

Ning Ai

UNIVERSITY OF ILLINOIS AT CHICAGO
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EDUCATION

Ph.D. in City and Regional Planning, Georgia Institute of Technology, August 2011
Master in City Planning, Massachusetts Institute of Technology, September 2003
B.A. in Environmental Economics & Natural Resource Management,
Renmin (People's) University of China, July 2001
B.S. in Environmental Engineering, Tsinghua University, July 2001

EMPLOYMENT

University of Illinois at Chicago, Chicago, IL, 8/19-present
Associate Professor, Dept. of Urban Planning and Policy, College of Urban Planning and Public Affairs
Research Associate Professor, Inst. for Environmental Science and Policy

University of Illinois at Chicago, Chicago, IL, 8/11-8/19
Assistant Professor, Dept. of Urban Planning and Policy, College of Urban Planning and Public Affairs
Research Assistant Professor, Institute for Environmental Science and Policy

Georgia Department of Natural Resources, Atlanta, GA, 5/06 – 8/06
Research Analyst, Environmental Protection Division

The World Bank, Washington, D.C., 11/03 – 8/04
Consultant, South Asia Energy and Infrastructure Unit

Massachusetts Bay Commuter Railroad Company, Cambridge, MA, 10/03 – 7/04
GIS Intern, Environmental Compliance Department

The World Bank, Washington, D.C., 6/02 – 8/02
Intern, South Asia Energy and Infrastructure Unit

REFEREED MONOGRAPH

Ning Ai and Nancey Green Leigh. 2017. "Planning for Sustainable Material and Waste Management."
American Planning Association Planning Advisory Service (PAS) Report #587. ISBN 978-1-61190-195-5.

REFEREED ARTICLES

Junjun Zheng and Ning Ai. 2021. Evaluating the Sustainability of Urban Food Recovery Programs: An Economic and Environmental Assessment in Chicago. *Transportation Research Record*. 2676 (1): 118-130. <https://doi.org/10.1016/j.scs.2019.101683>

Ning Ai, Junjun Zheng, Xiaochen Chen, and Kazuya Kawamura. 2021. Neighborhood-Specific Traffic Impact Analysis of Restaurant Meal Delivery Trips: Planning Implications and Case Studies in Chicago. *Journal of Urban Planning and Development*. 147 (2). [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000682](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000682)

- Ning Ai and Junjun Zheng. 2019. Community-Based Food Waste Modeling and Planning Framework for Urban Regions. *Journal of Agriculture, Food Systems, and Community Development*. 9(1): 39-58. <https://doi.org/10.5304/jafscd.2019.091.009>
- Ning Ai, Junjun Zheng, and Weiqiang Chen. 2019. U.S. End-of-Life Electric Vehicle Batteries: Dynamic Inventory Modeling and Spatial Analysis for Regional Solutions. *Resource, Conservation, and Recycling*, 145: 208-219. <https://doi.org/10.1016/j.resconrec.2019.01.021>
- Ning Ai, Marc Kjerland, Cynthia Klein-Banai, Thomas L. Theis. 2019. Sustainability Assessment of Universities as Small-Scale Urban Systems: A Comparative Analysis Using Fisher Information and Data Envelopment Analysis. *Journal of Cleaner Production*, 212: 1357-1367. <https://doi.org/10.1016/j.jclepro.2018.11.205>
- Shantanu Pai, Ning Ai, and Junjun Zheng. 2019. "Decentralized Community Composting Feasibility Analysis for Residential Food Waste: A Chicago Case Study." *Sustainable Cities and Society*. Volume 50: 1-13. <https://doi.org/10.1016/j.scs.2019.101683>
- Wen Zongguo, Chen Chen, Bai Weinan, Ning Ai, Lin Yanxin, Zhang Wenting. 2019. Environmental Impact of Carbon Cross-Media Metabolism in Waste Management: A Case Study of Municipal Solid Waste Treatment Systems in China. *Science of the Total Environment*. 674: 512-523. <https://doi.org/10.1016/j.scitotenv.2019.04.154>
- Yanyan Xue, Zongguo Wen, Hans Bressers, Ning Ai. 2019. Can Intelligent Collection Integrate Informal Sector for Urban Resource Recycling in China? *Journal of Cleaner Production*, 208: 307-315. <https://doi.org/10.1016/j.jclepro.2018.10.155>
- Ning Ai and Katheryn Borucki. 2018. "End-of-Life Electric Vehicle Batteries: U.S. Projections and Management Strategies." *EM* (Publication of the Air and Waste Management Association). *April Issue*: 16-20.
- Ning Ai, Junjun Zheng, and Xiaochen Chen. 2018. "Electric Vehicle Park-Charge-Ride Programs: A Planning Framework and Case Study in Chicago." *Transportation Research Part D: Transportation and Environment*, 59: 433-450. <https://doi.org/10.1016/j.trd.2018.01.021>
- Susan Kaplan, Ning Ai, Peter Orris, and P. S. Sriraj. 2016. "Green Commuting in the Health Care Sector: Obstacles and Best Practices." *Journal of Occupational and Environmental Medicine*, 58(2): e34-38. DOI: 10.1097/JOM.0000000000000636
- Ning Ai and Karen R. Polenske. 2008. "Socioeconomic Impact Analysis of Yellow-Dust Storms: An Approach and Case Study for Beijing." *Economic Systems Research*, 20(2): 187-203. <https://doi.org/10.1080/09535310802075364>
- Zhan Guo, Ning Ai, and Karen R. Polenske. 2008. "Evaluating Environmental and Economic Benefits of Yellow Dust Storm-Related Policies in North China." *The International Journal of Sustainable Development and World Ecology*, 15(5): 457-470. <https://doi.org/10.3843/SusDev.15.5:7>
- Nancey Green Leigh, Matthew Realff, Ning Ai, Steven French, Catherine Ross, and Bert Bras. 2007. "Modeling Obsolete Computer Stock under Regional Data Constraints: A Case Study in Atlanta." *Resources, Conservation, and Recycling*, 51: 847-869. <https://doi.org/10.1016/j.resconrec.2007.01.007>

BOOK REVIEW

- Ning Ai. 2013. Book Review: Metabolism of the Anthroposphere: Analysis, Evaluation, Design. By Peter Baccini and Paul H. Brunner. *Journal of Planning Literature*, 28: 365.

TECHNICAL REPORTS

Ning Ai and Junjun Zheng. Waste Characterization and Projection: Boone and Winnebago Counties (2019-2050). Report submitted to the Region 1 Planning Council. November 29, 2021. Summary results in Regional Solid Waste Management: A Plan for Boone & Winnebago Counties (2022 - 2042). https://static1.squarespace.com/static/54f7d1eee4b056cf8def292a/t/62ebd952239bc76aa38cd0ea/1659623781942/20221304R1_SW_Appendices+A-F_V1.2.pdf.

Ning Ai, Junjun Zheng, Matt Rundquist, and Taylor Gendel. Chicago Waste Generation and Characterization Update 2010-2020. Report submitted to the City of Chicago and Delta Institute on March 1, 2021. <https://www.chicago.gov/content/dam/city/progs/env/Chicago-Waste-Strategy/UIC-Report-7.12.21.pdf>.

Lilit Yeghiazarian (University of Cincinnati, Project Lead), Ning Ai, Sankar Arumugam (North Carolina State University), Jerad Bales (CUAHSI), Ximing Cai (University of Illinois-Urbana Champaign), Heather Golden (USEPA), Venkatesh Merwade (Purdue University), Claire Welty (University of Maryland, Baltimore County). A Systems Approach to Managing the Urban Infrastructure Grid - the Urban Multiplex. Report on the U.S. National Science Foundation (NSF) Sustainable Urban Systems (SUS) Workshop, September 9-10, 2019.

Environment and Water Working Group Report submitted to the Discovery Partners Institute. Chaired by Samuel Dorevitch. Ning Ai together with Max Berkelhammer (UIC), Brian M Deal (UIUC), Sybil Derrible (UIC), Samuel Dorevitch (UIC), Marcelo Garcia (UIUC), Shipra Gupta (UIS), Prasanta K Kalita* (UIUC), Madhu Khanna (UIUC), Krishna R Reddy (UIC), Tom Rothfus (UIS), Dennis Ruez (UIS), Lucia Vazquez (UIS). April 26, 2019.

Isabel Cruz, Ning Ai, Sybil Derrible, Samuel Dorevitch, and Thomas Theis. 2018. Final Project Report submitted to the U.S. National Science Foundation (NSF) CyberSEES Project Type II: Data Integration for Urban Metabolism (Grant No. CISE-1331800).

Ning Ai, Junjun Zheng, and Xiaochen Chen. "Integrated Approaches to EV Charging Infrastructure and Transit System Planning." Project report submitted to the Center for Urban Transportation Research at the University of South Florida and the UIC Urban Transportation Center. July 2016.

Ning Ai, Marcella Bondie, Anthony Grande, Shuo Ma, and Shi Yin. "Environmental Impact Assessment of Rail Infrastructure in Illinois." Project report submitted to the US Department of Transportation - National University Rail (NURail) Center. June 2015.

Ning Ai, Susan Kaplan, Peter Orris, and P. S. Sriraj. "Exploring Commuting-Related Environmental Impacts in the Healthcare Sector." Project report submitted to the Illinois Department of Transportation - METSI Program. June 2015.

Nancey Green Leigh and Ning Ai. "Summary Report: China-U.S. Forum on Sustainable Solutions to Global and Regional E-Waste." Guangzhou, China, August 1-3, 2010. Submitted to the US National Science Foundation (NSF) Office of International Science and Engineering (OISE) Grant No. 4806AAC and 4806AAE.

REFEREED CONFERENCE PROCEEDINGS

Yufan Jiang and Ning Ai. Economic Analysis of Municipal Solid Waste Management in the U.S. - A State-Level Review and Discussion. The 115th Air and Waste Management Association (A&WMA) Annual Conference & Exhibition (ACE), San Francisco, California, June 27-30, 2022. Paper #1167138.

Ning Ai and Junjun Zheng. Efficiency and Effectiveness of Public Expenditure on Municipal Solid Waste Management. The 111th Air and Waste Management Association (A&WMA) Annual Conference & Exhibition (ACE), Hartford, Connecticut, June 25-28, 2018. Paper #410725.

Ning Ai and Junjun Zheng. Regional Planning for End-of-Life Electric Vehicle Batteries: An Inventory Analysis and Case Study in California. The 110th A&WMA ACE, Pittsburgh, Pennsylvania, June 5-8, 2017. Paper # 264800.

Ning Ai, Junjun Zheng, Xiaochen Chen. "Electric Vehicle Park-Charge-Ride Programs: A Planning Framework and Case Study in Chicago." The 96th Transportation Research Board Annual Meeting Compendium, Washington, DC, January 8-12, 2017. Paper ID: TRB 17-05120.

Ning Ai and Junjun Zheng. End-of-Life Electric Vehicle Battery Management: An Inventory Analysis. The 109th A&WMA ACE, New Orleans, Louisiana, June 20-23, 2016. Paper #1161.

Ning Ai, Susan Kaplan, Peter Orris, and P. S. Sriraj. "Reducing Commuting-Related Environmental Impacts in the Healthcare Sector: An Exploratory Study." The 94th Transportation Research Board Annual Meeting Compendium, Washington, DC, January 13, 2015. Paper ID: 15-6057.

Ning Ai and Anthony Grande. "Financially-Viable Approaches to Municipal Solid Waste Management during Economic Recession." The 105th A&WMA ACE, San Antonio, TX, June 19-22, 2012. Paper ID: 2012-A-448-AWMA.

Ning Ai. "Incorporating Community Characteristics for Proactive Municipal Solid Waste Management." The 104th A&WMA ACE, Orlando, FL, June 21-24, 2011.

INVITED TALKS

Invited presentation on Environmental Justice Analysis Tools at the US EPA HCT Weekly Meeting. (Environmental Justice Tool Development Team). Presented by the UPP572 Class (System Methods for Environmental Planning and Policy class). Nov 9, 2022. Virtual.

Invited talk on food waste management at the Arcadis City Shapers Meeting, Sept 2, 2022. Virtual.

Invited presenter. Workshop on Convergent Innovations in Regional CirCULAR Economies (CIRCULAR). Sponsored by the NSF Sustainable Regional Systems Research Networks (SRS SN) Program. Aug 18-19, 2022. Chicago, IL.

Chicago Food Loss and Waste (Chi FLOW) Assembly. Community-Specific, Data-Informed, and Integrated Food Waste Management. Hybrid (Virtual and In-Person at Illinois Institute of Technology's Institute of Design). June 17, 2022.

UIC East + West Faculty Research Mixer hosted by Provost Reyes. March Mixer Theme: Translating Academia into Policy Impact: Effecting City/State Ordinances and Policy Changes. Presentation topic: Community-Specific, Data-Informed, and Integrated Sustainability Planning. Virtual. March 31, 2022.

Region 1 Planning Council (R1) Solid Waste Advisory Committee (SWAC) meeting. Waste Inventory Modeling in Boone and Winnebago Counties, IL. Virtual. October 27, 2021.

Museums in the Park (MIP) Green Committee Meeting, Summary presentation on Waste Characterization Studies in Chicago. Virtual. August 18, 2021.

UIC IPCE Civic Engagement Lunch Talk on "Enhancing Community Awareness of and Participation in Reducing Food Insecurities and Wastage." Virtual. April 6, 2021

UIC Food Recovery Network Webinar on "Planning to Address Dual Challenges of Food Insecurities and Wastage" (with Dr. Angela Odoms-Young). Virtual. December 12, 2020.

25th Belle R. & Joseph H. Braun Memorial Symposium, Panel on "World without Waste," with Tom Theis and Don Fullerton. Virtual. Oct 30, 2020. Recordings at <https://www.youtube.com/watch?v=JTWkFtwcxus&list=PLXIQ7VTNroxpoYEchpwUn1D05Q43QQRrEG&index=2>.

US Department of Energy ARPA-E Program Officers' Meeting. "Built Environment: A Critical View in a Metabolic Framework." With Kazuya Kawamura, Jane Lin, Shantanu Pai, Krishna Reddy, and Ashlynn Stillwell. Virtual. September 15, 2020.

Discovery Partners Institute Site Visit Presentation. "Science for Uncovering Strategies and Analytics IN Material and Waste Management (SUSTAIN-MWM)." With Isabel Cruz, Anne-Marie Hanson, Debra Jacobson, Susan Kaplan, and Ashlynn Stillwell. Virtual. July 20, 2020.

International Visitor Leadership Program participants at the World Chicago. "Planning for Sustainable Cities: A Metabolic View of Urban Sustainability." Chicago, IL. October 15, 2019.

International Seminar on Urban Metabolism in Policy and Practice. "Policy Interventions to Advance Sustainable Materials Management." Beijing, China. July 6, 2019.

University of Chicago Center for Spatial Data Science, "Community-Based Food Waste Modeling and Planning Framework for Urban Regions." Chicago, IL. November 12, 2019.

Earth and Learn Symposium at Whitney Young High School. "Planning for Sustainable Cities." Chicago, IL. May 20, 2019.

Tsinghua University Environmental Forum #368, "Environmental Planning under Community-Specific Data Constraints." Beijing, China. December 14, 2017.

US EPA Urban Sustainability Assessment and Management Workshop. "A Metabolic View of Urban Sustainability: A Case Study of Neighborhood-Based Food Waste Management." Chicago, IL. July 21, 2016.

UTC Seminar Series. "Green Commuting in Healthcare." With Susan Kaplan, Peter Orris, and P. S. Sriraj. Chicago, IL. April 21, 2016.

EnerNATIONAL Energy Initiative Panel at UIC. "Application of an Urban Metabolism Approach in Sustainability Assessment." Chicago, IL. August 17, 2015.

University of South Florida Center for Urban Transportation Research (CUTR) Webcast Series. "Sustainability Metrics and Mapping Tool for Environmental Assessment of Rail Infrastructure in Illinois." Virtual. December 11, 2014.

UIC Sustainable Remediation Forum (SURF). "Proactive Waste Management for Urban Sustainability." April 4, 2013.

The 5th Annual Carpet America Recovery Effort (CARE) Conference. "Carpet Inventory Estimates Using Building Characteristics Data: Opportunities and Obstacles." With Matthew Reaff. Charleston, SC, May 8, 2007.

U.S. EPA Region 4 Solid Waste & Recycling Meeting. "New Perspectives on Used Stuff: Policy Design to Increase the Efficiency of Solid Waste Management." Atlanta, GA, November 8, 2006.

PRE-ORGANIZED PANEL PRESENTATIONS

Roundtable Organizer. Opportunities and Challenges for Environmental Planning under the Biden-Harris Administration. Roundtable participants: Clinton Andrews Rutgers (The State University of New Jersey), Makena Coffman (University of Hawaii), Kevin Foy (North Carolina Central University), Steven French (Georgia Institute of Technology), Shannon Van Zandt (Texas A&M University), and Zhenghong Tang (Roundtable Facilitator, University of Nebraska Lincoln). ACSP 2023 Conference. October 20, 2023.

Presenter. Public Engagement Meeting hosted by the Region 1 Planning Council (R1). Waste Plan Updates in Boone and Winnebago Counties, IL. Virtual. May 2, 2022.

Presenter. City of Chicago 2021 Waste Strategy Webinar. Hosted by Delta Institute and City of Chicago. July 15, 2021. Recordings at: <https://www.youtube.com/watch?v=Wl62apA1TOK>.

Panelist. UIC Earth Day Panel Discussions on the Story of Plastic. April 22, 2020

Panel Session Co-Chair and Speaker, Advancing Circular Economy via Sustainable Materials Management. The 111th A&WMA ACE, Hartford, Connecticut, June 25-28, 2018.

Panel Session Chair and Speaker, "Planning's Role in Sustainable Waste Management." American Planning Association National Planning Conference, May 5-9, 2017.

Panel Session Chair and Speaker, Local Approaches to Zero-Waste and Sustainability Challenges. The 109th A&WMA ACE, New Orleans, Louisiana, June 20-23, 2016.

CONFERENCE PRESENTATIONS

Ning Ai and Yufan Jiang. Strategic Planning for Environmental Sustainability: An Analysis of Confounding Factors in the Case of Material and Waste Management. The 63th Association of Collegiate Schools of Planning (ACSP) Annual Conference, Chicago, IL, October 19-22, 2023.

Ning Ai. Food Recovery Programs: Planning for Efficiency, Effectiveness, and Equity. The 62th Association of Collegiate Schools of Planning (ACSP) Annual Conference, Toronto, Canada, November 3-6, 2022.

Junjun Zheng and Ning Ai. Characterizing Urban Food Waste Generation to Enhance Resource Conservation and Recovery. The 114th A&WMA's Annual Conference & Exhibition. Virtual. June 14-17, 2021.

Junjun Zheng and Ning Ai. "Application of Urban Analytics in Food Recovery Programs: An Exploratory Study in Chicago." The 60th Association of Collegiate Schools of Planning (ACSP) Annual Conference, Virtual, November 5-8, 2020.

Junjun Zheng and Ning Ai. Economic efficiency and environmental impacts of urban food recovery programs: A feasibility analysis of smart technology application in Chicago. The 113th A&WMA ACE. Virtual Conference. June 29-July 2, 2020.

Shantanu Pai and Ning Ai. Factors influencing willingness to pay and participate for curbside composting. A case study in Urbana, Illinois. The 113th A&WMA ACE. Virtual Conference June 29-July 2, 2020.

Ning Ai and Junjun Zheng. Improving Collection and Transportation Efficiency for Sustainable Food Waste Management: A Neighborhood-Level Case Study in Chicago. The 59th ACSP Annual Conference, Greenville, SC, October 24-27, 2019.

Ning Ai, Zongguo Wen, Shantanu Pai, Junjun Zheng. Food Waste Management: A Comparative Study of China and the U.S. The 10th biennial conference of the International Society for Industrial Ecology (ISIE), Beijing, China, July 7-11, 2019.

Tasneem Chowdhury, Junjun Zheng, Connie He Ping, Ning Ai, Thomas Theis. Connecting Research and Practice of Sustainable Conference Events: Case Study at the University of Illinois at Chicago. The 10th biennial conference of the International Society for Industrial Ecology (ISIE), Beijing, China, July 7-11, 2019.

Zheng Junjun, Pai Shantanu, and Ning Ai. Decentralized Community Composting Using Public Parks: A Feasibility Analysis in Chicago. The 111th A&WMA ACE. Hartford, CT, June 25-28, 2018.

Ning Ai and Junjun Zheng. Planning for Cost-Effective Material and Waste Management. The 58th ACSP Annual Conference, Buffalo, New York, October 25-28, 2018.

Ning Ai, Katheryn Borucki, Junjun Zheng. Addressing Food Insecurities and Wastage in a Sharing Economy Framework, the 58th ACSP Annual Conference, Buffalo, New York, October 25-28, 2018.

Ning Ai and Junjun Zheng. Assessing Integrated Approaches to Regional Renewable Energy Infrastructure Development and Retired Vehicle Battery Management: A Case Study in California. The 57th ACSP Annual Conference, Denver, CO, October 12-15, 2017.

Xiaochen Chen, Ning Ai, and Junjun Zheng. Exploring On-demand Trip Chains for Restaurant Food Delivery: Planning Implications and Case Studies in Chicago. The 57th ACSP Annual Conference, Denver, CO, October 12-15, 2017.

Ning Ai and Junjun Zheng. Addressing Socioeconomic towards a Circular and Sharing Economy: An Exploratory Study in Chicago. The 9th biennial conference of the International Society for Industrial Ecology (ISIE) and the 25th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), Chicago, Illinois, June 25-29, 2017.

Ning Ai, Junjun Zheng, and Xuan Shi. Community-Based Modeling and Sustainable Management of Urban Food Waste: A Planning Framework and Case Study in Chicago. The 9th biennial conference of ISIE and the 25th annual conference of the ISSST, Chicago, Illinois, June 25-29, 2017.

Ning Ai and Shi Xuan. Local Solutions to Sustainable Food Waste Management: A Neighborhood-Based Spatial Analysis in Chicago. The 56th ACSP Annual Conference, Portland, OR, November 3-6, 2016.

Junjun Zheng and Ning Ai. Exploring the Impact of Renewable Energy Development on Regional Economic Competitiveness. The 56th ACSP Annual Conference, Portland, OR, November 3-6, 2016.

Ning Ai, Sydney Blankers, Marc Kjerland, Cynthia Klein-Banai, Thomas. L. Theis. "Sustainability Assessment of Urban Universities as Small-Scale Urban Systems: A Case Study of University of Illinois at Chicago." The 55th ACSP Annual Conference, Houston, TX, October 22-25, 2015.

Ning Ai. "Opportunities of Neighborhood-Based Sustainable Food Waste Management" The 108th A&WMA ACE, Raleigh, NC, June 22-25, 2015. Paper ID: #500.

Ning Ai, Marcella Bondie, Anthony Grande, Shuo Ma, and Shi Yin. "Environmental Assessment of Rail Infrastructure in Illinois," Railroad Environmental Conference, Urbana-Champaign, IL, October 28-29, 2014.

Ning Ai, Marcella Bondie, Anthony Grande, and Shuo Ma. "Sustainable Rail Assessment: Metrics and Spatial Mapping Tool in Illinois," Rail Summit, Chicago, IL, October 25, 2013.

Ning Ai, Marcella Bondie and Anthony Grande. "Community-Specific Environmental Impact Assessment of Rail Infrastructure in Chicago," Transport Chicago, Chicago, IL, June 7, 2013.

Ning Ai, Marcella Bondie, and Anthony Grande. "Sustainability Metrics and Environmental Assessment of Rail Infrastructure in Illinois." The 54th ACSP Annual Conference, Philadelphia, PA, October 30 to November 2, 2014. Tracking ID: 4750/Abstract Index #: 148.

Ning Ai. "Challenges of Sustainable Urban Planning: The Case of Solid Waste Management." The 52nd ACSP Annual Conference, Salt Lake City, UT, October 13-16, 2011.

Ning Ai. "Urban Form and Sustainable Waste Management: Implications for Local Environmental Planning." The 51th ACSP Annual Conference, Minneapolis, MN, October 7-10, 2010.

Nancey Green Leigh, Ning Ai, and Steven French. "Planning's Role in the Multi-Scale Challenges of E-Waste Management." The 51st ACSP Annual Conference, Minneapolis, MN, October 7-10, 2010.

Guang Z. Chen and Ning Ai. "Integrated Approaches to Promoting Sustainable Urbanization: Experiences at the World Bank." The 9th International Urban Planning and Environment Association (UPE9) Symposium, Guangzhou, China, August 4-6, 2010.

Nancey Green Leigh, Ning Ai, and Steven French. "Sustainable Material and Waste Management in Urban Regions during Economic Recession: A Case Study of Post-Consumer Carpet," The 9th International Urban Planning and Environment Association (UPE9) Symposium, Guangzhou, China, August 4-6, 2010.

Ning Ai. "Implications of Sustainable Solid Waste Management for Metropolitan Planning." The 50th ACSP Annual Conference, Crystal City, VA, October 1-4, 2009.

Ning Ai. "Solid Waste Management in the US and Policy Implications for China." International Forum on Urban Development and Planning, Langfang, China, June 19-21, 2008.

Nancey Green Leigh, Ning Ai, Steven French, Bert Bras, Matthew Realff, and Jason Barringer. "Exploring Opportunities for Urban Redevelopment and Mitigating Inequality via Sustainable Electronic Waste Management: An Atlanta Case Study." The 48th ACSP Annual Conference, Milwaukee, WI, October 18-21, 2007.

Ning Ai. "Myth of Landfills: Burden or Wealth." The 47th ACSP Annual Conference, Fort Worth, TX, November 9-12, 2006.

Nancey Green Leigh, Ning Ai, and Steven French. "The Role of Product Inventory Estimates in Regional Waste Diversion Impact Analyses." The 47th ACSP Annual Conference, Fort Worth, TX, November 9-12, 2006.

Ning Ai and Nancey Green Leigh. "Designing Waste Recycling Programs to be Community and Material Specific: Insights from Florida." The 46th ACSP Annual Conference, Kansas City, MO, October 27-30, 2005.

Ning Ai and Karen R. Polenske. "Application and Extension of Input-Output Analysis in Economic-Impact Analysis of Dust Storms: A Case Study in Beijing, China." The 15th International Input-Output Association (IIOA) Conference, Beijing, China, June 27-July 1, 2005.

CONFERENCE POSTER PRESENTATIONS

"Participatory Opportunities for Urban Food Waste Management." With Junjun Zheng. The 55th Association of Collegiate Schools of Planning (ACSP) Annual Conference, Houston, TX, October 22-25, 2015.

"Urban Universities as Small-Scale Urban Systems: A Metabolism Study of University of Illinois at Chicago." With Sydney Blankers, Cynthia Klein-Banai, Thomas. L. Theis. The International Society for Industrial Ecology Conference, Surrey, UK, July 7-10, 2015.

"Modeling Food Waste for Neighborhood-Based Sustainable Practice." The International Society for Industrial Ecology Conference, Surrey, UK, July 7-10, 2015.

"Environmental Impact Assessment of Rail Infrastructure in Illinois." With Anthony Grande, and Marcella Bondie. Joint Rail Conference, Knoxville, Tennessee. April 16-18, 2013.

"Opportunities of Food Waste Management in New York City." Poster for the International Society for Industrial Ecology Conference, Toronto, Canada, June 17-20, 2007.

FUNDED RESEARCH

Promoting Environmental and Health Justice through Sustainable Food Service Products

Role: Principal Investigator. Project Period: 1/2/2024-12/31/2026.

Sponsor: US EPA Pollution Prevention (P2) Program

Total Amount Awarded: \$683,836

Waste Characterization and Projections in Boone and Winnebago Counties, IL

Role: Principal Investigator. Project Period: 9/8/2021-6/30/2022.

Sponsor: Region 1 Planning Council (R1)

Total Amount Awarded: \$24,999

Chicago Waste Generation and Characterization Update

Role: Principal Investigator. Project Period: 1/25/2021-2/26/2021.

Sponsor: Delta Institute/City of Chicago

Total Amount Awarded: \$29,993

Community Awareness Campaign and Advocacy for Circular and Sharing Economy Approaches to Addressing Food Insecurities and Wastage

Role: Principal Investigator. Project Period: 9/2019-5/2020.

Sponsor: UIC Institute for Policy and Civic Engagement

Total Amount Awarded: \$20,000

Data Integration for Urban Metabolism

Role: Co-Principal Investigator. Project Period: 10/2013-9/2018.

Principal Investigator: Isabel Cruz

Other Co-Investigators: Sybil Derrible, Samuel Dorevitch, Thomas Theis
Sponsor: National Science Foundation Cyber-Enabled Sustainability Science and Engineering (CyberSEES) program
Total Amount Awarded: \$616,000

Planning and Design of Electric Vehicle Charging Infrastructure for Sustainable Transportation Systems

Role: Principal Investigator. Project Period: 6/2015-6/2019.
Co-Principal Investigator: Lin Li
Sponsor: UIC Chancellor's Discovery Fund for Multidisciplinary Research
Total Amount Awarded: \$50,000

Planning for Sustainable Material and Waste Management

Role: Principal Investigator. Project Period: 11/2016-5/2017.
Co-Principal Investigator: Nancey Green Leigh
Sponsor: American Planning Association
Total Amount Awarded: \$4,000

Integrated Approaches to EV Charging Infrastructure and Transit System Planning

Role: Project Manager. Project Period: 3/2016-6/2016.
Sponsor: U.S. Department of Transportation National Center for Transit Research within the Center for Urban Transportation Research at the University of South Florida; UIC Urban Transportation Center
Total Amount Awarded: \$41,438

Feasibility and Efficiency Analysis of Neighborhood-Based Sustainable Food Waste Management

Role: Principal Investigator. Project Period: 8/2014-5/2015.
Co-Principal Investigator: Isabel Cruz
Sponsor: UIC Great Cities Institute Faculty Scholarship Program
Total Amount Awarded: \$18,000

Green Transportation Programs in the Healthcare Sector: A National Study

Role: Project Manager. Project Period: 1/2015-12/2015.
Co-Investigators: Susan Kaplan, Peter Orris, P. S. Sriraj
Sponsor: U.S. Department of Transportation National Center for Transit Research within the Center for Urban Transportation Research at the University of South Florida; UIC Urban Transportation Center
Total Amount Awarded: \$138,246

Green Transportation in Health Care Sector: A Pilot Study in Chicago

Role: Project Manager. Project Period: 1/2014 -6/2014.
Co-Investigators: Susan Kaplan, Peter Orris, P. S. Sriraj
Sponsor: Illinois Department of Transportation - METSI Program; UIC Urban Transportation Center
Total Amount Awarded: \$62,748

Environmental Impact Assessment for Rail Infrastructure in Illinois (Extension Project)

Role: Project Lead. Project period: 1/2014-8/2014.
Sponsor: US Department of Transportation - National University Rail (NURail) Center
Total Amount Awarded: \$11,642

Environmental Impact Assessment for Rail Infrastructure in Illinois

Role: Project Lead. Project period: 8/2012-1/2014.
Sponsor: US Department of Transportation - National University Rail (NURail) Center
Total Amount Awarded: \$99,540

Building Urban Resilience and Sustainability (BURST): Integrating Adaptive Infrastructure Systems with Institutional and Ecological Functions

Role: Co-Principal Investigator. Project Period: 1/2012-1/2014.

Principal Investigators: Thomas Theis and Isabel Cruz

Co-Investigators: Farhad Ansari, Samuel Dorevitch, Sarah Dunn, Ernesto Indacochea, Kazuya Kawamura, Jane Lin, Emily Minor, Karl Rockne, Eric Welch, David Wise, Moira Zellner

Sponsor: University of Illinois at Chicago Area of Excellence Awards Program

Total Amount Awarded: \$250,000

COURSES TAUGHT AS INSTRUCTOR

UIC UPP570 Environmental Planning and Policy - Graduate

UIC UPP571 Economic and Environmental Planning – Graduate

UIC UPP572 System Methods for Environmental Planning and Policy – Graduate

UIC UPP575 Recycling the City – Graduate

UIC UPP514 Economic Analysis for Planning and Management – Graduate

UIC US240 Urban and Community Economics – Undergraduate

Georgia Tech CP4020 Introduction to Urban and Regional Planning - Undergraduate

COURSES GUEST LECTURED

UIC UPP572 Systems Methods for Environmental Planning and Policy

UIC UPP594 Recycling Our Cities

UIC UPP588 Research Design and Program Evaluation

UIC UPP557 Spatial Planning and Design II

UIC UPP502 Planning Skills

UIC UPP505 Plan Making

UIC CME594 Sustainability Engineering

UIC UPP130 Principles of Urban Sustainability

UIC UPP230 Practices for Sustainable Cities

UIC Great Cities Institute Undergraduate Seminar

UIC UPP390 Sustainability Internship

GT CP4010 Foundations of Urban & Regional Development

GT CP6432 Industrial Restructuring Theories

PHD ADVISEES

Junjun Zheng (UPP, Committee Chair)

Shantanu Pai (UPP, Committee Chair)

Yufan Jiang (UPP, Committee Chair)

PHD PRELIM COMMITTEE SERVED

Joe Bozeman (Civil Engineering)

Girish Kumar (Civil Engineering)

Alexis D. Smith (Biological Sciences)

Jyoti K C (Civil Engineering)

Rajiv Kumar Giri (Civil Engineering)

Anton Rozhkov (UPP)

Abolfazl Seyrfar (Civil Engineering)

Zeyi Sun (Mechanical and Industrial Engineering)

Gaurav Verma (Civil Engineering)

Xue Zhou (Mechanical and Industrial Engineering)

PHD DISSERTATION COMMITTEE SERVED

Rajiv Kumar Giri (Civil Engineering, '14)

Joe Bozeman (Civil Engineering, '19)

Girish Kumar (Civil Engineering, '20)

Marc Kjerland (Applied Mathematics, '15)

Anton Rozhkov (UPP, '23)

Zeyi Sun (Mechanical & Industrial Engineering, '15)

Xue Zhou (Mechanical & Industrial Engineering, '21)

Balayamini Sadasivam (Civil Engineering, TBD)

GRADUATE STUDENTS ADVISED/SPONSORED THROUGH GRANTS

Katheryn Borucki

Travis Hawks

Jeff Griffin

Anthony Farruggia

Jennifer Maddux

Matthew Tyksinski

Xiaochen Chen

Vincent Ziols

Ben Sullivan

Sydney Blankers

Yining Li

Ada Morgan

Jessica Baas

Marcella Bondie

Anthony Grande

Taylor Gendel

Matt Rundquist

Mike Iversen

Junjun Zheng

Shantanu Pai

Em Hall

Shuo Ma (Computer Science)

Shi Yin (Computer Science)

Marc Kjerland (Applied Mathematics)

UNDERGRADUATE INTERN HOSTED

Lucas Trindade (Tiradentes University, Brazil, '16)

STUDENT AWARDS AND DISTINCTIONS

Brianna Ceglia (MUPP project advisee), UPP Best Master's Project, '13

Marcella Bondie (RA supervisee), American Association of University Women (AAUW) Career Development Award, '13

Marcella Bondie (RA supervisee), UIC Urban Transportation Center Student of the Year, '13

Marcella Bondie (RA supervisee), Elevate Energy Policy Fellow, '14

Sydney Blankers (RA supervisee), Ecological Society of America Graduate Student Policy Award, '15

Mackenzie Drosd & Vince Ziols (MUPP project advisees), UPP/UIC Nomination for the APA AICP Student Project Awards, '18

Vince Ziols (MUPP project & RA supervisee), Public Lands Transportation Fellow, Western Transportation Institute at Montana State University Bozeman, '18

Shantanu Pai (Independent Study Advisee), Air & Waste Management Association (A&WMA) Lake Michigan States Section - Stephen H. Rothblatt Scholarship, '18

Jen Jenkins (UPP570 student), 2018 Ed McClure Award for the Best Masters Student Paper, '18

DEPARTMENT/UNIVERSITY SERVICES

Chair, UIC Master of Urban Planning and Policy (MUPP) Program Committee, 8/19-7/20

Member, Center for Urban Resilience and Environmental Sustainability (CURES) Leadership Committee (Chaired by Dr. Donald J. Wuebbles), 3/19-3/20

EcoRep for UPP, UIC Office of Sustainability EcoReps Program, 1/19-present

Member, Inaugural Discovery Partners Institute (DPI) Thematic Working Group on Environment and Water (Chaired by Dr. Samuel Dorevitch), 10/18-4/19

Co-Chair, UIC Chancellor's Committee on Sustainability and Energy (CCSE), Sustainable Materials Subcommittee, 2015-2021

Mentor, UIC Summer Institute on Sustainability and Energy (SISE), 2012-16, 2018

Faculty judge, UIC Chancellor's Graduate Research Fellowship Program, 2015, 2016, 2020, 2022

Guest Lecturer, Sustainability Internship Program (SIP) at UIC, 2014, 2015, 2016

Chair, UIC UPP Environmental Planning and Policy specialization committee, 8/13—8/19

Member, UIC Chancellor's Committee on Sustainability and Energy, Recycling and Waste Management subcommittee, 2013-2014

Faculty judge, UIC Student Research Forum Sustainability Award, 2012

Member, UIC Master of Urban Planning and Policy (MUPP) Program Committee, 8/11-present

Member, UIC UPP PhD Program Committee, 8/21-present

Member, IBHE PhD Committee (Lead: Drs. Rachel Weber and Kazuya Kawamura), 12/18-8/19

PROFESSIONAL AND COMMUNITY SERVICES

Committee Member, Association of Collegiate Schools of Planning (ACSP) Committee on Diversity. 2/2023-present

Session Moderator. "Recycling, Upcycling and Reuse." Illinois Innovation Network Research Conference on Sustainability. October 29, 2020.

Organization Committee Member, 2020 Global Waste Forum, Beijing, China.

Member, The Plant Chicago Circular Economy Advisory Committee, 9/19-present

Session Moderator. Closed Loop Forum. The Plant Chicago. September 28, 2019.

Advisory Committee Member, Cook County Waste Management Plan Update, 2017-2018

Division Chair, Air & Waste Management Association (A&WMA) Technical Council, Sustainability and Resource Conservation Division, 6/20-present

Organization Committee Member, the 10th biennial conference of the International Society for Industrial Ecology (ISIE) in 2019 in Beijing

Organization Committee Member, the 9th biennial conference of the ISIE and the 25th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST) in 2017 in Chicago

Invited Speaker, USGBC Emerging Professionals On the Table meeting, May 10, 2016. With Allison Dill, Douglas Chien, and Rachel Ward.

Local Committee Member, Brownfields 2015 Conference Local Planning Committee, Spring 2015

Chair, Air & Waste Management Association (A&WMA), Resource Conservation (SRC) Technical Coordinating Committee, 6/12 – present; Division Vice Chair, 6/17-6/20

Memo to the Federal Railroad Administration, RE: Applications of UIC/UTC NURail Project
“Environmental Impact Assessment of Rail Infrastructure in Illinois” to FRA’s NEPA Implementing
Procedures, 1/23/14

Host Committee Member, International Symposium on the Design of Urban Systems of the Future,
UIC, 10/12-5/13

Committee Member, 2013 A&WMA Board of Directors Nominating Committee

Secretary, Waste Management Technical Coordinating Committees, Air & Waste Management
Association, 6/09 – 6/12

Invited Member, Cook County Solid Waste Management Plan Update, February 28, 2012.

Key Organizer, China-U.S. Forum on Sustainable Solutions to Global and Regional E-Waste, Guangzhou,
China, 11/09 - 8/10

Symposium Coordinator/Co-organizer, Public Symposium on Electronics Recycling: Geographic
Responsibility & Economic Development Opportunity, Atlanta, GA, Oct 23, 2009

Editorial Board Member, College of Architecture PhD Newsletter, Georgia Tech, 11/06 - 12/08

Symposium Coordinator, Public Symposium on Electronics Recycling Today and Tomorrow, Atlanta,
GA, Dec 9, 2005

Reviewer, United Nation Environmental Programme Global Environment Outlook for Cities (GEO-6 for
Cities) Draft report. 2021.

Reviewer, 2023 ComEd Powering Communities Grant Program.

Reviewer, 2021 North Dakota Renewable Energy Program.

Reviewer, *Ecological Modeling*

Reviewer, *Environmental Practice*

Reviewer, *Journal of Cleaner Production*

Reviewer, *Journal of Environmental Planning and Management*

Reviewer, *Journal of Hazardous, Toxic, and Radioactive Waste*

Reviewer, *Journal of Industrial Ecology*

Reviewer, *Journal of Planning Education and Research*

Reviewer, *Journal of Urban Planning and Development*

Reviewer, *Resources, Conservation, and Recycling*

Reviewer, *Transportation Research Board Annual Meeting*

Reviewer, *Transportation Research Part D: Transportation and Environment*

MEDIA APPEARANCE

Associated Press Interview by Melina Walling. “Americans are still putting way too much food into
landfills; Local officials seek EPA’s help.” 10/31/2023.
<https://apnews.com/article/f34ce9d1a8a58a95250f5f5883470ba0>

Panelist, *China Global Television Network* (CGTN, formally CCTV 9) World Insight TV live broadcast on
EV Battery Recycling, with the Host Tian Wei (CGTN), Isabel Hilton (Founder and Editor of
ChinaDialogue, London), and Baocheng LIU (Dean of the Center for International Business Ethics from

Univ. of International Business and Economics), 10/12/2017, 10:30pm (Beijing time). Video at <https://youtu.be/DuTljtIQvF8>.

Waste Dive Interview. Feature Article “APA report identifies standards for achieving urban circular economies,” 8/22/2017. <http://www.wastedive.com/news/apa-report-identifies-standards-for-achieving-urban-circular-economies/503138/>.

WBEZ (Chicago Public Radio and NPR Affiliate) Interview on “*A century of waste: The evolution of Chicago’s garbage collection*,” 8/27/2013. <https://www.wbez.org/shows/wbez-news/a-century-of-waste-the-evolution-of-chicagos-garbage-collection/d4790054-44a4-4557-ae2d-cf97d3c625a9>.

Gazette Chicago. Interview on “Privatizing Recycling in Chicago.” 10/7/2011. <http://www.gazettechicago.com/index/2011/10/city-mulls-privatizing-recycling-some-fear-union-busting-agenda/>.

Xinhua News Agency (Chinese official state-run press agency) Interview on “Economic Impacts of Hurricane Irene.” 9/4/2011. http://news.xinhuanet.com/english2010/indepth/2011-09/04/c_131096674.htm.

AWARDS

Journal of Planning Education & Research, Top Reviewer Award, 2015

UIC Great Cities Institute Faculty Scholarship, 2014-2015

Young Professional Best Paper Award, Air & Waste Management Association, 2012

NSF ADVANCE Program Women of Excellence Graduate Award, College of Architecture, Georgia Tech, 2011

The International Society for Industrial Ecology Conference Scholarship, 2007

PROFESSIONAL MEMBERSHIPS

Air & Waste Management Association, 4/09 –

American Planning Association, 3/08 –

Association for Environmental Studies and Sciences, 6/15-6/16

International Association for China Planning, 10/05 –

International Society for Industrial Ecology, 10/06 –