

## **Nikhil Kaza**

April 4, 2019

### **Education**

- May '08 • **Ph.D. in Regional Planning**, University of Illinois at Urbana Champaign
- May '07 • **M.S. in Applied Mathematics**, University of Illinois at Urbana Champaign
- May '04 • **M.U.P. in Urban Planning**, University of Illinois at Urbana Champaign
- Jun '01 • **B.Arch.(Hons.) in Architecture**, Indian Institute of Technology at Kharagpur, India

### **Professional Experience**

- Jul'15 - present • Associate Professor, Dept. of City & Regional Planning, University of North Carolina at Chapel Hill
- Jul'15 - Jul '17 • Associate Chair, Dept. of City & Regional Planning, University of North Carolina at Chapel Hill
- Jul'16 - present • Adjunct Associate Professor, Curriculum of Environment and Ecology, University of North Carolina at Chapel Hill
- Jan'13 - present • Faculty Fellow, Center for Community Capital
- Jul'09 - Jun'15 • Assistant Professor, Dept. of City & Regional Planning, University of North Carolina at Chapel Hill
- Jan'12 - Jul '16 • Adjunct Assistant Professor, Curriculum of Environment and Ecology
- Jan'11 - present • Fellow, Institute for the Environment
- Jul'09 - present • Faculty Fellow, Center for Urban and Regional Studies
- Jan'08 - Dec'08 • Sustainability Systems Modeller, EDAW Inc., Irvine CA
- Nov'07 - Jun'09 • Post doctoral Fellow, National Center for Smart Growth Education & Research, University of Maryland at College Park

### **Honors**

- Excellence in Doctoral Education, '18, UNC Chapel Hill
- Schwab Academic Excellence Award, '17, Institute for the Arts & Humanities, UNC Chapel Hill
- Progress Energy Fellowship, '12, Institute for the Environment, UNC Chapel Hill
- Department Excellence Award, '08, Department of Urban and Regional Planning, UIUC.
- Merit based research fellowship, '03-'04, Program in Environmental and Resource Economics, UIUC.
- Pre-Doctoral fellow, '01-'02, Department of Urban and Regional Planning, UIUC.
- National Merit Scholar '93, Ministry of Human Resources, Union Government of India.

## Bibliography

### Book Chapters

- 2011 • Kaza, N. and G. Knaap, Principles of Planning for Economists, K. Donaghy, N. Brooks, G. Knaap (eds.) *Oxford Handbook of Economics and Planning*. Chap 2. 29-50, New York, NY: Oxford University Press
- 2007 • Kaza, N., and L. D. Hopkins, Ontology for Land Development Decisions and Plans. In *Ontologies for Urban Development*, ed(s). J. Teller, J. Lee, and C. Roussey, Chap 5, 47–59, Studies in Computational Intelligence series, Berlin: Springer-Verlag.
- 2005 • Hopkins, L. D., N. Kaza, and V. G. Pallathucheril, A Data Model to Incorporate Plans and Regulations in Urban Simulation Models. In *GIS, Spatial Analysis and Modeling* ed(s). D.G. Maguire, M. Batty, and M. Goodchild, Chap 7, 173–202, Redlands, CA: ESRI Press.

### Refereed Articles

- In review • Onda, K., J. Branham, T. K. BenDor, N. Kaza and D. Salvesen, Does Removing Federal Infrastructure Subsidies Discourage Development? An Evaluation of the Impact of the U.S. Coastal Barrier Resources Act, *Proceedings of National Academy of Sciences*
- He, M., J. Glasser, N. Pritchard, S. Bhamidi and N. Kaza Identifying Geographic Regions using Community Structure in Commuting Networks *PLOS ONE*
- Pesantez, J., Berglund, E. and N.kaza, Modeling and Forecasting Short-Term Water Demand Reported by Smart Meters *Environmental Modeling and Software*
- Kaza, N. Urban Form and Transportation Energy Consumption, *Energy Policy*
- Lester, T.W., N. Kaza and T. McAdam, Splintered Metropolitan Opportunity in the United States? Re-Examining the “Mismatch” between Emerging Employment Centers and Distressed Neighborhoods, *Economic Development Quarterly*
- Onda, K., P. Sinha, A. E. Gaughan, F. Stevens and N. Kaza, The missing millions: Undercounting urbanisation in India. *Population and Environment*
- Kaza, N., D. Brookshire, K. Toledo, M. Perrit and S. Murphy, Whose plan is it anyway? Energy Planning by American Indian Tribes in the United States *Journal of Planning Education and Research*
- Li, C., N. Kaza , Y. Song and R. Burghardt, Explaining spatial variations in residential energy usage intensity in Chicago: The role of urban form and geomorphometry *Journal of Planning Education and Research*
- In press • Kaza, N., Vain Foresight: Against the Idea of Implementation in Planning *Planning Theory*
- Peng, K. and N. Kaza, Built environment and the purchase of fruits and vegetables in United States households. *Public Health Nutrition*

## Bibliography (contd.)

- 2018      • Li, C., Y. Song and N. Kaza, Urban Form and Household Level Energy Consumption; A multi-level study *Energy & Buildings* 158(1): 181-193
- 2017      • Qiu, S. and N. Kaza. Evaluating the Clean Cities Program *Science of the Total Environment* 579:254-262
- 2016      • Hartley, D., N. Kaza and T. W. Lester. Explaining the Drivers of Inner-City Job Growth: Evidence from the 2000s. *Economic Development Quarterly* 30(2):137-158
- Kaza, N., C. Tian, S. F. Riley and R. G. Quercia. Location Efficiency and Mortgage Risks for Low-Income Households *Housing Policy Debate* 26(4-5): 750-765
- 2015      • Zapata, M. and N. Kaza, Radical Uncertainty: Scenario Planning for Futures. *Environment & Planning B: Planning & Design* 42(4):754-770
- Kaza, N., Time Dependent Accessibility *Journal of Urban Management* 4(1): 24-39
- McCarty. J. and N. Kaza, Urban Form and Air Quality in the United States. *Landscape & Urban Planning* 139:168-179
- 2014      • Kaza, N. and M. Patane., The Land Use Energy Connection. *Journal of Planning Literature* 29(4):355-369
- Lester, T.W., N. Kaza and S. Kirk, Making Room for Manufacturing: Understanding Threats to Industrial Land Conversion in Cities. *Journal of American Planning Association* 79(4):295-313
- Kaza. N., Persons, Politics and Planning. *Planning Theory* 13(2):136-151
- Kaza. N., R. Quercia and C. Tian, Home Energy Efficiency and Mortgage Risks. *Cityscape* 16(1):279-298. An extended abstract also appears in *Community Development Investment Review* Federal Reserve Bank of San Francisco 10(1):63-69. Also featured in *Communities & Banking magazine* Federal Reserve Bank of Boston 26(1):22-23
- 2013      • Brookshire, D. and N. Kaza. Planning for Seven Generations: Energy Planning of American Indian Tribes. *Energy Policy* 62:1506-1514
- Kaza, N., T. W.Lester and D. A. Rodriguez, The spatio-temporal clustering of green buildings in the US. *Urban Studies* 50(16):3262-3282
- Kaza, N., The Changing Urban Landscape of Continental United States *Landscape and Urban Planning* 110:74-86
- Kaza, N. and T. K. BenDor, Land Value Impacts of Aquatic Ecosystem Restoration. *Journal of Environmental Management* 127:289-299
- 2012      • BenDor, T. K. and N.Kaza, A Theory of Spatial Systems Archetypes. *System Dynamics Review* 28(2):109-130

## Bibliography (contd.)

- Kaza, N. and L. D. Hopkins, Intentions, Urban Plans and Information Systems. *International Journal of Geographic Information Science* 26(3):557–576
- 2011 • Kaza, N., C. Towe and X. Ye, A Hybrid Land Conversion Model Incorporating Multiple End Uses. *Agricultural and Resource Economics Review* 40(3):341–359
- Kaza, N., I. Knaap, G. Knaap and R. Lewis, Peak Oil, Urban Form and Public Health: Exploring the Connections *American Journal of Public Health* 101(9):1598–1606
- Chakraborty, A., N. Kaza, G. Knaap and B. Deal, Robust Plans and Contingent Plans: Scenario Planning for Uncertain Times. *Journal of American Planning Association* 77(3):251–266
- 2010 • Kaza, N., Understanding Household Energy Consumption through Quantile Regression Approaches. *Energy Policy* 38(11): 6574–6585
- Kaza, N., D. Finn and L. D. Hopkins, Updating Plans: A Historiography of Decisions Over Time. *Journal of Information Technology in Construction*. 15:159–168
- 2009 • Kaza, N. and L. D. Hopkins, In What Circumstances Should Plans be Public? *Journal of Planning Education and Research* 28(4): 491–502
- 2006 • Kaza, N., Tyranny of the Median and Costly Consent: A Reflection on the Justification for Participatory Urban Planning Processes. *Planning Theory* 5(3): 255–270.
- 2005 • Hopkins, L. D., N. Kaza, and V. G. Pallathucheril, Representing urban development plans and regulations as data: A planning data model. *Environment & Planning B : Planning & Design* 32(4): 597–615.

### Book Reviews

- 2015 • Review of *Land Policy: Planning and the Spatial Consequences of Property* Benjamin Davy. *Planning Theory* 14(2): 212–224
- 2012 • Review of *The Exposed City: Mapping the Urban Invisibles* Nadia Amoroso. *Journal of Regional Science* 52(2): 392–394
- 2009 • Methods, Information Systems and Mapping. Review of *Planning Support Systems for cities and regions* Edited by Richard Brail. *Journal of American Planning Association* 76(1):123

### Working Papers

- Lester, T.W. and N.Kaza, *Is it time to retire the Term "Inner City"? Re-exploring the geography of metropolitan distress*
- Branham, J., BenDor, T., N.kaza, K. Onda and D. Salvesen, *Investigating the Impact of the Coastal Barrier Resources Act on Coastal Infrastructure*
- Kaza, N. and Nesse, K. *Characterizing the regional structure of United States*
- Kaza. N. *Urban Development Patterns*

## Bibliography (contd.)

- Kaza, N. *The Myths of Commons and Private Property*
- Kaza, N., Riley, S. and Quercia, R. *Household Responses to Transportation Energy Expenditure Shocks*
- Kaza, N., R. Vatsavai, E. Wibbels and A. Krishna *Characterizing and Monitoring irregular settlements using high resolution satellite images in Bangalore, India.*
- Kaza, N., J. Reyes, D. A. Rodriguez, M. L. Serre and H. Taubenböck. *Urban change and PM 2.5 in cities*

### Conference Papers (selected)

- |      |   |
|------|---|
| 2016 | <ul style="list-style-type: none"> <li>• Li, C., Y. Song and N. Kaza, Effects of Urban Form on Residential Energy Consumption: A structural analysis of Chicago — <i>ACSP Conference</i>, Portland, OR</li> <li>• Kaza, N., Knaap, G. and Hopkins, L. D. Vain Foresight: Against Implementation — <i>ACSP Conference</i>, Portland, OR</li> </ul>   |
| 2014 | <ul style="list-style-type: none"> <li>• Kaza, N., Whose plan is it anyway? Energy Planning by American Indian tribes in the United States — <i>ACSP Conference</i>, Philadelphia, PA</li> </ul>  |
| 2013 | <ul style="list-style-type: none"> <li>• Kaza, N., C. Tian and R. Quercia. Home Energy Efficiency and Mortgage Risks — <i>ACEEE finance Forum</i>, Chicago, IL</li> <li>• Kaza, N. Industrial Land Transformation in Cities — <i>Urban Affairs Association</i>, San Francisco, CA</li> <li>• Kaza, N., P. Berke and D. Spurlock, Plans and Non-Plans: The uses of Planning — <i>AESOP-ACSP Joint Congress</i>, Dublin</li> </ul>  |
| 2012 | <ul style="list-style-type: none"> <li>• Brookshire, D. and N. Kaza. Sustaining the Seventh Generation: Strategic Energy Planning of American Indian Tribes. — <i>2012 Society of Government Economists</i>, Washington, DC</li> <li>• Kaza, N., Persons, Politics and Planning — <i>26<sup>th</sup> AESOP Conference</i>, Ankara</li> <li>• Kaza, N., The Changing Urban Landscape of United States — <i>50<sup>th</sup> WRSA Conference</i>, Kauai, HI</li> </ul>   |
| 2011 | <ul style="list-style-type: none"> <li>• Zapata, M. and N. Kaza Scenario Planning for Uncertain Futures: Incorporating Multiple Futures and Multiple Publics. — <i>51<sup>st</sup> ACSP Conference</i>, Minneapolis, MN.</li> <li>• BenDor, T. and N. Kaza Land Value Impacts of Aquatic Ecosystem Restoration: An Analysis of the Research Triangle Region of North Carolina — <i>51<sup>st</sup> ACSP Conference</i>, Salt Lake City, UT.</li> </ul>  |
| 2010 | <ul style="list-style-type: none"> <li>• Kaza, N., Towe, C. and Ye, X. Scenarios Using Land Conversion Model for Multiple Land uses, — <i>50<sup>th</sup> ACSP Conference</i>, Minneapolis, MN..</li> <li>• Knaap, G., Kaza, N. and Lewis, R. Density and Public Health: It is not that simple, — <i>50<sup>th</sup> ACSP Conference</i>, Minneapolis, MN.</li> <li>• Blohm, A., Becker, J., Kaza, N., Knaap, G., Moglen, G. and Ruth, M., Envisioning a sustainable Maryland: Comparing alternative development scenarios considering energy consumption and water quality — <i>49<sup>th</sup> WRSA Conference</i>, Sedona, AZ</li> </ul> |
| 2009 | <ul style="list-style-type: none"> <li>• Kaza, N., Knaap, G. and Clifton, K., Economic Scenarios and Development Patterns in the Baltimore-Washington Region — <i>49<sup>th</sup> ACSP Conference</i>, Crystal City, VA</li> </ul>  |

## Bibliography (contd.)

- 2008**

- Kaza, N., Towe, C., Ye, X. and Thapa, B., An Economic model of Land Conversion Incorporating Multiple Land uses— *American Agricultural Economics Association Annual Meetings*, Milwaukee, WI
  - Kaza, N., Knaap, G, and Meade, D., Exploring alternative Futures Using a Spatially Explicit Econometric Model— *55<sup>th</sup> North American Meetings of the Regional Science Association.*, Brooklyn, NY
  - Knaap, G., A. Chakraborty, and N. Kaza, Planning a new era in the smart growth state: A primer on state development plans *2008 ACSP-AESOP Joint Congress*, Chicago, IL.

- 2007**

- Kaza, N., Plans in Decision Support Systems and Decisions in Planning Support Systems *48<sup>th</sup> ACSP Conference*, Milwaukee, WI.

## Grants & Contracts

- 2018-2019**

- Creating an Interdisciplinary Network to Investigate the Drivers of Urban Biodiversity, *University of North Carolina Institutional Planning Grant*, Co-Principal Investigator with Sara Gagne, Rachel Urbanek, Christopher Dumas \$22,000

- 2017-2018**

- Smart Management of Water Resources and Infrastructure with the Internet of Things *University of North Carolina Institutional Planning Grant*, Co-Principal Investigator with Emily Berglund, Kumar Mahinthakumar, James Bowen and Mohammed Anwar \$75,000

- 2017-2019**

- Relationships Between Removal of Infrastructure Subsidies and Coastal Development: The Impact of the U.S. Coastal Barrier Resources Act. *National Science Foundation*, Co-Principal Investigator with Todd BenDor and David Salvesen \$348,507

- 2016-2017**

- Property Rights and Land Tenure in the Slums of Bangalore, India *Omidiyar Network* Co-Principal Investigator with Anirudh Krishna, Erik Webbels and Ranga Raju Vastavai \$232,000

- 2014-2015**

- Research on Urban Form: A typology of carbon emissions by neighborhood type in Ningbo, China *World Bank* Co-Principal Investigator with Yan Song \$175,000

- 2014-2017**

- Quantifying risks from changing U.S. PM2.5 distributions due to climate variability and warming with large multi-model ensembles and high-resolution downscaling, *US Environmental Protection Agency STAR grant*, Investigator with Arlene Fiore (Principal Investigator) and Jason West (co-Principal Investigator), \$788, 625

- 2013**

- Junior Faculty Development Award, *University of North Carolina at Chapel Hill* \$7,500

- 2012-2014**

- The Mortgage Performance of Energy Efficient Homes, *Institute for Market Transformation* Co-Principal Investigator with Roberto Quercia \$46,200

- 2012-2013**

- Incubator Study on Industrial Land Use, *What Works Collaborative, Urban Land Institute* Co-Principal Investigator with T. William Lester, Daniel Rodriguez, Yan Song and Philip Berke \$75,000

- 2011-2012**

- Accessibility in a Gendered Economy, *Carolina Transportation Program*, Principal Investigator, \$5,000

- 2011-2013**

- Joint Region Marianas Energy Investment Program Development Extension *NAVFAC Marianas, United States Navy*, Principal Investigator, \$206,040

- 2010-2012**

- Joint Region Marianas Energy Investment Program Development *NAVFAC Marianas, United States Navy*, Principal Investigator, \$175,102

## Grants & Contracts (contd.)

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|------------------|--|
| <b>2010-2011</b> | • Decision Support Systems for Eastern North Carolina, <i>Southeast Regional Partnership for Planning and Sustainability</i> , Co-Principal Investigator with Todd Bendor, Phil Berke, Yan Song, David Salvesen, \$49,994  |
| <b>2008-2011</b> | • Toward a transportation modeling system for Maryland, <i>University Transportation Center</i> , Co-Principal Investigator with Gerrit Knaap, \$224,528   |
| <b>2010-2011</b> | • Linking Econometric Models with Chesapeake Bay Models, Updating Nutrient Loading Models, and Coordinating to Support the Maryland State Development Plans, <i>US Environmental Protection Agency</i> , Co-Investigator with Charles Towe, Glenn Moglen and Gerrit Knaap, \$165,000 |

## Teaching Activities

- |                                     |  |
|-------------------------------------|--|
| <b>Instructor</b>                   | <ul style="list-style-type: none"> <li>• <i>PLAN 704 - Theory of Planning I</i>, Fall '09 (Enrollment-14), '10 (19), '11 (11) &amp; '12 (16), Spring '10 (25) &amp; '14 (23), '15(41), '16(45)</li> <li>• <i>PLAN 590.003 - Urban Data Analytics</i>, Fall '18(26)</li> <li>• <i>PLAN 499 / 590 / 547 - Seminar on Energy, Transportation &amp; Land use</i>, Spring '10 (15), '11 (9), '12 (16), Fall '13 (14), '14 (15), '15(21), '16(19)</li> <li>• <i>PLAN 057(H) - What is Good City?</i> Spring'14 (9) , Fall '15 (9)</li> <li>• <i>PLAN 823 - Planning Workshop</i>, Spring '11 (16) &amp; Fall '11 (9)</li> <li>• <i>PLAN 805 - Theory of Planning II</i>, Fall '10 (7) , '12 (8) &amp; '14 (9)</li> <li>• <i>PLAN 896 - Independent Study</i>, Spring '10 (2), '16(1), Fall '10 (1) &amp; 14 (2)</li> <li>• <i>PLAN 992 - Master's Project</i>, Spring '10 (2), '11 (3), '12 (2), '13 (1), '14 (3), '15(3) &amp; '16(4)</li> <li>• <i>Research Methods for Planners</i>, Spring '09.</li> </ul> |
| <b>Co-Instructor</b>                | <ul style="list-style-type: none"> <li>• <i>Sustainable Transportation Seminar</i>, Spring '08.</li> </ul>   |
| <b>Ph.D. Dissertation Chair</b>     | <ul style="list-style-type: none"> <li>• Ke Peng, Essays On Associations Of Built Environment With Use Of Restaurants and Food Stores And Food Purchase In The United States, (2018)</li> </ul>  |
| <b>Ph.D. Dissertation Committee</b> | <ul style="list-style-type: none"> <li>• Chaosu Li, Essays on Climate Change Mitigation, Building Energy Efficiency and Urban Form(2018)</li> <li>• William L. Bishop, Value Capture Relevant Value Creation Resulting from Public Investment in Light Rail Transit Infrastructure and Transit Oriented Development (2018)</li> <li>• Allison Forbes, Linked Through Skill: Labor Market Interdependencies Across the Automotive Value Chain (exp. June 2018)</li> <li>• Allan Mathew Freyer, Towards an embedded practice model for community bargaining in firm location decisions, May 2017</li> <li>• Lilah Besser, Neighborhood Built Environment Characteristics and Cognition in Non-demented Older Adults, May 2017</li> <li>• Marc Howlett, Who Plans? The Role of Metropolitan Planning Organizations in Regional Freight Planning, May 2016</li> <li>• Lyndsey Ward Lyles, Stakeholder Network Influences on Local-Level Hazard Mitigation Planning Outputs, December 2012</li> </ul>         |

## Teaching Activities (contd.)

### Comp. Exam Committee

- Lilah Besser (May 2017), Marc Howlett (May 2015), Danielle Spurlock (December 2014), Louis Merlin, (May 2014), Allan Fryer (May 2016), Jun Huh (Withdrew), Kevin Park (May 2015), William Bishop, Matthew Palmer, Kirstin Frescoln (May 2017), Ke Peng (May 2017), Erik Vergel, Joshu Shih, (Withdrew), Chaosu Li (Nov 2016)

## Other Professional Activities

- Associate Editor for *Environmental Science & Policy*
- Member of Editorial Boards for *Planning Theory*, *Journal of Planning Literature*
- Reviewer for *European Journal of Decision Processes*, *Applied Energy*, *Journal of American Planning Association*, *Journal of Planning Education and Research*, *American Journal of Public Health*, *Journal of Environmental Planning & Management*, *Future Internet*, *Land Use Policy*, *Urban Studies*, *European Journal of Operations Research*, *Energy Policy*, *Landscape and Urban Planning*, *Environment Systems & Decisions*, *Journal of Transport & Landuse*, *International Journal of Geographic Information Science*, *Transportation Research D*, *Cities*, *Journal of Environmental Management*
- Co-Chair for Land Use & Governance Track, Association of Collegiate Schools of Planning Annual Conference
- Member of planning tools task force for Greater Washington 2050 Region Forward '09
- Organiser for symposium on "Using Plans" honouring Lew Hopkins's contributions '08
- Member of Ph.D. Committee, AY '11-'12
- Member of MCRP Committee, Fall '12
- Reviewer for Indo-US Science & Technology Forum (IUSSTF), American Association for the Advancement of Science (AAAS), '12
- Member of Scientific Committee, Conference of Computers in Urban Planning and Urban Management, '13
- Member of Organising Committee, Cities, Rivers, and Cultures of Change: Rethinking and Restoring the Environments of the Global American South, AY '13-'14
- Director of Undergraduate Studies, AY '13-'14
- Search Committee Member for Urban Design Position, AY '13-'14
- Search Committee Member Lecturer in Sustainability, AY '14-'15
- Associate Editor, *Journal of Urban Management* '15
- Director of Graduate Studies & MCRP committee chair, AY '14-'16
- Summer School Administrator, City & Regional Planning AY'14-'17