

Ioanna Tsoulou

Research Fellow / Science Manager

UCL Institute for Environmental Design and Engineering (IEDE)
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Interests

Climate Adaptation and Urban Resilience, Sustainable Urban Systems and Urban Modeling, Building Energy, Air Quality & Occupant Behavior Analysis and Green Infrastructure Performance

Experience

UCL Institute for Environmental Design and Engineering London, UK
Research Fellow/Science Manager **2020 - Present**

- Complex Urban Systems for Sustainability and Health (Wellcome Trust)
- Climate Resilience of Care Settings - ClimaCare (NERC)

Rutgers Center for Green Building New Brunswick, NJ, USA
Researcher **2013 - 2020**

- Indoor Air Quality Analysis in Low-Income Households (CDHW & VNB)
- Indoor Thermal and Air Quality Performance during Heat Waves (NSF)
- Green and Resilient Shelter Practices and Implementation Strategies (NJ DCA)
- Building Modeling and Simulation of Occupant Behavior for EnergyPlus/Open Studio (US DOE)
- Forming a Living Laboratory to Optimize Future Workspace Designs (Rutgers)
- Hometown Dashboard: Smart City Technologies for Improving Quality of Life (Rutgers)
- Sandy Recovery What-if Scenarios for Coastal Community Resiliency in NJ (NSF)
- Flood Risks and Real Estate Decision Making in Coastal New Jersey (NJ Sea Grant)

Alan M. Voorhees Transportation Center New Brunswick, NJ, USA
Research Assistant **2014 - 2015**

- Cost Analysis of Roadway Construction, Operations and Maintenance in NJ (NJ DOT)
- Contraflow Plans of Roadways in NJ (NJ DOT)

Human Ecology, Rutgers University New Brunswick, NJ, USA
Research Assistant **2013 - 2014**

- Evaluation of Water Infrastructure in New Jersey's Combined Sewer Overflow Cities (NJ Future)

Education

Rutgers University New Brunswick, NJ, USA

Ph. D. in Urban Planning and Public Policy **October 2020**

- Concentration: Environmental and Energy Analysis, Climate Adaptation, Green Infrastructure
- Dissertation: "*A Social-Ecological Approach for Heat Adaptation of Senior, Low-Income Housing*"
- Committee: Profs. Clinton J. Andrews, Lyna Wiggins, Frank Felder and Anu Ramaswami

Master in City and Regional Planning (MCRP) **May 2015**

- Concentration: Environmental and Physical Planning

University of Patras Patras, Greece

Master in Civil Engineering (M. Eng.) **July 2012**

- Concentration: Environmental and Transportation Engineering

Papers Under Review or Preparation

- **I. Tsoulou**, N. Jain, E. Oikonomou, G. Petrou, A. Mavrogianni, A. Howard, R. Gupta, A. Milosevic, P. Wilkinson and M. Davies. “Assessing the Current and Future Risk of Overheating in London’s Care Homes: The Effect of Passive Ventilation.”
- **I. Tsoulou**, J. Taylor, P. Symonds, N. Mohajeri and M. Davies. “Improving Indoor Thermal Comfort and Air Quality for Older Adults through London’s Environmental Policies.”
- **I. Tsoulou**, C. J. Andrews, J. Senick, G. Mainelis and R. He (submitted). “Summertime Thermal Comfort, Air Quality and Natural Ventilation in Senior Public Housing Residences.”
- **I. Tsoulou**, S. Kim, G. Mainelis and J. Senick. “Comprehensive Interventions for Residential Indoor Air Quality through a Social-Ecological Systems Lens: A Systematic Review.”

Journals

- **I. Tsoulou**, C. J. Andrews, R. He, G. Mainelis and J. Senick (2020). “Summertime Thermal Conditions and Senior Resident Behaviors in Public Housing: A Case Study in Elizabeth, NJ, USA.” *Building and Environment*, 168, 106411.
- C. J. Andrews, M. Smart, K. Lowrie and **I. Tsoulou** (2020). “What Is the Role of International Scholarship in JPER?” *Journal of Planning Education and Research*, 40(1), 6-7.
- C. J. Andrews, M. Smart, K. Lowrie and **I. Tsoulou**. (2020). *Boundaries of Planning Scholarship*.
- **I. Tsoulou** (2018). “Investigating Links Among Urban Sprawl and Environmental Justice Indicators in US Territories.” *plNext – next generation planning*. 7: 117-135. DOI: 10.24306/plnxt/53.
- C. J. Andrews, M. S. Allacci, J. Senick, H. C. Putra, and **I. Tsoulou** (2016). “Using Synthetic Population Data for Prospective Modeling of Occupant Behavior during Design.” *Energy and Buildings special issue on Occupancy Behavior Modeling*. 126: 415-423. DOI: 10.1016/j.enbuild.2016.05.049

Conferences/Peer Reviewed

- **I. Tsoulou**, J. Senick, C. J. Andrews, G. Mainelis, R. He and H. C. Putra (accepted). “Heat Waves and Seniors in Public Housing: A Social-Ecological Exploration in an Urban Context.” In the 12th International Forum on Urbanism, Beyond Resilience, June 27-29, 2019, Jakarta, Indonesia.

Book Chapters

- R. Jagannathan and **I. Tsoulou**, (forthcoming). “Educating Youth for Future Unemployment in Greece.” In “The Growing Challenge of Youth Unemployment in Europe and America: A Cross-Cultural Perspective.” Bristol University Press.
- J. A. Senick, C. J. Andrews, H. C. Putra, **I. Tsoulou** and M. S. Allacci, (2018). “Synthetic Populations of Building Office Occupants and Behaviors.” In *Building Performance Evaluation* (pp. 63-72). Springer, Cham.

Technical Reports

- Twenty Questions About Design Behavior for Sustainability (2019), Report of the International Expert Panel on Behavioral Science for Design, Nature Sustainability.
- C. J. Andrews, H. C. Putra, **I. Tsoulou**, M. S. Allacci, and J. Senick, (2016). “Occupant Behavior Module for EnergyPlus/OpenStudio.”
- D. Van Abs, A. McClean, **I. Tsoulou**, Y Gao, and T. Evans, (2014). “Water Infrastructure in New Jersey’s CSO Cities: Elevating the Importance of Upgrading New Jersey’s Urban Water Systems.” *New Jersey Future*.

Conferences

- A Socio-Ecological Approach to Risk: Managing Overheating in Senior, Low-Income Residences. *Society for Risk Analysis (SRA) Annual Meeting, Arlington, VA, USA*. December 2019
- Summertime Outdoor Activities of Seniors Living in Public Housing.

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| <i>59th ACSP Annual Conference, Greenville, SC, USA.</i> | October 2019 |
| ▪ Measuring Energy & Air Quality in Public Housing Sites during Heat Waves. <i>58th ACSP Annual Conference, Buffalo, NY, USA.</i> | October 2018 |
| ▪ How Seniors Living in Public Housing Cope with Heat Waves. <i>57th ACSP Annual Conference, Denver, CO, USA.</i> | October 2017 |
| ▪ Investigating Sprawl and Environmental Justice Dimensions in US Counties. <i>9th ISIE Conference and 25th ISSST Annual Conference, Chicago, IL, USA.</i> | June 2017 |
| ▪ How Just is Sprawl? Links among Density and Environmental Justice in US Counties. <i>11th AESOP Young Academics Conference, Munich, Germany.</i> | April 2017 |
| - Best Paper Award, 2nd place. | |
| ▪ How Do Heat Waves Affect Seniors Living in Affordable Housing? <i>Ozone Research Center Science Workshop, Piscataway, NJ, USA.</i> | March 2017 |
| ▪ A Living Laboratory at Rutgers: Environment, Design and User Behavior. <i>Rutgers Climate Symposium, Piscataway, NJ, USA.</i> | November 2016 |
| ▪ Hometown Dashboard: Smart City Technologies for Improving Quality of Life. <i>GCTC Expo, Smart City Innovation Summit, and US Ignite Summit, Austin, TX, USA.</i> | June 2016 |

Research Grants

- **UCL Bartlett Research Grants.** “Minimizing Building Envelope Heat Losses through Functional Gradation.” 01/2021 - 06/2021. PI: Kostas Grigoriadis.

Teaching

Edward J. Bloustein School of Planning and Public Policy, Rutgers University New Brunswick, NJ, USA
Teaching Assistant **2014 - 2020**

- Introduction to Planning, Policy, and Health (Undergraduate), Spring 2020
- Topics in GIS (Graduate), Spring 2019
- Urban Design Studio (Graduate and Undergraduate), Spring 2018
- Designing Healthy Cities (Undergraduate), Fall 2014 & Fall 2016
- Graphical Communication for Planners (Graduate), Spring 2014 & Spring 2015

Honors and Awards

External

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| Association of Collegiate Schools of Planning (ACSP) Student Travel Award | 2019 |
| International Society for Industrial Ecology (ISIE) Young Professionals Student Scholarship | 2017 |
| Northeast Sustainable Energy Association (NESEA), Scholarship for Emerging Professionals | 2017 |
| Gerondelis Foundation Fellowship, Gerondelis Foundation, Inc. | 2014 - 2016 |
| University of Patras John S. Latsis Scholarship | 2005 - 2007 |

Rutgers

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| Rutgers GradFund Conference Travel Award | 2020 |
| Laurence M. Downes Graduate Award in Energy and Environmental Policy | 2019 - 2020 |
| Rutgers Conference Travel Awards | 2016 - 2019 |
| Bloustein School Graduate and Teaching Assistantships | 2015 - 2019 |
| Rutgers TA/GA Professional Development Fund Awards | 2015 - 2018 |
| Rutgers Climate Institute, Student Support Fund Award | 2016 - 2017 |
| Bloustein School Memorial Fellowship | 2013 - 2015 |

Memberships

Society for Risk Analysis (SRA)
International Society of Industrial Ecology (ISIE)
Northeast Sustainable Energy Association (NESEA)
Association of European Schools of Planning (AESOP)
Association of Collegiate Schools of Planning (ACSP)
American Planning Association (APA)

Service

Editorial Assistant

- SAGE Journal of Planning Education and Research (JPER) 2019 - 2020

Journal Reviewer Activity

- Elsevier Sustainable Cities and Society
- Elsevier Building and Environment
- SAGE Journal of Planning Education and Research (JPER)
- Taylor & Francis Building Research and Information
- MDPI Sustainability
- COGITATIO Urban Planning

Conference Organizing

- Annual Krueckeberg Doctoral Conference in Urban Studies, Urban Planning and Public Policy
Rutgers University, New Brunswick, NJ, USA 2015 - 2019
- 6th Annual Sustainable Raritan River Conference
Rutgers University, New Brunswick, NJ, USA June 2014

Community Service

- Co-founder of the Greek Graduates of Rutgers Organization (GGRutgers), Rutgers University 2018 - 2020

Skills

Design & Visualization: AutoCAD, ArchiCAD, Rhino, SketchUp, Photoshop, Maxwell, InDesign

Spatial Analysis: ArcGIS, ArcGIS Pro, CityEngine

Statistics & Programing: STATA, MATLAB, SPSS

Energy & Air Quality: Energy Plus/Open Studio, CONTAM

Publishing Software: Lyx, Microsoft Office

Languages:

- English and Greek

Other Interests

Music Theory/Composition, Piano, Pottery, Interior Design and Decor