

Curriculum Vitae

Juliana Maantay, Professor, Department of Earth, Environmental, and Geospatial Sciences

Director, MS-GISc Graduate Program; Director, The Urban GISc Lab;

Lehman College, City University of New York (CUNY)

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Professor, CUNY Graduate Center, EES Doctoral Program; Professor, CUNY Graduate School of Public Health, DPH Program

NOAA-CREST Research Scientist, City College of New York (CCNY), CUNY

Education:

Cornell University, Ithaca, NY. B.Sc., 1973. 1969 - 1973 (Environmental Analysis and Design)

New York University, NYC, NY. M.U.P., 1992. 1990 - 1992 (Urban Planning)

City University of New York, Hunter College, NYC, NY. M.A., 1995. 1992 - 1995 (Geography/GISc)

Rutgers University, New Brunswick, NJ. M. Phil., 1999. 1995 - 1999 (Environmental Geography)

Rutgers University, New Brunswick, NJ. Ph.D., 2000. 1995 - 2000 (Environmental Geography)

Honors and Awards (Partial List):

American Planning Association's Weinberg Award for Excellence in Urban Planning (1992);

American Congress on Surveying and Mapping – Cartography and Geographic Information Society 34th Annual Map Competition Awards – Atlas/Book, Professional Category, “GIS for the Urban Environment” (2006);

Planetizen's Top Planning Books for 2007 – “GIS for the Urban Environment” (2007);

Fulbright Distinguished Chair Award, Mackintosh School of Architecture, Urban Lab, Glasgow, Scotland. *Health, Justice, and the Built Environment: A Case Study Comparison of New York City and Glasgow* (2011-2012).

Invited Presentations, Plenary Speaker, and Keynote Addresses (Partial List):

Symposium, Barcelona Lab for Urban Environmental Justice and Sustainability, Universitat Autònoma de Barcelona, 2018.

Symposium, Institute of Hazard, Risk, and Resilience, University of Durham, U.K., 2012;

Environmental Protection Agency's “Symposium on the Science of Disproportionate Environmental Health Impacts,” Washington DC, 2010;

National Institute of Environmental Health Sciences, Research Triangle Park, NC, 2007;

American Planning Association, “Planning a More Livable New York,” NYU, NY, 2007;

New York Academy of Sciences, NY, NY, 2007;

National Research Council, National Academy of Sciences, Washington, DC, 2002;

Law, Medicine, and Ethics, Johns Hopkins; Temple University School of Law; Harvard School of Medicine, and CDC, Philadelphia, PA, Plenary Session, 2001;

Healthy and Sustainable Communities, Clark Atlanta University, Atlanta, GA, Plenary Session, 1997;

United Nations Habitat II Conference, Istanbul, Turkey, 1996. Delegate of the National Council of Churches.

Peer-Reviewed Publications (Partial List):

Maantay, J.A., Maroko, A.R., Anguelovski, I., & Connolly, J. 2020. The Paradox of Urban Greening: Does it Harm the Very People Who Need it the Most? *The Constructed Environment*, 10(4): 25 pages..

Maantay, J.A. 2019. Environmental Justice and Fairness. *Routledge Companion to Environmental Planning*, Davoudi, S.; Cowell, R.; White, I.; and Blanco, H., eds. Routledge: Oxford, UK.

Anguelovski, I., Checker, M, Connolly, J.J.T., Gould, K., Lewis, T., **Maantay, J.A.**, Maroko, A.R., Pearsall, H., Timmons Roberts, J., Shokry, G. 2019. Why green "climate gentrification" threatens poor and vulnerable populations. *Proceedings of the National Academy of Sciences of the United States of America*, 116(52).

Maroko, A.R., **Maantay, J.A.**, Machado, R. P. P., & Barrozo, L.V. 2019. Improving Population Mapping and Exposure Assessment: Three-Dimensional Dasytetric Disaggregation in New York City and São Paulo, Brazil. *Papers in Applied Geography*, 5(2): 45-57.

Maantay, J.A. and Maroko, A.R. 2018. Brownfields to Greenfields: Environmental Justice versus Environmental Gentrification. *International Journal of Environmental Research and Public Health*, 15 (17 pages).

Maantay, J.A., and Maroko, A.R. 2017. Assessing populations at risk: Areal interpolation and dasytetric mapping, in: Walker, G., Holifield, R., eds., *Handbook of Environmental Justice*, Routledge, UK.

Maantay, J.A. and Maroko, A.R. 2015. 'At-risk' places: inequities in the distribution of environmental stressors and

- prescription rates of mental health medications in Glasgow, Scotland. *Environmental Research Letters*, 10 (16 pages).
- Maantay, J.A.** 2013. The Collapse of Place: Derelict Land, Deprivation, and Health Inequality in Glasgow, Scotland. *Cities and the Environment*, 6(1): Article 10 (55 pages).
- Maantay, J.A.** and Becker, S., eds. 2012. The Health Impacts of Global Climate Change: A Geographic Perspective, *Journal of Applied Geography*, 33: 1-106.
- Chakraborty, J., **Maantay, J.A.**, and Brender, J. 2011. Disproportionate Proximity to Environmental Health Hazards: Methods, Models, and Measurement. *American Journal of Public Health*, 101 (S1): S27-S36.
- Brender, J., **Maantay, J.A.**, Chakraborty, J. 2011. Residential Proximity to Environmental Hazards and Adverse Health Outcomes. *American Journal of Public Health*, 101 (S1): S37-S52.
- Miyake, K., Maroko, A.R., **Maantay, J.A.**, Grady, K., Arno, P. 2010. Not Just A Walk in the Park: methodological improvements for determining environmental justice implications of park access in NYC. *Cities and the Environment*, 3(1):Article 8 (17 pages).
- Maantay, J.A.**, Maroko, A.R., and Culp, G. 2009. Using Geographic Information Science to Estimate Vulnerable Urban Populations for Flood Hazard and Risk Assessment in New York City, in Showalter, P., and Lu, Y. eds., *Geotechnical Contributions to Urban Hazard and Disaster Analysis*, Chapter 5, pp. 71-97, Springer-Verlag.
- Maantay, J.A.**, Tu, J., Maroko, A. 2009. Loose-coupling an Air Dispersion Model and a Geographic Information System (GIS) for Studying Air Pollution and Asthma in the Bronx, New York City. *Environmental Health Research*, 19(1):59-79.
- Maroko, A.R., **Maantay, J.A.**, Sohler, N.L., Grady, K., Arno, P. 2009. The complexities of measuring access to parks and physical activity sites in New York City: a quantitative and qualitative approach. *International Journal of Health Geographics*, 8(34):1-23.
- Maantay, J.A.**, Maroko, A.R. 2008. Mapping urban risk: Flood hazards, race, and environmental justice in New York. *Journal of Applied Geography*, 29 (1):111-124.
- Maantay, J.A.**, Maroko, A.R., Porter-Morgan, H. 2008. A New Method for Population Mapping and Understanding the Spatial Dynamics of Disease in Urban Areas. *Urban Geography*, 29(7):724-738.
- Maantay, J.A.**, Maroko, A.R., and Herrmann, C. 2007. Mapping Population Distribution in the Urban Environment: The Cadastral-based Expert Dasymeric System (CEDs). *Cartography and Geographic Information Science*, 34(2):77-102.
- Maantay, J.A.** 2007. Asthma and Air Pollution in the Bronx: Methodological and Data Considerations in Using GIS for Environmental Justice and Health Research. *Health and Place*, 13:32-56.
- Maantay, J.A.** 2002. Industrial Zoning Changes in New York City and Environmental Justice: A Case Study in “Expulsive” Zoning. *Projections: the Planning Journal of Massachusetts Institute of Technology (MIT)*, pp. 63-108.
- Maantay, J.A.** 2002. Zoning Law, Health, and Environmental Justice: What’s the Connection? *Journal of Law, Medicine, and Ethics*, pp. 572-593. Special issue: *Health, Law, and Human Rights*.
- Maantay, J.A.** 2002. Mapping Environmental Injustices: Pitfalls and Potential of Geographic Information Systems (GIS) in Assessing Environmental Health and Equity. *Environmental Health Perspectives*, 110, (Supp. 2):161-171.
- Maantay, J.A.** 2001. Zoning, Equity, and Public Health. *American Journal of Public Health*, 91(7):1033–1041.

Books:

- Maantay, J.A.**, and McLafferty, S. 2011. *Geospatial Analysis for Environmental Health*, Springer-Verlag. 500+ pages.
- Maantay, J.A.**, and Zeigler, J. 2006. *GIS for the Urban Environment*, ESRI Press: Redlands, CA. 600+pages.

Brief narrative of research career, current interests, and most significant achievements:

Dr. Maantay has specialized expertise in geospatial analysis and environmental modeling of urban environmental and public health issues, in addition to her general research work on a wide variety of urban issues for more than 30 years. Her educational and professional background is multi-disciplinary, combining health geographics, urban planning and policy, environmental assessment, urban design, urban and environmental geography, Geographic Information Science (GISc), and geospatial analysis. Prior to her past 20+ years in academia, she held positions for 25 years in private sector architecture, planning, real estate, and financial services firms; public/governmental agencies; non-profit organizations; and community based planning and advocacy groups. She has published widely in leading journals on the relationship between urban policy, public health, and the built environment, and has written two highly-acclaimed books in this field. Her sole-authored papers on using GIS to study the relationships amongst land use, the built environment, health, and environmental justice in the *American Journal of Public Health* (Zoning, Equity, and Public Health, 2001); *Environmental Health Perspectives* (Mapping Environmental Injustices: Pitfalls and Potential of GIS, 2002); and *Health and Place* (Asthma and Air Pollution in the Bronx: Methodological and Data Considerations in Using GIS for Environmental Justice and Health Research, 2007), are considered seminal papers in the field, and her work has been cited extensively (~2,000). In 2011-2012 she received a Distinguished Chair Award from the US-UK Fulbright Commission to research the interactions between health and the built environment at the Mackintosh School of Architecture’s Urban Lab in Glasgow, Scotland. As Director of

the Urban GISc Laboratory at Lehman College, she has developed innovative methodological approaches and new technical advancements in geospatial analysis.

As a professor in the Earth and Environmental Sciences (EES) doctoral program at CUNY's Graduate Center, Dr. Maantay has been a mentor and supervising advisor to 12 Ph.D. students and served on the dissertation committees of 15 additional Ph.D. students in EES, as well as several doctoral students in the Public Health DPH program, Ecology/Biology, and Criminal Justice doctoral programs.

Synergistic activities:

Dr. Maantay provides technical advice and support to local, national, and international agencies and organizations, including the US Environmental Protection Agency's National Environmental Justice Advisory Council; the CDC's Children's Health Disparities working group; the National Research Council, National Academy of Sciences panel on Research and Applications of GIS; United Nations Human Settlements Programme; and the U.N. Environment Programme. Dr. Maantay was the lead author of the EPA's 2010 report on Environmental Justice. Dr. Maantay has also provided guidance and pro bono geospatial analyses for a number of community-based and environmental advocacy non-profit groups. She has been a Research Scientist with NOAA-CREST since 2001, and is an affiliate of the CUNY Institute for Demographic Research.

Grant Funded Research Projects (Partial List):

National Oceanic and Atmospheric Administration (NOAA) cooperative grant, "Center for REmote Sensing Science and Technology-CREST" Project Title: Public Health Impacts of Climate Change (Role: Research Scientist). 9/2011-8/2021 NA16SEC4810008

National Oceanic and Atmospheric Administration (NOAA) cooperative grant, "Center for REmote Sensing Science and Technology-CREST" Project Title: Environmental Health Justice: Air Pollution and Respiratory Disease. (Role: Research Scientist). 9/2001-8/2011. NA17AE162

National Institute of Environmental Health Sciences (NIEHS) Project Title: South Bronx Environmental Justice Partnership, with Montefiore Medical Center, Albert Einstein College of Medicine, and For A Better Bronx (FABB) community-based organization. Using participatory GIS to explore health disparities in the Bronx, focusing on the relationship between outcomes such as cardiovascular and respiratory disease, and environmental risks and benefits. (Role: Co-PI). 9/2005-8/2010. 2 R25 ES01185-05

National Center for Minority Health and Health Disparities. Project Title: Bronx CREED (Center to Reduce and Eliminate Racial and Ethnic Health Disparities). Using GISc study health disparities and impacts in the Bronx, including access to healthy foods, active recreation spaces, and the correspondence between the built environment and diabetes and obesity. (Role: Co-PI). 9/2007-8/2010 5P60 MD000514-06

United States Department of Agriculture (USDA) Project Title: Urban Agriculture, Green Infrastructure, and Urban Ecology. (Role: Co-PI). 9/2009-8/2013.

New York City Parks Department Collaborative Grant Project Title: Geographic Feature Identification Project - Using GIS, Global Positioning Systems, and orthophotos, to identify, ground truth, and map geographical features in New York City parks to create comprehensive spatial and attribute database. (Role: PI) /2003-8/2006

PSC-CUNY Faculty Research Award Program, (Role: PI) grant recipient: 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2009 (various research projects, Urban Studies, Health Geographics).

Academic Experience:

Lehman College/CUNY, 1998-2000, *Instructor,* Geology and Geography Dept.; 2000-2003, *Assistant Professor;* 2004-2009, *Associate Professor,* Environmental, Geographic, and Geological Sciences Dept.; 2010-Present, *Professor,* Earth, Environmental, and Geospatial Sciences (EES); 2009-2010, *Chair,* 2001-Present, *Director of Geographic Information Sciences (GISc) Program.*

CUNY Graduate Center, 2000-2003, *Assistant Professor,* Earth and Environmental Sciences (EES) Geography Doctoral Program; 2004-2009, *Associate Professor,* EES Doctoral Program; 2010-Present, *Professor,* EES Doctoral Program;

CUNY Graduate School of Public Health and Policy, 2008-2009, *Associate Professor,* Public Health Doctoral Program; 2010-Present, *Professor,* Public Health Doctoral Program (DPH);

Professional Experience:

Russo + Sonder Architects, 2/79-9/81, *Design Director;* **Griswold, Heckel and Kelly Associates,** 9/81-6/84, *Senior Project Designer,* Architecture and Planning; **Sidney Gilbert and Associates,** 6/84-3/86, *Senior Project Manager,;* **Paine Webber, Inc.,** 3/86-11/90, *Vice President,* Architecture and Planning Division; **Regional Plan Association,** 4/91-9/92, *Environmental Planning Associate;* **NYC Dept. of Environmental Protection,** 9/92-10/95, *Senior Environmental Planner,* Environmental Assessment and Planning; **The Center for a Sustainable Urban Environment,** CUNY, Hostos Community College, 10/95-9/97, *Associate Director,* Community Environmental Analysis; **NYC Dept. of City Planning,** 9/97-8/98, *Senior City Planner.*