MIT Center for Real Estate

The MIT Center for Real Estate (MIT/CRE) was founded in 1983 by MIT alumnus, Charles "Hank" Spaulding CE '51. A prominent real estate developer, Spaulding had the vision to improve the quality of the built environment and to promote a more informed professional practice in the global real estate industry through teaching, research, and industry interaction. This remains the fundamental mission of the center.

Educating the women and men whose innovations will serve the industry worldwide, the center is home to the first one-year Master of Science in Real Estate Development (MSRED) degree, as well as a Professional Education (PE) certificate program in Real Estate Finance and Development that is attended by industry executives and practitioners world-wide.

The center's pioneering research investigates innovations in real estate from initial concept and design through to financing and investment—providing breakthrough knowledge to help organizations capitalize on today's emerging markets new technologies. Uniting industry leaders with MIT's distinguished researchers and students, the center's diversified Industry Partners Program advances the art and science of global real estate, bridging the gap between theory and practice.

The mission of the MIT/CRE is to understand these transformations and to shape how the real estate industry and cities will emerge on the other side. To do this today—as CRE did when it was founded in the 1980s—will require the center to reconsider the nature of real estate education and practice. We are well equipped to do this, with a diverse and distinguished faculty, a large and growing research capacity, 29 industry partners, and a cadre of over 1,100 alumni—who are leading major development companies and innovative projects on every continent. The center's biggest challenge is determining how to engage and leverage these assets to co-create a more mature, responsible, and successful industry model.

Faculty and Staff

Professor Dennis Frenchman, Class of 1922 Professor of Urban Design and Planning, was appointed as director of the MIT Center for Real Estate. Frenchman assumed the role on July 1, succeeding Albert Saiz, an associate professor of urban economics and real estate. Saiz remains on the faculty of both the MIT/CRE and the Department of Urban Studies and Planning (DUSP).



Dennis Frenchman

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Frenchman, who serves on the MIT/CRE and DUSP faculties, holds dual master's degrees in architecture and city planning from MIT, where he has taught since 1983. A registered architect, he has a distinguished record of award-winning practice in Boston, most recently as senior principal of Tekuma Frenchman Urban Design, working on large-scale development projects in Asia, the Middle East, and Latin America. His practice and research focus on the transformation of cities, and he is an expert with worldwide experience in the application of digital technology to city design.

Frenchman has led MIT research efforts for the Energy Foundation to develop new models for clean energy urbanization in China. He has played a leading role in the design and development of innovation districts around the world, from Medellín, Colombia, to Seoul, South Korea. He is part of an interdisciplinary team from MIT engaged in research collaborations with the Amsterdam Institute for Advanced Metropolitan Solutions (AMS) in the Netherlands, using the city of Amsterdam as a living laboratory and test bed for urban innovation.

At MIT, Frenchman has led key initiatives in design and urbanism for his department and the School of Architecture and Planning (SA+P). For 15 years he headed the school's Joint Program in City Design and Development. From 1987 to 2016, he co-led and taught the "Beijing Studio," an urban design program jointly organized by MIT and Tsinghua University that was one of the earliest and longest-running academic engagements between the US and China. Within the center, Frenchman co-founded the Real Estate Innovation Lab in 2016 with Professor David Geltner and Research Scientist Andrea Chegut.

In 2016, serving as its faculty director, Frenchman developed and helped to launch DesignX, the SA+P entrepreneurship accelerator aimed at ventures related to design and the built environment.

In AY2019, the center hosted Visiting Associate Professor Manish Srivastava MSRED '97. Srivastava is an associate professor of real estate finance, investments, and development at New York University's Schack Institute of Real Estate. He taught International Real Estate Transactions for the CRE graduate degree program in spring 2019. Professor Srivastava is a regular speaker on various international forums and has delivered keynote lectures across several academic, institutional, and corporate forums in Asia, Europe, North America, and South America. He graduated from MIT with dual master of science degrees in real estate and architecture. He was also an Aga Khan Scholar.

Career development officer and MSRED Admissions Committee member R. Kelly Cameron earned his doctorate in educational leadership from Northeastern University in May 2019.

Lacey Cochran was hired as an academic and communications assistant. Cheryl Gillespie was promoted to fiscal officer. Tim Lemp was hired as program assistant. And Patricia (Tricia) Nesti was promoted to academic administrator.

Visiting Committee

For the first time since the center's founding, a visiting committee was appointed specifically for the center. Typically reserved for departments and major research entities at MIT, this was a significant milestone, representing a vote of confidence from the dean of the School of Architecture and Planning, Hashim Sarkis, and a recognition that the center's graduate degree program and research are making a major impact. The visiting committee consisted of the following members:

- Anthony Pangaro, chair, principal and CEO—MDA Partners of Boston
- Oliver (Ollie) Carr III MSRED '92, member, CEO—Carr Properties, Washington, DC
- Professor Phillip L. Clay, PhD '75, member, professor emeritus—MIT
- Professor Jacob Cohen, member, senior associate dean for undergraduate and master's programs—MIT Sloan
- Svafa Grönfeldt, member, senior advisor to the dean—MIT SA+P, executive vice president—Alvogen, Inc., and former president—Reykjavik University

New Executive Board

The mission and charter of the newly appointed executive board is twofold: to help identify and pursue sources of funding to ensure future financial health, such as growing the center's endowment and seeking graduate student funding; and to rethink and enhance the Industry Partner Program, making the value proposition meaningful and impactful for partners and the center. The partners' role includes providing advice and guidance on CRE's strategic relationship with industry, with a specific focus on creating industry events and executive education programs that highlight MIT's leading role in innovation within the built environment. The new board members are:

- Marwan Aboudib MSRED '16, co-founder and partner—Tekuma Frenchman Urban Design, Boston, MA and Dubai, UAE
- Benjamin Breslau, chief research officer—JLL Americas (Industry Partner Program and research sponsor)
- Rob Brown MSRED '93, managing partner—Osprey Bay Holdings Ltd., Toronto, Canada
- Oliver (Ollie) Carr III MSRED '92, CEO—Carr Properties, Washington, DC (Industry Partner Program)
- Larry Ellman MSRED '92, managing partner— Broadview Real Estate Partners, Greater New York City
- Shawn Hurley MSRED '99, president—Marcus Partners, Boston, MA
- Barrett Elizabeth Yates Mack MSRED '06, chief financial officer and chief strategy officer—CrossLead, Inc., Washington, DC
- Babis Pandis MSRED '92, co-founder and partner—Bluehouse Capital, Athens, Greece
- Kristi Prigmore Adams MSRED '97, partner—Cantegra SK, Austin, TX, and COO—mycoop Technologies, Inc., New York, NY

- Jonathan Richter MSRED '95, global head of real estate—Rosewood Investment Corporation, New York, NY
- Nick Tsapatsaris MSRED '92, owner—Tsapatsaris and Associates, Ridgewood, NJ
- Mark DeSario, chairman and CEO—Beacon Ridge Capital Management, Chicago, IL, and chairman and director—Investbridge Capital Group, Dubai, UAE

Naming and Endowment

In the interest of long-term stability, the naming and endowment of the center continues to be a major focus. During fiscal year 2019, the center worked closely with the dean's office and other SA+P staff to identify and cultivate key donors.

MIT/CRE received its last \$250,000 payment from Real Capital Analytics. This gift was for the purpose of supporting Professor Geltner's research in the area of price indices. Geltner's Real Estate Price Dynamics Platform serves at the intersection between academics and the real estate industry. This research utilizes the newest data combined with cutting-edge and interdisciplinary econometric techniques from fields outside of real estate, such as space navigation, meteorology, and health care. Researchers develop innovative tools that potentially have a global impact for real estate stakeholders, resulting in a more transparent real estate market. The research focuses on developing applications and models used for real estate price indices in markets with scarce observations; for forecasting prices; and for the mass valuation of real estate using machine learning.

The center has identified student fellowships as a key initiative. One of the partner firms, Prologis, initiated a student fellowship for students with a specific interest in industrial real estate and logistics industries. This fellowship was first offered in academic year 2016 in the amount of \$50,000. Prologis provided another fellowship in AY2019, which was awarded to Yuling (Elaine) Shu.

Masters in Real Estate Development Degree Program

Marketing and Student Recruitment

Extended Open House is part of the center's recruitment strategy. Prospective students come to campus for a week and sit in on classes, attend events with alumni and current students, meet one-on-one with faculty and admissions staff, and fully immerse themselves in the MSRED experience. In AY2019, 71 prospective students participated in the Extended Open House. The program will continue during AY2020.

The center's online and social media presence has been enhanced and expanded to better serve industry partners and students, and to support student recruitment. CRE reinvigorated its Twitter, Facebook, and LinkedIn accounts and has leveraged these social media platforms to reach constituents more effectively. This strategy has also enabled the center to engage in conversations across and amongst SA+P departments, labs, and centers.

Master of Science in Real Estate Development

Thirty-four students matriculated in fall 2018, including four dual degree students from the Department of Urban Studies and Planning, and two from Architecture. The Class of 2019 consisted of 11 women and 23 men, of which 13 were international students and 15 were women and/or minorities.

In March 2019, the 35th class of the MSRED program was admitted. The applicant pool increased by one application from the previous class for a total of 134 applicants. Beginning in the admissions cycle for AY2019, the MSRED program implemented a Young Leaders Program. The program is intended for exceptional applicants with three years or fewer of work experience in the real estate industry. Program participants may make up approximately 10% of the student cohort each year.

The incoming Class of 2020 consists of 33 students—eight women and 25 men. Fourteen are international students representing China, the Czech Republic, Australia, South Korea, Canada, Mexico, Nigeria, and India. Four students are dual-degree students, two from Architecture and two from DUSP. There is one Young Leader in the Class of 2020, who has two and a half years of professional experience in the real estate industry.

Career Development and Experiential Learning

Students in the MSRED program are gaining work experiences through two forms of short-term employment: winter externships during the Independent Activities period (IAP) and summer internships.

Experiential Learning

Actualizing the institutional motto *mens et manus*, mind and hand (the fusion of academic knowledge with practical purpose), MIT/CRE's offerings afford students a unique chance to bring academics into the workplace as IAP externs and/or summer interns. A partial list of companies and center partners providing learning opportunities for students during AY2019 are listed below:

- Globally: Investbridge Capital (Dubai), Hines (London), Conservatorio (Panama City), LaSalle Investment Management (Singapore), and Prologis (Hong Kong)
- Domestically: MITIMCo, Winn Development, JLL, Boston Properties, The Davis Companies, Carr Properties, Jonathan Rose Companies, and Amazon

Employer-in-Residence

The MIT/CRE Employer-in-Residence program is a way to advance student exposure to corporate leaders and human resource professionals. Highlights of this past year include:

- Sponsoring project-based learning opportunities for students
- Pitching industry-related thesis topic ideas to students
- Serving as industry experts and data support specialists
- Recruiting for IAP externships, summer internships, and full-time openings

Professional Networking

In addition to academic rigor, creating networking opportunities with industry professionals for students is a core concept of the career development efforts at MIT/CRE. By featuring guest lecturers and presentation speakers, the center is bringing high quality, interactive, thoughtful discussions to campus that link theoretical concepts to industry practices. Exposure to professionals across the industry is an important element of the overall student experience. Below is a sampling of industry exposure and professional activities offered to students.

- Thought Leader Lecture Series
- MIT World Real Estate Forum
- A fall and spring learning fellowship offered by the National Association of Real Estate Investment Managers
- Learning activities and conference invitations by the Urban Land Institute, Building Owners and Managers Associates, and CoreNet Global
- Annual Real Estate Career Day—a professional networking event sponsored by MIT/CRE, DUSP, and Harvard's Graduate School of Design



World Real Estate Forum 2019 Reception

Online Job Board

With the assistance of GradLeaders, an online technology development company, the center uses technology in the form of a job board specific for MSRED students to promote opportunities domestically and abroad. The job board is a mechanism for posting IAP externships, summer internships, and regular full-time job opportunities. Additionally, the interactive platform allows students to schedule both confidential conversations with the career development officer and interview meetings with visiting employers. They can also RSVP to MIT/CRE-sponsored activities and events through the platform.

Alumni Engagement

For the second year, MIT/CRE and leaders of the Alumni Association Center for Real Estate will collaborate to offer professional mentoring to incoming MSRED students. Students and mentors are paired based on professional goals, career and personal interests, and various other key factors. Throughout the academic year, mentors offer professional guidance and expert coaching to students. With MSRED students and alumni representing a variety of countries from around the globe, mentors and mentees regularly use online technology, traditional phone calls, and in-person meetings to stay connected.

Diversity and Inclusion

Mindful of the need to increase diversity across the real estate industry, MSRED alumni planned and executed a commercial real estate pilot summer learning program in 2019. They collaborated with the nonprofit NEXUS Summer Learning, an industry association and specialized organization. Sponsored by MIT/CRE, the program was a 12-day, in-residence learning experience for 28 Black, Latino/Hispanic, and/or Asian high school juniors and seniors from across the United States. Students were involved in SAT preparation along with an intensive introduction to commercial real estate. The pilot included multiple forms of classroom learning focused on commercial real estate. There were also site tours of real estate projects in Boston and Cambridge, and coaching from industry professionals. The program concluded with four teams of seven students presenting their commercial real estate development projects to four industry professionals who served as "celebrity" judges.



NEXUS program participants with Curriculum Director Kelly Cameron

To further broaden the center's efforts to increase diversity in its applicant pool, R. Kelly Cameron, career development officer and MSRED admissions committee member, attended annual conferences, summits, and networking events sponsored by professional affinity groups, associations, and organizations.

MIT CREATE

MIT CREATE (Cultural, Research, Entrepreneurship, and Technology Exchange) is a team of researchers and practitioners who collaborate with governments, communities, and organizations to generate sustainable social impact in the human environment through design. In spring 2019, MIT CREATE facilitated a seminar series, "Forms of Urban Informality," which held regular co-learning sessions with a group of five students, led by the center's visiting lecturer Kate Mytty and DUSP PhD candidate Matthew Claudel. This seminar explored examples of urban innovation around the world through the lens of informality. Participants discussed examples from informal settlements in Colombia to Bird scooters in Boston to infrastructure in Chicago. The team also held three open events with around 40 attendees at each event.

Six graduate students pursued action-based research with two collaborating organizations: Conservatorio—a real estate development organization in Panama City, Panama—and Sweet Water Foundation—an organization focused on regenerative neighborhood development in the South Side of Chicago.

Mixed Income Market Development with Conservatorio

There are a significant number of micro-enterprises in Panama City, Panama. Street vending alone is reported to account for 175,000 people in this small city. Researchers worked to understand existing real estate opportunities for micro-enterprises and to collaboratively develop a potential inclusive market model adapted to the Central American context. Three students worked on this topic, one in the Master of City Planning program, one in the MSRED program, and one as a fellow in the Special Program for Urban and Regional Studies.

Regenerative Neighborhood Development with Sweet Water Foundation

The Sweet Water Foundation (SWF) has a deeply community-grounded approach to regenerative neighborhood development, combining a green economy with urban farming, affordable housing, and a community school—with art running through it all. MIT CREATE collaborated with SWF on everything from painting, farming, laser-cutting, and exploring the spatial history of the south side of Chicago and its implications for current development. CREATE also helped to develop a mechanism to share visions around community land trusts with the SWF community and drafted an example of what action-based education entails at SWF.

Thesis Awards

Each year, the Center for Real Estate presents several awards. A panel of faculty and staff review and select the submissions and present the awards during graduation dinner.

The Thesis Excellence Award honors the student who has prepared a thesis which is recognized as achieving a level of excellence above and beyond the standards of MIT. Sponsored by David Deutsch '93, creativity and originality are considered, along with analysis, execution, and presentation of the final thesis. This year, the award was presented to Alvin Ong '19 for his thesis "Qualifying Partnership Terms in Real Estate Joint Ventures."

The Exemplar Award acknowledges a member of the MSRED class who shows great potential for industry leadership. Key qualities considered by the award committee include authenticity, integrity, academic focus, leadership, ethics, perseverance, positive attitude, responsibility, commitment to the center and its classmates, vision, and a strong team attitude. MSRED students, faculty, and staff are invited to nominate students for this award. The recipient of the award for 2019 was Sam Pepper '19.

Professional Education Certificate Program

Together with MIT Professional Education, this program had another successful year. Sixty-six certificate applicants and 48 participants completed their master's certificate in Real Estate Development and Finance during the first two weeks of June. Sixteen countries were represented during the program this year.



Boston Properties tour The Hub on the Causeway

Industry Partner Program

Since its founding, the center has cultivated strong relationships and partnerships with all sectors of the global real estate industry. Those connections continue to be key in keeping curriculum current and research relevant—and to providing networking, mentorship, and experiential learning opportunities for students through internships and externships.

The center's partners are among the program's greatest assets. Bringing a wealth of experiences and a range of resources and interests, partners share a common commitment to improving the built environment. Partners support the mission in a variety of ways, helping to apply rigorous research and unparalleled education to

contemporary issues in real estate around the world. In FY2019, 31 companies with offices both domestically and internationally are industry partners and friends of the center. Over the last 12 months, the center has cultivated, secured, and/or renewed 13 industry partners at higher levels of funding.

The partners represent a variety of relevant categories: real estate developers, investment firms, and data and technology companies. Members also include three of the world's largest real estate advisories, one of the largest global business advisories, major corporate real estate managers, and Gensler—the largest architecture firm in the world.

Faculty, Lecturer, and Research Staff Updates

Professor Dennis Frenchman was a winner of the International Design Competition for Ocean Edge, New Marine City, Shenzhen, China. He spoke on "Making Productive Cities: The New Industry of Real Estate" at the MIT/CRE World Real Estate Forum; delivered the keynote for the CRE-CFC-CREDA conference in Shenzhen, China, titled "The Future of Real Estate and City-making;" and gave a talk, "Making Cities Productive: The Next Real Estate Challenge," at the planning forum in Shenzhen.

Professor David Geltner was nominated for the Office of Digital Learning's Teaching with Digital Technology Award. He developed MIT/CRE's and DUSP's first-ever online course in the GetSmarter joint venture framework, Commercial Real Estate Analysis and Investment. The timelines was as follows:

- January–July 2018: Development work
- July 11, 2018: Course launched live
- August 2018: Presentation completed with 127 paying students (\$2,500 each) registered from six continents
- September 2018: Second presentation

Professor Geltner began using the MITx residential online platform in all three of the residential courses that he teaches: 11.431J/15.426J Real Estate Finance and Investment, 11.432J/15.427J Real Estate Capital Markets, and 11.434J/15.428J/ESD.712J Tools for Analysis: Design for Real Estate and Infrastructure Development. He used edX Edge to teach Real Estate Finance: Advanced course as part of the Professional Education certificate program. Geltner also used MIT-copyrighted content from the GetSmarter course to build out a real estate finance summer orientation course for incoming MSRED students to take online before arriving on campus. Below is a list of his latest publications:

- "Riskiness of Real Estate Development: A Perspective from Urban Economics and Option Value Theory," (with A. Kumar and A. Van de Minne), Real Estate Economics, July 2018
- "Revisiting Supply and Demand Indexes in Real Estate," (with D. van Dijk and A. Van de Minne), DNB Working Papers 583, 2018
- "System Dynamics Modeling of Chinese Urban Housing Markets for Pedagogical and Policy Analysis Purposes," (with X. Zhang and R. de Neufville), *Journal of* Real Estate Finance and Economics, Vol. 57 No. 3, 2018

- "Forecasting US Commercial Property Price Indexes Using Dynamic Factor Models," (with A. Van de Minne and M. Francke), 2018
- "Characteristics of Depreciation in Commercial and Multi-Family Property: An Investment Perspective," (with S. Bokhari), Real Estate Economics, Vol. 46 No.4, 2018

Professor Geltner is principal investigator along with Professor Frenchman at the Real Estate Innovation Lab. In AY2019 he presented the keynote paper at the annual Real Estate Capital Markets Conference of the Center for European Economic Research in Heidelberg, Germany. He also completed service on the PhD committee of Dorinth van Dijk at the University of Amsterdam.

During AY2019, Lecturer John Kennedy was a mentor for Our Generation Speaks—an Israel/Palestine Entrepreneurial Program. He chaired a panel at the World Real Estate Forum titled, "Transformative Real Estate: Urban Transformation Through Innovation, Equity, and Social Impact." Kennedy also spoke about entrepreneurship to engage innercity high school students in city development at the NEXUS program.

Visiting Lecturer Kate Mytty was awarded the Mandela Fellowship by the US State Department, which took her to Johannesburg, South Africa, for two weeks to work on urban development in a cross-country context. Mytty also co-taught "Promises and Challenges of Urbanization," a seminar at the international conference, European Alpbach Forum.

Professor Albert Saiz was featured in Richard Florida's May 2019 article in Boomberg CityLab: "The Beauty Bump: How a City's Beauty Affects Its Economic Growth." He published "Beautiful city: Leisure amenities and urban growth" (with G. Carlino) in the *Journal of Regional Science*. Vol. 59, No. 3, June 2019; "Immigrant locations and native residential preferences: Emerging ghettos or new communities?" (with J. Moraga and A. Ferrer-i-Carbonell) in *Journal of Urban Economics*, Vol. 112, July 2019; and "Hot Property: The Housing Market in Major Cities," (edited by R. Nijskens, M. Lohuis, P. Hilbers, and W. Heeringa).

Lecturer Gloria Schuck taught in the Commercial Real Estate Women Leadership Certificate program.

Senior Lecturer Walter Torous taught Real Estate Finance Fundamentals in June 2019 in the Professional Education program. He published "Second Mortgages: Valuation and Implications for the Performance of Structured Financial Products" (with A. Ghent and K. Miltersen) in *Real Estate Economics*, July 2018 and "Complexity in Structured Finance" (with A. Ghent and R. Valkanov) in *The Review of Economic Studies*, Vol. 86, No. 2, March 2019. Torous participated in meetings of the American Economic Association in Atlanta, GA, in January 2019, and presented at the Third Annual Israeli Conference on Behavioral Finance in Tel Aviv in June 2019.

Professor William Wheaton was the recipient of the John Quigley Research Award, presented by the American Real Estate and Urban Economics Association (AREUEA), in May 2019. He published two research papers "Robots, Automation, and the Demand

for Industrial Space" in January 2019 and "Bricks versus Clicks: The Efficiency of Alternative Retail Channels," (with E. Tung), in February 2019. Professor Wheaton spoke on current revolutions in technology and their implications for future urban form at the Urban Land Institute in October 2018. He also presented "The IT-Energy Revolution: Implications for Urban Form" at AREUEA in May 2019.

Professor Siqi Zheng was awarded the Best Paper at the China Urban 100 Forum in 2018. She also won the Best Paper award at the 2019 annual Global Chinese Real Estate Congress. Professor Zheng published two book chapters: "Environmental Sustainability in Urban China," (edited by Y. Huang), *Chinese Cities in the 21st Century*, Springer, 2019, and "Congestion and Pollution in Chinese Cities," (with C. Sun, J. Wang and X. Hu, edited by G. Wan and M. Lu), *Cities of Dragons and Elephants: Urbanization and Urban Development in China and India*, Oxford University Press, 2019. Professor Zheng was an organizer for the MIT Mini Urban Economics and Policy Workshop that took place in April and May 2019. She is the principal investigator for the MIT International Science and Technology Initiatives research grant "Novel Measures of Air Pollution Social Costs in China: Big Data Analysis." In AY2019 she was featured in MIT News three times:

- "The city is her lab: Siqi Zheng studies the economics of China's urban explosion," MIT News, July 3, 2018
- "In China, a link between happiness and air quality," MIT News, January 21, 2019
- "Why urban planners should pay attention to restaurant-review sites," MIT News, July 15, 2019

During the past year, Professor Zheng presented at numerous conferences, workshops, lunch talks, lecture series, trainings, summer institutes, and seminars, both in the United States and abroad, including in Bangkok, Thailand, and Seoul, South Korea.

Below is a list of Professor Zheng's recent publications:

- "Air pollution lowers Chinese urbanites' expressed happiness on social media," (with, J. Wang, C. Sun, X. Zhang, and M.E. Kahn), *Nature Human Behaviour*, Vol. 3, 2019.
- "Predicting neighborhoods' socioeconomic attributes using restaurant data," (with L. Dong and C. Ratti), Proceedings of the National Academy of Sciences, July 2019.
- "Does clean air increase the demand for the consumer city? Evidence from Beijing," (with C. Sun, J. Wang, and M.E. Kahn), *Journal of Regional Science*, April 2019.
- "Exploring the effect of air pollution on social activity in China using geotagged social media check-in data," (with L. Yan, F. Duarte, D. Wang, and C. Ratti), *Cities*, November 2018.
- "The Principle of Relatedness," (with Hidalgo, Balland, Boschma, Delgado, Feldman, Frenken, Glaeser, He, Kogler, Morrison, Neffke, Rigby, Stern, and Zhu), International Conference on Complex Systems 2018: Unifying Themes in Complex Systems IX. 2018.

- "Small property rights housing in major Chinese cities: Its role and the uniqueness of dwellers," (with H. Liu and D. Yi), Habitat International, Vol. 77, July 2018.
- "Environmental ideology and household energy conservation in Beijing," (with W. Sun, X. Zhang, H. Li, and J. Wu), *Journal of Cleaner Production*, Vol. 195, September 2018.

Researcher Rui Du attended the 2018 and 2019 NBER Summer Institute for Urban Economics in Cambridge, MA, as well as the American Economic Association's annual meeting in Atlanta, GA, in January 2019. Du presented at several workshops and meetings during the 2019 academic year.

Closing Remarks

The Center for Real Estate builds bridges between the challenges and opportunities of technology and the environment as they relate to real estate development and investments. The solutions to current economic, social, and environmental challenges will come from the real estate industry and its innovative entrepreneurs. The MIT/CRE serves as a connection for the existing brainpower and entrepreneurship in the industry with research communities devoted to these issues.

Dennis Frenchman Director