. South Korea also has the lowest fertility rate in the world. “It’s the country’s most serious challenge,” Kim says. The population of South Korea has just begun to decline; some schools in small villages in the countryside are being turned into senior citizen centers.

What can be done to solve these problems? Professor Kim believes the country needs to become more family friendly and lower the cost of raising children. Kim suggested that better land use regulations could help increase the supply of housing and lower its cost, thereby making it easier and more affordable to raise a family.

Despite South Korea’s challenges, Professor Kim displayed a fierce pride in his country’s ascent over the past half century. While acknowledging some mistakes, he maintained, “Overall we made good policy decisions.”

# Penn IUR Hosts Lectures by Architect and WRI Director, Pablo Lazo



Pablo Lazo, currently Director of Urban Development for the World Resources Institute, and formerly Deputy Director for the British design, consulting, and engineering company ARUP, gave three public lectures this fall about Mexico City. The lectures explored four key ecologies – wastewater infrastructure, modernist social housing projects of mid-20th century, old village settlements in the valley, and the eastern plains – that have defined the city’s urban growth during the 20th century. Here he shares the inspiration for and potential influence of his lectures

**YOU HAVE WORKED ON URBAN PLANNING AND RESILIENCY PROJECTS IN MEXICO CITY FOR MANY YEARS. WHAT INSPIRED YOU TO FOCUS YOUR RESEARCH ON THE ECOLOGIES OF MEXICO CITY?**

This research project has been in some ways, part of my work with cities over two decades. Working in different geographies and cultural contexts has led me to enquire how to better depict cities beyond the conventional urban understanding of a spatial-socioeconomic relationship. By taking a systemic approach and the use of term ecology at the core of the

question, one can argue that a city is a system of systems where “ecology” is the term that unlocks a different understanding of cities, as it were, a scene where all the systems are interconnected. Urban resiliency is probably the latest theoretical framework that tries to understand these interconnections or interdependencies that could lead to more resilient urban contexts.

My focus on Mexico City – one of the major metropolitan areas in the world – is mainly driven to reveal that the urban evolution and growth of the city has been based on a series of political contradictions that have led to the creation of these ecologies that are unique. And they need to transform and, to a certain point, reinvent themselves, if they want to contribute to the city’s evolution.

**WHEN YOU FOCUS ON FOUR ECOLOGIES, IT BRINGS TO MIND REYNER BANHAM’S BOOK “LOS ANGELES: THE ARCHITECTURE OF FOUR ECOLOGIES” – WHAT CONNECTIONS DO YOU SEE BETWEEN THESE TWO CITIES?**

There is a very strong connection with this seminal work for Los Angeles. But while Banham depicts the city through four ecologies anchored in key architectural elements or styles, my work depicts Mexico City with four ecologies based on metropolitan infrastructures. The study for Los Angeles is rooted also on spatial conditions which are very relevant to understand how LA has become the city intoxicated using the car, while at the same time it has an enormous diversity in its urban fabric. The research on Mexico City, on the other hand, explains how its urban evolution is inextricably connected to infrastructure elements such as wastewater and social housing, so that they have become part of the city themselves.

**YOU STUDY THE INFRASTRUCTURE FROM THE PAST. HOW DO YOU THINK SCHOLARS WILL SEE TODAY’S INFRASTRUCTURE IN THE FUTURE?**

I would think they will recognize the shift in the paradigm of infrastructure design that started about two decades ago. But there is now evidence of what this shift has done in

cities around the world. In some cities green infrastructure has changed drastically how cities perform, how resilient they are, and it has made substantial changes to public spaces, for example. In the next decade in Mexico City, if these four ecologies could change the direction in which they have operated, I think that scholars would see this infrastructure as the change cities (and in particular Mexico City) did to continue evolving and demonstrating it is possible to overcome the climate change effects.

**IN ADDITION TO BEING A SCHOLAR, YOU ALSO WORK AT WRI. HOW DO YOU SEE YOUR RESEARCH AND PRACTICE BEING CONNECTED?**

I have always believed that theory and practice go hand in hand. The research on Mexico City has been part of my practice for many years at Arup and now at WRI. In the latter, I am working with a multidisciplinary team in urban water resilience, and this work is deeply influenced by the research on the metropolitan ecologies.

**WHAT INFLUENCE DO YOU HOPE THIS RESEARCH HAS?**

First, I would hope that this urban reading of Mexico City provides an insight on how urban infrastructure can have profound effects in shaping the city, either intentionally or not, and why it is critical that in the future these huge urban elements should be better designed, taking an integrated approach, and contributing to create more inclusive and equitable cities.

Second, as I mentioned in the seminars, there hasn’t been any urban revision of the city since 1992. I believe that every 25 years there is a need to revise how cities are evolving, and for Mexico City this is now crucial because these ecologies (water infrastructure, mobility, housing and land use) are going to be critical in making the city more resilient and equitable in the future. But rather than taking urban policy as a start, now we should embrace them as these systems that we live with how interconnected they are. It is not about future policies for urban growth, but rather about a new political ecology.

## Penn IUR Keeps Focus on Cities at COP27

Penn played its largest role yet in this year's [United Nations climate change conference, COP27](#). The conference, held in Sharm El Sheikh, Egypt, from Nov. 6-20, and attended by more than 30,000 people, included policy discussions, climate events, and negotiations that resulted in a deal to fund "loss and damage" related to climate change. In its third year with accredited observer status, the Penn delegation contributed to both the negotiations at the center of the conference, including significant work on loss and damage conversations, and the series of events at its perimeter, called the "blue zone."

Penn IUR Co-Director Eugenie Birch joined the launch of several campaigns on urban adaptation. One, called "Roofs Over Our Heads," is an effort to publicize and address the needs of informal settlements, led by Perry World House visiting fellow [Sheela Patel](#). Penn IUR Fellow Mauricio Rodas also helped to launch a campaign focused on battling extreme heat.

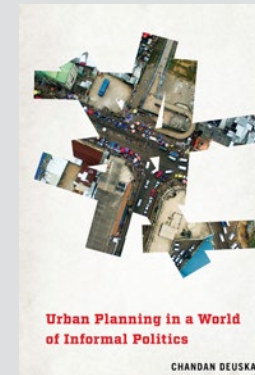
Together Birch and Rodas penned an op-ed in the [Philadelphia Inquirer](#) that encouraged Philadelphia leaders to plan for the coming summer's heat, using learnings from COP27 as a guide.



From top to bottom left: Penn IUR Co-Director Eugenie Birch at the Thailand Pavilion; Kleinman Center for Energy Policy Executive Director Cornelia Colijn and Penn IUR Managing Director Amy Montgomery; Penn IUR Fellow Mauricio Rodas



## New Books in the University of Pennsylvania Press Series, The City in the 21st Century



### Urban Planning in a World of Informal Politics

Chandan Deuskar.  
University of Pennsylvania Press, 2022.  
The City in the Twenty-First Century series.

*Urban Planning in a World of Informal Politics* contends that in many countries in the Global South, local politicians have incentives to ignore formal urban plans and sideline planners. This results in inequity and environmental damage in some of the most rapidly urbanizing countries in the world. Deuskar proposes innovative and practical ways cities can adapt to the complex politics of urban informality.

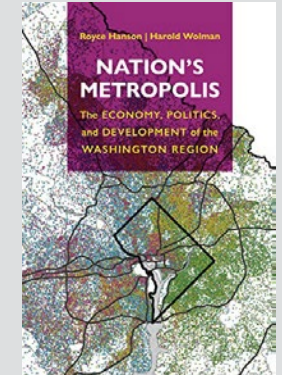
Deuskar is an Urban Specialist at The World Bank, received his PhD in city and regional planning from the University of Pennsylvania, and was a postdoctoral fellow at Penn IUR.



### China Urbanizing: Impacts and Transition

Edited by Weiping Wu and Qin Gao.  
University of Pennsylvania Press, 2022.  
The City in the Twenty-First Century series.

*China Urbanizing: Impacts and Transitions* explores how the process of urbanization has affected nearly every aspect of China. The book provides new sources of information on urban China, and covers pressing topics such as smart cities, urban infrastructure financing challenges, and demographic decline.



### Nation's Metropolis: The Economy, Politics, and Development of the Washington Region

Dr. Royce Hanson and Harold Wolman

*Nation's Metropolis* describes how the national capital region functions as a metropolitan political economy. Its authors distinguish aspects of the Washington region that reflect its characteristics as a national capital from those common to most other metropolitan regions and to other capitals. To do so, they employ an interdisciplinary approach that draws from economics, political science, sociology, geography, and history.

# 2022 Photography Contest Winners

For the seventh year, Penn IUR held a photography contest to capture the experience of cities around the world. The theme in 2022, “[Thriving](#),” drew attention to the resilience of urban places and people in the wake of the COVID-19 pandemic. Participants were asked to submit photographs that depict thriving in community activities, in urban landscapes, or other examples of flourishing conditions. Out of more than 80 submissions from photographers in more than a dozen countries, three images were selected as the winner and runners up. Guest judges included three members of University of Pennsylvania faculty: Francesca Ammon, Associate Professor, City and Regional Planning and Historic Preservation; Matt Kenyatta, Director of Justice and Belonging; and John McInerney, Director, Sachs Program for Arts Innovation.



## WINNER

### *Wall with Hope*

by Dan Cook

Philadelphia, United States

“Early winter morning, mid-pandemic, a person waits for a bus alongside a wall bursting with urgings of encouragement and hope with a nonchalance that belies the extraordinariness of the moment. Here is a moment of thriving... a thriving in the everyday.”



**RUNNER-UP:**  
*Gossip and Nostalgia*  
by Nimai Chandra Ghosh  
West Bengal, India

"Coronavirus is finished, and women are happy and satisfied with the vaccination. They come closer to each other, gossiping, as well as taking care of their hair. They are enjoying their life throughout the generations, from tiny baby to 76 years old. This is happy, prosperous, satisfied, and loveable life."

**RUNNER-UP:**  
*Lights and Hope*  
by Muhammad Amdad Hossain  
Dhaka, Bangladesh

"As part of the Hindu festival Rakher Upobash, thousands of Hindu people pray in Shamibag Temple and sit together with oil lamps and fruit. The Hindu devotees keep fasting on that day and secure their places from an afternoon in the temple. All the men, women, and children sit side by side. They remember Baba Loknath who was an 18th-century Hindu saint of Bengal."



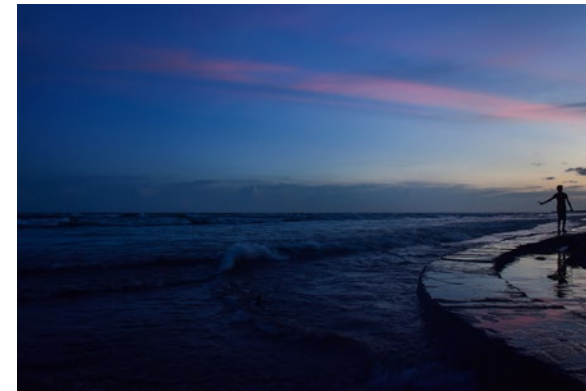
## 2022 Photography Contest Finalists



Ian Haileys  
Kariobangi North, Kenya



Syed Mahabubul Kader  
Dhaka, Bangladesh



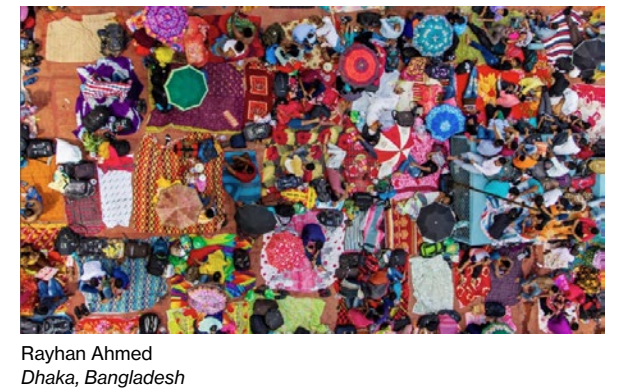
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Udaypur Sea Beach, West Bengal, India



Syed Mahabubul Kader  
Dhaka, Bangladesh



Mithail Afrige Chowdhury  
Dhaka, Bangladesh



Rayhan Ahmed  
Dhaka, Bangladesh

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**The Penn Institute for Urban Research** is dedicated to advancing cross-disciplinary urban-focused research, instruction, and civic engagement on issues relevant to cities around the world. As the global population becomes increasingly urban, understanding cities is vital to informed decision-making and public policy at the local, national, and international levels. Penn IUR has a strong focus on research that informs the sustainable and inclusive 21st-century city. By providing a forum for collaborative scholarship and instruction at Penn and beyond, Penn IUR stimulates research and engages with urban practitioners and policymakers to inform urban policy.

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