Matei Georgescu
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Senior Sustainability Scientist, Global Institute of Sustainability
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EDUCATION

Ph.D. **Rutgers University**, Atmospheric Science, 2008.
M.S. **Rutgers University**, Environmental Sciences, 2003.
B.S. **Rutgers University**, Meteorology, 1999.

POSITIONS HELD

- **Associate Professor**, School of Geographical Sciences and Urban Planning, Arizona State University (2016-Present)
- **Associate Director for Research Based Graduate Programs**, School of Geographical Sciences and Urban Planning, Arizona State University (2016-2019)
- **Assistant Professor**, School of Geographical Sciences and Urban Planning, Arizona State University (2012-2016)
- **Adjunct Faculty**, School of Mathematical and Statistical Sciences, Arizona State University (2012-Present)
- **Senior Sustainability Scientist**, Global Institute of Sustainability, Arizona State University (2011-Present)
- **Assistant Research Professor**, School of Mathematical and Statistical Sciences, Arizona State University (2011-2012)
- **Post-doctoral Scholar**, School of Mathematical and Statistical Sciences, Arizona State University (2010-2011)
- **Post-doctoral Scholar**, Environmental Earth System Science, Program on Food Security and the Environment, Stanford University (2008-2010)

HONORS and AWARDS

- **Fulbright Specialist**, January 2021-January 2025.
- **Fulbright Scholar**, Foundation for Research and Technology – Hellas, Greece, 2020.
- **Visiting Professor**, University of Bucharest, Aug 2017.
- **Geophysical Research Letters**, Editors' Citation for Excellence in Refereeing, 2016.
- **NASA Earth System Science Fellow**, Department of Environmental Sciences, Rutgers University, 2005-2008.
- **George H. Cook Scholar**, Cook College, Department of Environmental Sciences, Rutgers University, 1999.

REFEREED PUBLICATIONS (published or in press listed only)

My publications have appeared in high-impact journals including *Nature Climate Change*, *Proceedings of the National Academies of Sciences (USA)*, and *Environmental Research Letters* and in top disciplinary journals such as *Journal of Climate*, *Journal of Geophysical Research – Atmospheres*, *Geophysical Research Letters*, and *Global Change Biology – Bioenergy*.
Google Scholar H-Index = 31; **Google Scholar Citations** = 3760.

Student authors/co-authors: undergraduate students are underlined**;** graduate students are *italicized***;** Postdoctoral Scholars are preceded with an asterisk "*"; high school students are preceded with two asterisks "**". Impact Factor (IF) listed below is single year value that corresponds to year and time of publication. Only published (i.e., with a DOI or Volume) items are listed below.

2022

69. Stuhlmacher, M., Georgescu, M., Turner II, B. L., Goldblatt, R., Gupta, S., Frazier, A. E., ... & Clinton, N. (2022). Are global cities homogenizing? An assessment of urban form and heat island implications. *Cities*, 103705 (IF = **5.835**)**.**

68. Lachapelle, J. A., Krayenhoff, E. S., Middel, A., Meltzer, S., Broadbent, A. M., & **Georgescu, M.** (2022). A microscale three-dimensional model of urban outdoor thermal exposure (TUF-Pedestrian). *International journal of biometeorology*, *66*(4), 833-848 (IF = **3.787**)**.**

67. Rajput, M., Augenbroe, G., Stone, B., **Georgescu, M.**, Broadbent, A., Krayenhoff, S., & Mallen, E. (2021). Heat exposure during a power outage: A simulation study of residences across the metro Phoenix area. *Energy and Buildings*, 111605, https://doi.org/10.1016/j.enbuild.2021.111605 (IF = **5.879**)**.**

66. Broadbent, A.M., Declet-Barreto, J.-H., Krayenhoff, E. S., Harlan, S. L., and **Georgescu, M.** (2021), Targeted implementation of cool roofs for equitable urban adaptation to extreme heat, *Science of The Total Environment*, *811*, 151326, https://doi.org/10.1016/j.scitotenv.2021.151326, (IF = **7.963**)**.**

65. Georgescu, M., Broadbent, A.M. and RC Balling Jr. (2021), Effect of Increased Greenhouse Gas Concentration on Mean, Extreme and Timing of Precipitation over Arizona (USA), International Journal of Climatology, https://doi.org/10.1002/joc.7444 (IF = **4.069**)**.**

2021

64. Georgescu, M., Arabi, M., Chow, W. T. L., Mack, E., and Seto K. C. (2021), [Editorial] Focus on sustainable cities: urban solutions toward desired outcomes, *Environ. Res. Letters,* **16** 120201, https://doi.org/10.1088/1748-9326/ac37d1, (IF = **6.793**)**.**

63. *Guyer, H.*, **Georgescu, M**., Hondula, D.M., Wardenaar, F., and Vanos, J. (2021), Identifying the need for locally-observed wet bulb globe temperature across outdoor athletic venues for current and future climates in a desert environment, *Environmental Research Letters*, In Press, https://doi.org/10.1088/1748-9326/ac32fb, (IF = **6.793**)**.**

62. Stone Jr, B., Mallen, E., Rajput, M., Gronlund, C. J., Broadbent, A. M., Krayenhoff, E. S., ... & **Georgescu, M.** (2021). Compound Climate and Infrastructure Events: How Electrical Grid Failure Alters Heat Wave Risk. *Environmental Science & Technology*, *55*(10), 6957-6964 (IF = **9.028**).

61. *Brandi, A.*, Broadbent, A. M., Krayenhoff, E. S. and **Georgescu, M.** (2021), Influence of projected climate change, urban development and heat adaptation strategies on end of twenty-first century urban boundary layers across the Conterminous US**,** *Climate Dynamics*, In Press**,** doi: 10.1007/s00382-021-05740-w (IF = **4.486**).

60. Georgescu, M., Broadbent, A.M., Wang, M., Krayenhoff, E. S., and Moustaoui, M. (2021), Precipitation response to climate change and urban development over the continental United States, *Environmental Research Letters*, 16 044001, doi: https://doi.org/10.1088/1748-9326/abd8ac (IF = **6.096**)

59. Stone, B., Mallen, E., Rajput, M., Broadbent, A.M., Krayenhoff, E. S., Augenbroe, G., and **Georgescu, M.** (2021), Climate change and infrastructure risk: Indoor heat exposure during a concurrent heat wave and blackout event in Phoenix, Arizona, *Urban Climate*, 36 100787, doi: https://doi.org/10.1016/j.uclim.2021.100787. (IF = **3.834**)

58. Krayenhoff, E. S., Broadbent, A. M., Zhao, L., **Georgescu, M**., Middel, A., Voogt, J. A., ... & Erell, E. (2021). Cooling hot cities: A systematic and critical review of the numerical modelling literature. *Environmental Research Letters*, https://doi.org/10.1088/1748-9326/abdcf1. (IF = **6.096**)

2020

57. *Broadbent, A. M., Krayenhoff, E. S., & **Georgescu, M.** (2020). The motley drivers of heat and cold exposure in 21st century US cities. *Proceedings of the National Academy of Sciences,* 117 (35) 21108-21117, doi: https://doi.org/10.1073/pnas.2005492117. (IF = **9.412**)

56. Cao, Q., Liu, Y., **Georgescu, M.**, and Wu, J. (2020). Impacts of landscape changes on local and regional climate: a systematic review, 35, 1269-1290, *Landscape Ecology*, https://doi.org/10.1007/s10980-020-01015-7. (IF = **4.35**)

55. Iwaniec, D. M., Cook, E. M., Davidson, M. J., Berbés-Blázquez, M., **Georgescu, M.**, Krayenhoff, E. S., ... & Grimm, N. B. (2020). The co-production of sustainable future scenarios. *Landscape and Urban Planning*, *197*, 103744. (IF = **5.14**)

54. Liao, C., Qiu, J., Chen, B., Chen, D., Fu, B., **Georgescu, M.**, ... & Li, X. (2020). Advancing landscape sustainability science: theoretical foundation and synergies with innovations in methodology, design, and application. *Landscape Ecology*, 35, (1-9). (IF = **4.35**)

53. *Broadbent, A. M., Krayenhoff, E. S., & **Georgescu, M.** (2020). Efficacy of cool roofs at reducing pedestrian-level air temperature during projected 21st century heatwaves in Atlanta, Detroit, and Phoenix (USA). *Environmental Research Letters*, 15 084007, doi: https://doi.org/10.1088/1748-9326/ab6a23. (IF = **6.19**)

52. Heusinger, J., *Broadbent, A. M., Sailor, D. J., & **Georgescu, M.** (2020). Introduction, evaluation and application of an energy balance model for photovoltaic modules. *Solar Energy*, *195*, 382-395. (IF = **4.67**)

2019

51. *Aragon, N. U.*, *Stuhlmacher, M.*, *Smith, J. P.*, Clinton, N., and **Georgescu, M.** (2019), Urban Agriculture's bounty: contributions to Phoenix' Sustainability Goals. Environmental *Research Letters*, 14(10), 105001, doi: https://doi.org/10.1088/1748-9326/ab428f. Part of Focus on Sustainable Cities Special Issue: Urban Solutions Toward Desired Outcomes. (IF = **6.19**)

50. Baniassadi, A., Sailor, D. J., Krayenhoff, E. S., *Broadbent, A. M., and **Georgescu, M.** (2019). Passive survivability of buildings under changing urban climates across eight US cities. *Environmental Research Letters*, *14*(7), 074028. (IF = **6.19**)

49. White, J. D., Mack, E. A., Harlan, S. L., Krayenhoff, E. S., **Georgescu, M.**, and Redican, K. (2019). Regional Multivariate Indices of Water Use Potential for the Continental United States. *Sustainability*, *11*(8), 2292. (IF = **2.075**)

48. Hondula, D. M., Sabo, J. L., Quay, R., Chester, **M., Georgescu**, M., Grimm, N. B., ... and Rittmann, B. (2019). Cities of the Southwest are testbeds for urban resilience. *Frontiers in Ecology and the Environment*, *17*(2), 79-80. **(**IF = **8.302)**

47. ***Broadbent, A. M., Krayenhoff, E. S., **Georgescu, M.**, and Sailor, D. J. (2019). The observed effects of utility-scale photovoltaics on near-surface air temperature and energy balance. *Journal of Applied Meteorology and Climatology*, 58(5), 989-1006, doi: https://doi.org/10.1175/JAMC-D-18-0271.1 (IF = **2.24**).

2018

46. *Krayenhoff, E. S., M. Moustaoui, *A. M. Broadbent, **V. Gupta, and **M. Georgescu** (2018), Diurnal interaction between urban expansion, climate change and adaptation in U.S. cities, *Nature Climate Change*, doi: 10.1038/s41558-018-0320-9 (IF = **19.2**).

45. Hondula, D. M., Davis, R. E., and **M. Georgescu**, (2018), Clarifying the connections between green space, urban climate, and heat-related mortality, *American Journal of Public Health*, 108(S2), S62-S63, doi: 10.2105/AJPH.2017.304295 (IF = **4.138**).

44. Clinton, N., *M. F. Stuhlmacher*, A. Miles, *N. U. Aragon*, *M. Wagner*, **M. Georgescu**, C. Herwig and P. Gong (2018), A Global Geospatial Ecosystem Services Estimate of Urban Agriculture, *Earth's Future*, 6(1), 40-60. [**Editor's Research Spotlight Selection by Earth's Future Editorial Board**] doi:10.1002/2017EF000536 (IF = **4.94**).

43. Cao, Q., D. Yu, **M. Georgescu**, J. Wu and W. Wang (2018), Impacts of future urban expansion on summer climate and heat-related human health in eastern China, *Environment International*, **625**, 416-427, https://doi.org/10.1016/j.envint.2017.12.027 (IF = **7.09**)

42. Cao, Q., D. Yu, **M. Georgescu**, and J. Wu (2018), Substantial impacts of landscape changes on summer climate with major regional differences: The case of China, *Science of*

*the Total Environmen*t, **112**, 134-146, https://doi.org/10.1016/j.scitotenv.2017.12.290 (IF = **4.9**)

41. Goldblatt, R., *M. F. Stuhlmacher*, B. Tellman, N. Clinton, G. Hanson, **M. Georgescu**, C. Wang, F. Serrano-Candela, A. K. Khandelwal, W.-H. Cheng, and R. C. Balling, Jr. (2018), Using Landsat and nighttime lights for supervised pixel-based classification of urban land cover, *Remote Sensing of Environment*, 205, 253-275, https://doi.org/10.1016/j.rse.2017.11.026 **(IF = 6.265)**

2017

40. *Aragon, N. U.*, *M. Wagner*, *M. Wang*, *A. M. Broadbent, N. Parker, **M. Georgescu** (2017), Sustainable Land Management for Bioenergy Crops, Part of Special Issue on European Geosciences Union General Assembly 2017, EGU Division Energy, Resources & Environment (ERE), *Energy Procedia*, 125, 379-388, doi: https://doi.org/10.1016/j.egypro.2017.08.063. (No IF: Peer reviewed Elsevier journal that publishes conference proceedings dealing with all aspects of energy – discontinued in 2019).

39. Hondula, D. M., R.C. Balling, R. Andrade, *E. S. Krayenhoff, A. Middel, A. Urban, **M. Georgescu** and D. J. Sailor (2017), Biometeorology for cities, *Int. J. Biometeorol.*, 61 (1), 59-69, https://doi.org/10.1007/s00484-017-1412-3 (IF = **2.31**)

38. Gonzáles, J. E., **M. Georgescu**, M. C. Lemos, N. Hosannah, and D. Niyogi (2017), Climate Change's Pulse is in Central America and the Caribbean, *Eos*, 98, https://doi.org/10.1029/2017EO071975. (No IF: *Eos* is a peer reviewed American Geophysical Union journal that publishes Earth and space sciences news and perspectives).

37. Hunt, J. C. R., Y. D. Aktas, A. Mahalov, M. Moustaoui, F. Salamanca, and **M. Georgescu** (2017), Climate change and growing megacities: Hazards and vulnerability, *Proceedings of the Institution of Civil Engineers – Engineering Sustainability*, 171(6), 314-326, doi: https://doi.org/10.1680/jensu.16.00068. (IF = **0.691**)

36. Eakin, H., L. Bojórquez-Tapia, M. A. Janssen, **M. Georgescu**, D. Manuel-Navarete, E. R. Vivoni, A. E. Escalante, A. Baeza-Castro, M. Mazari-Hiriart, A. M. Lerner (2017), Urban resilience efforts must consider social and political forces, *Proceedings of the National Academies of Sciences (USA)*, 114(2), 186-189. (IF = **9.423**)

35. *Wang, M.*, *M. Wagner*, G. Miguez-Macho, I. Kamarianakis, A. Mahalov, M. Moustaoui, J. Miller, A. VanLoocke, J. E. Bagley, C. J. Bernacchi, and **M. Georgescu** (2017), On the long-term hydroclimatic sustainability of perennial bioenergy crop expansion over the conterminous U.S., *J. Climate*, 30(7), 2535-2557, doi: 10.1175/JCLI-D-16-0610.1 (IF = **4.85**)

34. *Wagner, M.*, *M. Wang*, G. Miguez-Macho, J. Miller, A. VanLoocke, J. E. Bagley, C. J. Bernacchi, and **M. Georgescu** (2017), A realistic assessment of perennial biofuel crop

deployment: A southern Great Plains perspective, *Global Change Biology – Bioenergy*, 9(6) 1024-1041 (IF = **6.151**)

2016

33. *Cao, Q.*, D. Yu, **M. Georgescu**, J. Wu (2016), Impacts of urbanization on summer climate in China: An assessment with coupled land-atmospheric modeling, *J. Geophys. Res. Atmos*, doi: 10.1002/2016JD025210, 121(18), 10,505-10,521. (IF = **3.318**)

32. Biggs, T., A. Daccache, D. El Chami, J. Flynn, **M. Georgescu**, D. Haro, T. M. Hess, J. W. Knox, G. Jewitt, M. Ozdogan, M. Marshall, S. Ngcobo, D.J. Nixon, J. Sumberg, and P. Thenkabail, (2016), A sweet deal? Sugarcane, water and agricultural transformation in Sub-Saharan Africa, *Global Environmental Change*, doi:10.1016/j.gloenvcha.2016.05.003 (IF = **5.089**)

31. *Benson-Lira, V.*, **M. Georgescu**, S. Kaplan, and E. R. Vivoni (2016), Loss of a lake system in a megacity: The impact of urban expansion on seasonal meteorology in Mexico City, *J. Geophys. Res. Atmos.*, 121(7), 3079-3099, doi:10.1002/2015JD024102 (IF = **3.43**)

30. Salamanca, F., **M. Georgescu**, A. Mahalov, M. Moustaoui, and A. Martilli (2016), Citywide impacts of cool roof and rooftop solar photovoltaic deployment on near-surface air temperature and cooling energy demand, *Boundary-Layer Meteorology*, 161, 203-221, doi: 10.1007/s10546-016-0160-y (IF = **2.47**)

29. *Yang, J.*, Z. Wang, **M. Georgescu**, F Chen, and M. Tewari (2016), Assessing the impact of enhanced hydrological processes on urban hydrometeorology with application to two cities in contrasting climates, *Journal of Hydrometeorology*, 17, 1031-1047, doi: http://dx.doi.org/10.1175/JHM-D-15-0112.1 (IF = **3.645**)

28. Kaplan, S., **M. Georgescu**, N. Alfasi, I. Kloog (2016), Impact of future urbanization on summer: A case study of Israel, *Theoretical and Applied Climatology,* doi: 10.1007/s00704-015-1708-3 (IF = **2.015**)

2015

27. *Cao, Q.*, D. Yu, **M. Georgescu**, Z. Han, and J. Wu (2015), Impacts of land use and land cover change on regional climate: a case study in the agro-pastoral transitional zone of China, *Environmental Research Letters*, **10** 124025, doi: http://dx.doi.org/10.1088/1748-9326/10/12/124025 (IF = **3.906**)

26. Sailor, D. J., **M. Georgescu**, J. Milne, and M. Hart (2015), Development of a National Anthropogenic Heating Database with an Extrapolation for International Cities, *Atmospheric Environment*, **118**, 7-18, doi:10.1016/j.atmosenv.2015.07.016 (IF = **3.281**)

25. Hondula, D.M., R.C. Balling, J.K. Vanos, and **M. Georgescu** (2015), Rising Temperatures, Human Health, and the Role of Adaptation, *Current Climate Change Reports*, **1**, 144-154, doi: 10.1007/s40641-015-0016-4 [**Invited Manuscript** for **New** Springer Journal *Topical Collection on Climate Change and Human Health*]

24. Georgescu, M., W. Chow, Z. Wang, A. Brazel, B. Trapido-Lurie, M. Roth, *V. Benson-Lira* (2015), Prioritizing urban sustainability solutions: coordinated approaches must incorporate scale-dependent built environment induced effects, *Environmental Research Letters*, **10** 061001, doi:10.1088/1748-9326/10/6/061001. [**June Monthly Highlights Selection by ERL Editorial Board**] (IF = **4.09**)

23. *Salamanca, F., **M. Georgescu**, A. Mahalov, and M. Moustaoui (2015), Summertime response of temperature and cooling energy demand to urban expansion in a semiarid environment, *Journal of Applied Meteorology and Climatology*, **54**, 1756-1772, doi: http://dx.doi.org/10.1175/JAMC-D-14-0313.1 (IF = **2.099**)

22. Georgescu, M. (2015), Challenges associated with adaptation to future urban expansion, *Journal of Climate*, **28**(7), 2544-2563, doi: http://dx.doi.org/10.1175/JCLI-D-14-00290.1. (IF = **4.904**)

21. Li, J., **Georgescu, M.**, Hyde, P., Mahalov, A., and Moustaoui, M. (2015), Regional-scale transport of air pollutants: impacts of southern California emissions on Phoenix ground-level ozone concentrations, *Atmos. Chem. Phys.*, **15**, 9345-9360, doi:10.5194/acp-15-9345-2015. (IF = **5.053**)

20. S. R. Shaffer, W. T. L. Chow, **M. Georgescu**, P. Hyde, G. D. Jenerette, A. Mahalov, M. Moustaoui, and B. L. Ruddell (2015), Multiscale Modeling and Evaluation of Urban Surface Energy Balance in the Phoenix Metropolitan Area. *J. Appl. Meteor. Climatol.*, **54**, 322–338, doi: http://dx.doi.org/10.1175/JAMC-D-14-0051.1 (IF = **2.099**)

2014

19. Li, J., **M. Georgescu**, P. Hyde, A. Mahalov, and M. Moustaoui (2014), Achieving accurate simulations of urban impacts on ozone at high resolution, *Environmental Research Letters*, **9** 114019, doi: 10.1088/1748-9326/9/11/114019. (IF = **4.09**)

18. Bagley, J. E., S. C. Davis, **M. Georgescu**, M. Z. Hussain, J. M., J. Miller, S. Nesbitt, A. VanLoocke, C. J. Bernacchi (2014), The biophysical link between climate, water, and vegetation in bioenergy agro-ecosystems, *Biomass & Bioenergy*, **71**, 187-201, doi: 10.1016/j.biombioe.2014.10.007. (IF = **3.411**)

17. Chow, T. W., *F. Salamanca, **M. Georgescu**, A. Mahalov, B. L. Ruddell (2014), A multi-method and multi-scale approach for estimating city-wide anthropogenic heat fluxes, *Atmospheric Environment*, **99**, 64-76, doi: 10.1016/j.atmosenv.2014.09.053. (IF = **3.062**)

16. Georgescu, M., P. Morefield, B. G. Bierwagen, and C. P. Weaver (2014), Urban adaptation can roll back warming of emerging megapolitan regions, *Proceedings of the National Academies of Sciences (USA)*, **111**(8), 2909-2914, doi: 10.1073/pnas.1322280111 (IF = **9.809**)

15. Hondula, D., **M. Georgescu**, and R. Balling Jr. (2014), Challenges associated with projecting urbanization-induced heat-related mortality, *Science of The Total Environment*, **490**, 538-544, doi: 10.1016/j.scitotenv.2014.04.130 (IF = **3.163**)

14. *Salamanca, F., **M. Georgescu**, A. Mahalov, M. Moustaoui, and M. Wang (2014), Anthropogenic Heating of Urban Climate due to Air Conditioning, *Journal of Geophysical Research - Atmospheres*, **119**, 5949–5965, doi:10.1002/2013JD021225. (IF = **3.44**)

2013

13. *Salamanca, F., **M. Georgescu**, A. Mahalov, M. Moustaoui, M. Wang, and B. V. Svoma (2013), Assessing summertime urban air conditioning consumption in a semiarid environment, *Environmental Research Letters*, **8** 034022, doi:10.1088/1748-9326/8/3/034022 (IF = **3.582**)

12. Georgescu, M., D. B. Lobell, C. B. Field, and A. Mahalov (2013), Simulated Hydro-Climatic Impacts of Projected Brazilian Sugarcane Expansion, *Geophysical Research Letters*, doi: 10.1002/grl.50206. (IF = **3.982**) Selected as "*Editor's Choice*" by *Science*. Selected as "*Editor's Highlight*" by *Geophysical Research Letters*.

11. Georgescu, M., M. Moustaoui, A. Mahalov, and J. Dudhia (2013), Summertime Climate Impacts of Projected Megapolitan Expansion in Arizona, *Nature Climate Change*, **3**(1) 37-41, doi: 10.1038/nclimate1656. (IF = **14.472**)

2012

10. Georgescu, M., A. Mahalov, and M. Moustaoui (2012), Seasonal Hydro-Climatic Impacts of Sun Corridor Expansion, *Environmental Research Letters*, **7** 034026 doi:10.1088/1748-9326/7/3/034026. (IF = **3.631**)

2011

9. Georgescu, M., M. Moustaoui, A. Mahalov, and J. Dudhia (2011), An alternative explanation of the semi-arid urban area "oasis effect", *Journal of Geophysical Research - Atmospheres*, **116**, D24113, doi: 10.1029/2011JD016720. (IF = **3.021**)

8. **Georgescu, M.**, D. B. Lobell, and C. B. Field (2011), Direct climate effects of perennial bioenergy crops in the United States, *Proceedings of the National Academies of Sciences (USA)*, doi: 10.1073/pnas.1008779108. (IF = **9.681**) Selected as "*Research Highlight*" by *Nature Climate Change*. *One of PNAS' Most-Read Articles during March 2011.*

2010 and Prior

7. Georgescu, M., and D. B. Lobell (2010), Perennial Questions of Hydrology and Climate, *Science*, **330**, 33. (In Letters)

6. Georgescu, M., D. B. Lobell, and C. B. Field (2009), Potential impact of U.S. biofuels on regional climate, *Geophysical Research Letters*, **36**, L21806, doi: 10.1029/2009GL040477.

5. Georgescu, M., G. Miguez-Macho, L. T. Steyaert, and C. P. Weaver (2009), Climatic effects of 30 years of landscape change over the Greater Phoenix, AZ, region: 2. Dynamical and thermodynamical response, *Journal of Geophysical Research - Atmospheres*, **114**, D05111, doi: 10.1029/2008JD010762.

6. Georgescu, M., G. Miguez-Macho, L. T. Steyaert, and C. P. Weaver (2009), Climatic effects of 30 years of landscape change over the Greater Phoenix, AZ, region: 1. Surface Energy Budget Changes, *Journal of Geophysical Research - Atmospheres*, **114**, D05110, doi: 10.1029/2008JD010745.

5. Georgescu, M., G. Miguez-Macho, L. T. Steyaert, and C. P. Weaver (2008), Sensitivity of summer climate to anthropogenic land cover change over the Greater Phoenix, AZ, Region, *Journal of Arid Environments,* **72/7***,* doi: 10.1016/j.jaridenv.2008.01.004, 1358-1373.

2. Georgescu, M., C. P. Weaver, R. Avissar, R. L. Walko, and G. Miguez-Macho (2003), Sensitivity of model-simulated summertime precipitation over the Mississippi River Basin to the spatial distribution of initial soil moisture, *Journal of Geophysical Research - Atmospheres*, **108**(D22), 8855, doi: 10.1029/2002JD003107.

1. Harnack, R.P., Apffel, K., **M. Georgescu**, and S. Baines (2001), The Determination of Observed Atmospheric Differences Between Heavy and Light Precipitation Events in New Jersey, USA, *International Journal of Climatology*, **21**, 1529-1560.

RESEARCH GRANTS AWARDED

At ASU, as **PI/Co-PI**, I have assisted in bringing >$7.15 million in extramural funding to ASU. My ASU lifetime proposal recognition is $5.05 million while my funded grants recognition is $1.85 million. Awards have been obtained from the National Science Foundation (NSF), National Institute of Food and Agriculture (NIFA-USDA), and since being granted tenure, non-federal and local entities (e.g., ICF International, Salt River Project). Only awards with my designation as PI or Co-PI are listed below; no items currently *Pending* are listed.

- *Salt River Project*:
  Principal Investigator, "The Effect of a Warmer Climate on Future Salt-Verde Watershed Winter Precipitation Using Convection-Permitting Regional Climate Model Simulations," Grant Amount: **$179,731**, Funding Period: 2021-2023.

- *National Science Foundation*:
  Co-Principal Investigator, "Environmental sustainability of Southwestern US utility-scale photovoltaic expansion under changing climate conditions," Grant Amount: **$298,366**, Funding Period: 2020-2022.

- *ICF International*:
  Principal Investigator, "Meteorological assessment of urban expansion effects for two rapidly urbanizing metropolitan areas in the US," Grant Amount: **$19,836.00**, Funding Period: 2018-2019.

- *National Science Foundation*:
  Co-Principal Investigator (ASU Institutional PI), Sustainability Research Networks. "The Urban Water Innovation Network (U-WIN): Transitioning Toward Sustainable Urban Water Systems," (Total) Collaborative Grant Amount: $12,000,000, (ASU) Grant Amount: **$1,310,784**, Funding Period: 2015-2021 [1-year No Cost Extension].

- *National Science Foundation*:
  Co-Principal Investigator (ASU Institutional PI), "Hazards SEES: Enhancing Emergency Preparedness for Critical Infrastructure Failure during Extreme Heat Events", (Total) Collaborative Grant Amount: $2,349,000, (ASU) Grant Amount: **$738,767**, Funding Period: 2015-2020.
    - **2018**. REU Supplement (Humans, Disasters and the Built Environment Program in Engineering Directorate): **$8,000**.

- *National Institute of Food and Agriculture (USDA)*:
  Co-Principal Investigator, "EASM-3: Collaborative Research: Physics-Based Predictive Modeling for Integrated Agricultural and Urban Applications", Grant Amount: **$751,860**, Funding Period: 2015-2020.

- *National Science Foundation*:
  Co-Principal Investigator, "EASM-3: Collaborative Research: Physics-Based Predictive Modeling for Integrated Agricultural and Urban Applications", Grant Amount: **$1,161,522**, Funding Period: 2014-2020 [1-year No Cost Extension].

- *National Science Foundation*:
  Co-Principal Investigator, "CNH: The Dynamics of Multi-Scalar Adaptation in Megacities", Grant Amount: **$1,498,870**, Funding Period: 2014-2020 [1-year No Cost Extension].

- *Belmont Forum:*
  Co-Principal Investigator (ASU Institutional PI), "European Joint Programming Initiative Collaborative Research: Hydro-social and environmental impacts of sugar cane production on land use and food security," (ASU) Grant Amount: **$28,419**, Funding Period: 2014-2017 [1-year No Cost Extension].

- *Roskind Small Grant Award (Internal ASU Award)*:
Principal Investigator, "Optimal deployment of trees to mitigate pedestrian heat exposure: novel measurements and high-resolution modelling", Grant Amount: $10,000, Funding Period: 2017.

- *National Science Foundation*:
  Principal Investigator, "Sustainable Large-Scale Deployment of Perennial Biomass Energy Crops," Grant Amount: **$1,484,950**, Funding Period: 2012-2018 [1-year No Cost Extension].

PROFESSIONAL ACTIVITIES and SERVICE

Chapters in Books:

- **Lead Author (member of core writing team)**, Second Assessment Report on Climate Change and Cities (ARC3-2), Urban Climate Change Research Network, Chapter 5: "Urban Planning and Design", 2015.

Editorial Service:

- **Associate Editor,** *Journal of Geophysical Research – Atmospheres* (Current Impact Factor: 3.82), 15-25 manuscripts per year, April 2016 – Current.
- **Editorial Board Member,** *Environmental Research Letters* (Current Impact Factor: 6.096), More than 20 manuscripts per year, January 2017 – Current.
- **Guest Editor**, *Proceedings of the National Academies of Sciences (USA)* (Current Impact Factor: 9.412), 2016 (1 manuscript); 2017 (1 manuscript); 2018 (1 manuscript); 2020 (3 manuscripts); 2021 (3 manuscripts).

Panels:

- **National Science Foundation**
  Coastlines and People (CoPe) Advisory Panel to review CoPe Large-scale Hub Proposals in response to NSF solicitation 20-567: Spring 2021.

- **Swiss Federal Institute of Technology in Zurich**
  ETH Domain Joint Initiatives in the Strategic Area "Energy, Climate and Sustainable Environment": Spring 2022.

Professional Service:

1. **Member, Board on the Urban Environment**, American Meteorological Society, Service anticipated for 1/1/2018 – 1/31/2022.
2. **Judge, World of 7 Billion**, Global video contest for middle and high school students focused on thinking critically about global challenges related to population and solutions to urban challenges, April 2022.

Special Issue Editorial Service (INVITED):

3. **Guest Editor**, *Environmental Research Letters* (Impact Factor at time of SI Announcement: 6.19): Invited by ERL to recruit Guest Editors and develop theme for a focused Special Issue.
   a. **Subject -** Focus on Sustainable Cities: Urban Solutions Toward Desired Outcomes.

REFEREE of Professional Journals:

I have served as manuscript reviewer for numerous national and international journals, and globally distinguished peer-reviewed geophysics magazines (as of this writing, 39 distinct journals and magazines comprise the list and they are presented in alphabetical order, below).

Agricultural and Forest Meteorology; Atmosphere; Atmospheric Science Letters; Boundary-Layer Meteorology; Climate Dynamics; Climate Policy; Climate Research; Earth's Future; Ecological Indicators; Energy and Buildings; Environmental Research; Environmental Research Letters; EOS Transactions – American Geophysical Union; Environmental Science and Technology; Geophysical Research Letters; Global Change Biology-Bioenergy; International Journal of Biometeorology; International Journal of Climatology; International Regional Science; International Journal of Environmental Research and Public Health; Journal of Applied Meteorology and Climatology; Journal of Arid Environments; Journal of Atmospheric and Solar-Terrestrial Physics; Journal of Climate; Journal of Geophysical

Research-Atmospheres; Journal of Hydrology; Journal of Hydrometeorology; Landscape and Urban Planning; Nature Climate Change; Nature Communications; Physics Today (American Institute of Physics); Plant, Cell & Environment; Proceedings of the National Academies of Sciences (USA); Science of the Total Environment; Remote Sensing; Soil Science Society of America Journal; Sustainable Cities and Society; Urban Climate; Water Resources Research.

External Grant Reviewer (number in parenthesis indicates reviews performed):

4. National Science Foundation (numerous, including 2 CAREER Awards);
5. Illinois Water Resources Center (1);
6. Swiss National Science Foundation (3);
7. Royal Society (1).

MEDIA and SCIENCE COMMUNICATION

My research has received extensive media attention (TV, Print, national, and international and social media) and a limited summary includes the following outlets (the links remain active and one may click on them to read story):

Print and Video: *The Guardian* (Biofuel boom could follow oil price spike); *ScienceDaily* (Scientists Identify New Implications for Perennial Bioenergy Crops); *Climate Central* (New Biofuel Crops Could Offer a Climate Advantage for the Midwest); *Voice of America* (Large cities in the United States are preparing for temperature anomalies); *LA Times (*Urban Growth Means Hotter Temps*)*; *ClimateWire* (Study measures the rising temperature of a megalopolis and what can be done); *Scientific American* (*Cool Roofs may have side effects on regional rainfall*); *Climate Central* (*City temps may soar from urbanization, Global Warming*); *Scientific American* (Increased Sugar Cane production in Brazil may affect regional climate); *Popular Mechanics* (Cool Roofs Can Counteract Warming of Urban Sprawl); *USA Today* (White and Green Roofs fight global warming, study finds); *Nature* (How Cities Can Beat The Heat); *Financial Times* (Crops take root in unlikely places); *New York Times* (Five Ways to Keep Cities Cooler During Heat Waves); *CNN* (US Cities could face nearly 30 times more exposure, study finds)

TV: *Arizona 3TV (*ASU Study: Arizona will only get hotter); *CBS5 – Phoenix* (Urban sprawl might cause higher temps); *Arizona Horizon [PBS]* (Megapolitan Impacts on Climate); *China Central TV* (Urban Heat Island Impacts)

INVITED MAGAZINE ARTICLES

5. S. Cheval, **M. Georgescu,** and M. Demuzere (2018), Urban climate, urban biometeorology, and science tools for cities at EGU 2018, *IAUC*, **68**, pp. 23 (**Invited** article for International Association for Urban Climate Quarterly Newsletter).

4. S. Cheval, **M. Georgescu,** and M. Demuzere (2017), Urban Climate Summer School (Romania) – Key Outcomes, Lessons Learned and Future Directions, *IAUC*, **65**, pp. 18-23 (**Invited** article for International Association for Urban Climate Quarterly Newsletter).

3. Sailor, D., **M. Georgescu,** and M. Hart (2016), An Anthropogenic Heating Database for

US Cities, *IAUC*, **60**, pp. 6-10. (**Invited** article for International Association for Urban Climate Quarterly Newsletter).

2. Brazel, A., and **M. Georgescu** (2014), Hot Times in the City, (**Invited** article on urban heat islands for Sustain Quarterly Magazine).

1. Georgescu, M. (2010), Climatic effects of a rapidly urbanizing metropolitan complex: The Rise of Phoenix, *IAUC*, **35**, pp. 6-9. (**Invited** article for International Association for Urban Climate Quarterly Newsletter).

SESSIONS CONVENED at PROFESSIONAL CONFERENCES/SCHOOLS

I have convened a number of sessions at professional domestic and international conferences and have also helped develop and deliver the inaugural and second annual Urban Climate Summer School (BUCSS) in Romania and in the process have connected ASU researchers with members of the international community. The sessions convened, including delivery of BUCSS, originate from within North America and several European nations.

15. Georgescu M. (Co-Convener), Cheval S. (Co-Convener), Hendrik Wouters (Co-Convener) and N. Theeuwes (Convener) (2021), Urban climate, urban biometeorology, and science tools for cities, CL2.2, European Geociences Union General Assembly, **Online**, April 19-30, 2021 (*Note that EGU, including this session, was delivered online due to the COVID-19 Pandemic*).

14. Georgescu M. (Convener), Cheval S. (Co-Convener), Matthias Demuzere (Co-Convener), Hendrik Wouters (Co-Convener) and N. Theeuwes (Co-Convener) (2020), Urban climate, urban biometeorology, and science tools for cities, CL2.5, European Geociences Union General Assembly, **Online**, May 3-8, 2020 (*Note that EGU, including this session, was delivered online due to the COVID-19 Pandemic*).

12. Georgescu M. (Scientific and Organizing Committee) (2018), Urban Climate Summer School, University of Bucharest, **Romania**, August 27-31, 2018.

11. Georgescu M. (Chair) (2018), Urban Design and Planning with Climate IX, 10th International Conference on Urban Climate (Joint with 14th Symposium on the Urban Environment), New York City, **USA**, August 10, 2018.

10. Georgescu M. (Chair) (2018), Urban Design and Planning with Climate VIII, 10th International Conference on Urban Climate (Joint with 14th Symposium on the Urban Environment), New York City, **USA**, August 10, 2018.

9. Georgescu M. (Co-Convener), Cheval S. (Convener), Matthias Demuzere (Co-Convener), Hendrik Wouters (Co-Convener) (2018), Urban climate, urban biometeorology, and science tools for cities, CL2.18, European Geociences Union General Assembly, Vienna, **Austria**, April 8-13, 2018.

8. Georgescu M. (Scientific Committee) (2018), Air and Water - Components of the

Environment Conference, Universitatea Babes-Bolyai Cluj-Napoca, Sovata Resort, **Romania**, March 15-17, 2018.

7. Georgescu M. (Scientific and Organizing Committee) (2017), Urban Climate Summer School, University of Bucharest, **Romania**, August 21-25, 2017.

6. Georgescu M. (Co-Convener), Cheval S. (Convener), Matthias Demuzere (Co-Convener), Hendrik Wouters (Co-Convener) (2017), Urban climate and urban biometeorology, CL2.02, European Geociences Union General Assembly, Vienna, **Austria**, April 23-28, 2017.

5. Georgescu M. (Co-Convener), Cheval S. (Convener), Kourtidis K. (convener), Matthias, Demuzere (Co-Convener), Hendrik Wouters (Co-Convener) (2016), Urban climate, urban heat island and urban biometeorology, CL2.01/AS4.1, European Geociences Union General Assembly, Vienna, **Austria**, April 17-22, 2016.

4. Georgescu M. (Chair) (2015), Climate Change Mitigation and Adaptation in Cities 1: Cities inside models and downscaling methods, 9th International Conference on Urban Climate (Joint with 12th Symposium on the Urban Environment), Toulouse, **France**, July 20, 2015.

3. Georgescu M. (Chair) (2015), Climate Change Mitigation and Adaptation in Cities 3: Climate. Impact Studies and adaptation strategies, 9th International Conference on Urban Climate (Joint with 12th Symposium on the Urban Environment), Toulouse, **France**, July 20, 2015.

2. Georgescu M. (Co-Convener), Cheval S. (Co-Convener), Kourtidis, K. (Convener) (2015), Urban climate, urban heat island and urban biometeorology, CL2.1/AS1.21, European Geociences Union General Assembly, Vienna, **Austria**, April 12-17, 2015.

1. Georgescu M. (Co-Chair) and Sailor D. (Co-Chair) (2014), Urban Adaptation and Mitigation Strategies (II)**,** 94th Annual Meeting of the American Meteorological Society, Atlanta, **USA**, Feb. 3, 2014**.**

INVITED COLLOQUIA/PANELS

I have given invited papers ranging from plenary talks, lectures as part of department seminar series within universities and industry, and an invited presentation at the National Academies of Sciences, Engineering, and Medicine (USA) in Washington DC. Invitations originate from within North America, the Middle East, across Asia and several European nations.

47. Georgescu M (2021), Regional Climate Modeling and Geospatial Approaches Facilitate Development of Sustainable Urban Systems, October 7, 2021 **(Invited Talk for IBM - delivered through Zoom because of COVID-19 pandemic)**

46. Georgescu M (2021), Land-atmosphere-hydrosphere interactions: projecting future environmental change in urban areas, Sep. 21, 2021 (**Urban Water Innovation Network Seminar for Stakeholders - delivered through Zoom because of COVID-19 pandemic**)

45. Georgescu M (2020), Targeting Desired Outcomes: Do current thermal adaptation strategies miss the mark?, December 15, 2020, American Geophysical Union (**Invited Talk for Extreme Weather and Climate in Urban Areas and Their Social Impacts and Mitigation Session - delivered through Zoom because of COVID-19 pandemic).**

44. Georgescu M (2020), The motley drivers of climatic change across US cities, December 3, 2020, Salt River Project (**Invited Speaker for Salt River Project Utilities focused on enhancing research collaborations - delivered through Zoom because of COVID-19 pandemic)**.

43. Georgescu M (2019), Sustainable Urban Systems – A Climatic Perspective, Monday, December 16, 2019, The National Academies of Sciences, Engineering and Medicine, Washington D.C., USA (**Invited Speaker for National Academies Workshop on Advancing Urban Sustainability in China and the United States - A National Academies Workshop in Collaboration with the Chinese Academy of Sciences**).

42. Georgescu M (2019), A more holistic perspective on healthy and equitable urban environments – Beyond meteorology and climate, Wednesday, October 2, 2019, University of Tsukuba, Tsukuba, Japan (**Invited Speaker for Center for Computational Sciences**).

41. Georgescu M (2019), An urban climate perspective on human environment interactions, Tuesday, October 1, 2019, University of Tsukuba, Tsukuba, Japan (**Invited Speaker for Tsukuba Global Science Week**).

40. Georgescu M (2019), Quantifying human-urban interactions: an urban climate perspective, Webinar, Thursday, August 29, 2019 (**Invited Speaker for Lawrence Berkeley National Laboratory/Pacific Northwest National Laboratory Monthly Webinar Series).**

39. Georgescu M (2019), Sustainable Urban Systems: An Agri-Climatic Perspective, Qinghai Normal University, Qinhgai, China, Saturday, July 13, 2019 (**Invited Speaker for the 7th Landscape Sustainability Science Forum).**

38. Georgescu M (2019), Beyond the obvious: the multiple benefits of urban agriculture, 2019 Northeast Joint Summer Session, University of the District of Columbia, Monday June 3, 2019 (**Invited Speaker and Panelist for 2019 Northeastern Joint Summer Session).**

37. Georgescu M (2019), Sustainable Urban Systems – A Climatic Perspective, Invited Speaker for Department of Civil and Environmental Engineering Seminar Series, University of Illinois at Urbana-Champaign, Thursday March 28, 2019 (**Univ. Illinois Invited Civil and Environmental Engineering Seminar speaker)**.

36. Georgescu M (2019), Sustainable large-scale deployment of perennial biomass energy crops, RENCI in Chapel Hill, North Carolina, Wednesday, March 21, 2019 (**Invited Speaker and participant to the CUAHSI WSC INFEWS Modeling workshop to envision a terrestrial modeling system to encode and formalize the knowledge from NSF WSC and INFEWS projects**).

35. Georgescu M. (2018), Urban systems and Urban Climate: at odds or in sync? Monday, August 27, 2018 **(Bucharest Urban Climate Summer School, Bucharest, Romania)**.

34. Georgescu M. (2018), The utility of computational modeling to address urban environmental sustainability, Monday, August 27, 2018 **(Bucharest Urban Climate Summer School, Bucharest, Romania)**.

33. Georgescu M. (2018), Climatic Extremes - Impacts on Urban Areas, March 16, 2018 **(Plenary at the Air and Water – Components of the Environment International Conference, Sovata, Romania)**.

32. Georgescu M. (2017), The utility of computational modeling to address urban environmental sustainability, August 22, 2017 **(Invited Speaker at the Urban Climate Summer School, University of Bucharest, Romania)**.

31. Georgescu M. (2017), Urban Climate Research and Climate Change Challenges, August 21, 2017 **(Urban Climate Summer School, University of Bucharest, Romania)**.

30. Georgescu M. (2017), UWIN – A Multi-Institutional Partnership Focused on Sustainable Urban Water Systems, July 24, 2017 **(Lee Kuan Yew School of Public Policy Seminar Series, National University of Singapore, Singapore)**.

29. Georgescu M. (2017), Futures Scenarios – Impacts on near-surface temperatures, January 13, 2017 **(CAP-LTER All Scientist Meeting, Arizona State University, Skysong/Scottsdale, Arizona, USA)**.

28. Georgescu M. (2016), The Utility of Computational Modeling to address Climate and Sustainability Challenges, October 19, 2016 **(Earth Science and Engineering Department Weekly Seminar Series, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia)**.

27. Georgescu M. (2016), Sustainable pathways of renewable energy production – the potential role of bioenergy cropping systems, June 8, 2016 (**Plenary at Fourth International Forum on Landscape Sustainability Science, Beijing Normal University, Beijing, China)**.

26. Georgescu M. (2016), Sustainable Urban Form and GeoDesign: Pathways for Healthy and Resilient Cities III (Sponsored by Remote Sensing Specialty Group, Human Dimensions of Global Change Specialty Group), Friday, April 1, 2016 (**Invited Panelist for American Association of Geographers Annual Meeting San Francisco, USA)**.

25. Georgescu M. (2016), Embedding sustainability within a social and physical framework, Wednesday, January 20, 2016 (**16th National Conference and Global Forum on Science, Policy and the Environment, Washington DC, USA**).

24. Georgescu M. (2015), Addressing Sustainability Concerns, Wednesday, October 21, 2015 (**Tsinghua University, Beijing, China**).

23. Georgescu M. (2015), Mitigating Urban Heat in a Warming World, Tuesday, October 20, 2015 (**Invited Panelist for Yale Center in Beijing Workshop on Urban Climate: From Science to Solutions, Beijing, China**).

22. Georgescu M. (2015), Toward Sustainable Urban Adaptation and Mitigation, Wednesday, October 14, 2015 (**Invited Talk for Roof Coatings Manufacturers Association Annual Meeting, Embassy Suites, Phoenix, AZ, USA)**.

21. Georgescu M. (2015), Sustainable Cities: Challenges Associated with Urban Expansion, Wednesday, June 10, 2015 (**Plenary at Third International Forum on Landscape Sustainability Science, Beijing Normal University, Beijing, China)**.

20. Georgescu M. **(**2015), Fundamentals of (Urban) Climate Modeling, National University of Singapore, Department of Geography, Friday, February 6, 2015 (**National University of Singapore, Singapore**).

19. Georgescu M. **(**2015), Utility of Computational Modeling to Examine Sustainability Challenges, National University of Singapore, Department of Geography, Tuesday, February 3, 2015 (**Invited Talk at National University of Singapore, Singapore**).

18. Georgescu M. **(**2014), Shaping the Cities of Tomorrow: Integrating Local Urban Adaptation within an Environmental Framework, AGU Fall Meeting, San Francisco, CA, Tuesday, December 16, 2014 (**Invited Talk for Urban Areas and Global Change II Session at American Geophysical Union**).

17. Georgescu M. **(**2014), Multi-Scale Assessment of Projected Urban Expansion in the United States AGU Fall Meeting, San Francisco, CA, Tuesday, December 15, 2014 (**Invited Poster for Urban Areas and Global Change I Session at American Geophysical Union**).

16. Georgescu M. (2014), Prioritizing Urban Adaptation Strategies: Incorporating Local Solutions within an Environmental and Energy Framework, October 15, 2014 **(European Coatings Conference "Architectural Coatings" hosted by Vincentz**

Network, Dusseldorf, Germany).

15. Georgescu M. (2014), Initial Progress in Urban Climate Modeling for Mexico City Metropolitan Area, National Autonomous University of Mexico, August 14, 2014**,** Mexico City **(Invited Talk at National Autonomous University of Mexico**).

14. Georgescu M. (2014), A Description of the Advanced Research WRF: Purpose, Utility and Applications, Center for Human-Environment System Sustainability, Beijing Normal University, China, July 29, 2014 (**Beijing Normal University, Beijing, China**).

13. Georgescu M. (2014), The utility of computational modeling to address climate and sustainability challenges, Center for Human-Environment System Sustainability, Beijing Normal University, China, July 28, 2014 (**Invited Talk at Beijing Normal University**).

12. Georgescu M. (2014**),** Are Climate Models Ready for the Urban Scale? Center for Quality Growth & Regional Development, Georgia Technical Institute, Atlanta, Georgia, July 9, 2014 (**Invited Talk for the Urban Climate Institute at Georgia Tech**).

11. Georgescu M. (2014), Shaping the Cities of Tomorrow: Integrating Local Adaptation within an Environmental and Energy Framework, Erice, Sicily, Italy, May 14, 2014 (**Invited Talk for the 47th Session of the International Seminars on Planetary Emergencies Workshop on Energy, Cities, and the Control of Complex Systems**).

10. Georgescu M. (2013), Are Urban Heat Island Adaptation Strategies Created Equal? Hydroclimatic Impact Assessment for U.S. 2100 Urban Expansion, AGU Fall Meeting, San Francisco, CA, December 9, 2013 (**Invited Talk for Water, Energy and Society in Urban Systems American Geophysical Union Session**).

9. Georgescu M. (2013), Recent Advances and Current Challenges Associated with Bioenergy Crop Expansion, University of Wisconsin-Madison, October 30, 2013 (**Invited talk for the 9th Agro-IBIS Workshop**).

8. Georgescu M. (2013), Challenges Associated with Sustainable Urban Development, Department of Atmospheric Sciences, University of Arizona, October 17, 2013 (**Invited Department of Atmospheric Sciences Seminar Series Speaker**).

7. Georgescu M. (2012), Beyond Greenhouse Gases: Direct Hydroclimatic Consequences of Megapolitan Expansion, Workshop on Natural Disasters and Climate Change in Asia, November 5-7, Bangi, Malaysia (**Invited Plenary Speaker**).

6. Georgescu, M. (2012), Direct Hydro-Climatic Impacts of Renewable Energy Expansion, American Society of Agronomy/Crop Science Society of America/Soil Science Society of America Annual Meeting, October 21-24, Cincinnati, OH (**Invited**).

5. Georgescu, M. (2012), Beyond Greenhouse Gases – The importance of direct climate impacts associated with bioenergy expansion, Water in Bioenergy Agroecosystems Workshop, June 12-13 Chicago, IL (**Invited**).

4. Georgescu, M. (2010), Direct climate effects of land-use change associated with bioenergy crops, Arizona State University, Tempe, AZ, March 24, 2010 (**Invited**).

3. Georgescu, M. (2009), Climatic effects of landscape change: consequences of urbanization and agriculturally related land-use change, Arizona State University, Tempe, AZ, Nov. 20, 2009 (**Invited**).

2. Georgescu, M. (2008), Air-Worldwide, Boston, MA, June 6, 2008 (**Invited**).

1. Georgescu, M. (2008), Hydrologic Research Center, San Diego, CA, May 19, 2008 (**Invited**).

Professional Conference Presentations (Lead Author Only)

Below is a listing of all papers I have given at professional domestic and international conferences/meetings (both oral and poster) that were NOT invited (i.e., as lead author but not invited). There are numerous additional papers I have served as co-author on, given by high school students, graduate students and post-doctoral scholars - these are not listed.

20. Georgescu M. (2017), Connecting Urbanization to precipitation: the case of Mexico City**,** European Geophysical Union General Assembly, Vienna, Austria, April 26, 2017.

19. Georgescu M. (2015), Urban Climate Adaptation Impacts: A multi-scale assessment to examine modeling robustness, Climate Change Mitigation and Adaptation in Cities 4, 9th International Conference on Urban Climate (Joint with 12th Symposium on the Urban Environment), Toulouse, France, July 21, 2015.

18. Georgescu M. (2015), A Matter of Scale: Climatic Assessment of Projected Urban Expansion and Adaptation in California 2100**,** European Geophysical Union General Assembly, Vienna, Austria, April 17, 2015.

17. Georgescu M. (2014), Urban Heat Island Adaptation Strategies are not created equal: Assessment of Impacts and Tradeoffs**,** European Geophysical Union General Assembly, Vienna, Austria, April 28, 2014.

16. Georgescu M. (2014), Prioritizing adaptation to urban-induced climate change, 94th Annual Meeting of the American Meteorological Society, Atlanta, GA, Feb. 3, 2014**.**

15. Georgescu M., Lobell, D., Field, C., and A. Mahalov (2012), Seasonal hydroclimatic impacts of Brazilian sugar cane expansion, *AGU Fall Meeting*, December 3 – 7, 2012.

14. Georgescu, M., Moustaoui, M., A. Mahalov, and J. Dudhia (2011), Reassessment of the semi-arid urban area "oasis effect", *AGU Fall Meeting*, GC33B-1075, December 5 - 9, 2011.

13. Georgescu, M., Moustaoui, M., and A. Mahalov (2011), On improved representation of the diurnal cycle over a semi-arid, metropolitan area: WRF-ARW vs RAMS, *12th Annual WRF Users' Workshop*, Boulder, CO, June 20 - 24, 2011.

12. Georgescu, M., Moustaoui, M., and A. Mahalov (2010), RCM Intercomparison over the semi-arid Greater Phoenix metro-area, *AGU Fall Meeting*, B21E-0368, December 13-17, 2010.

11. Georgescu, M., Moustaoui, M., and A. Mahalov (2010), Climatic impacts of 30 years of landscape change over Greater Phoenix, AZ, *CAP All-Scientist Meeting*, Arizona State University, November 19, 2010.

10. Georgescu, M. (2010), Policy-based examples of Regional Climate Model Use, *Mathematical, Computational and Modeling Sciences Center Seminar Series*, Arizona State University, Tempe, AZ, November 9, 2010.

9. Georgescu, M. (2010), Quantifying long-term climatic implications of urbanization: Historical landscape change over Metro-Phoenix, *Urbanization and Global Environmental Change*, Tempe, AZ, October 16, 2010.

8. Georgescu, M., Lobell, D. B., and C. Field (2009), Climate implications of land-use change associated with U.S. biofuels, *AGU Fall Meeting, A44C-08*, December 14-18, 2009.

7. Georgescu, M., Miguez-Macho, G., Steyaert, L. T., and C. P. Weaver (2008), Climatic effects of 30 years of landscape change over the Greater Phoenix, AZ, region, *AGU Fall Meeting,* GC53B-0725, December 15-19, 2008.

6. Georgescu, M. (2007), Assessing the Impact of LULCC over the Greater Phoenix Area*, Fourth Symposium on Southwest Hydrometeorology,* Tucson, Arizona, September 20-21, 2007.

5. Georgescu, M., and C. P. Weaver (2006), Impact of 20 Years of Land-Use and Land-Cover Change over the Greater Phoenix Area, *AGU Fall Meeting, A41B-0034,* December 11-15, 2006.

4. Georgescu, M., and C. P. Weaver (2005), Impact of Anthropogenic Land-Use/Land-Cover Change on Climate and Hydrologic cycle over the Greater Phoenix Area, *AGU Fall Meeting, H41-D 0445,* December 5-9, 2005.

3. Georgescu, M., Weaver, C.P., Avissar, R., Walko, R.L. (2002), The Sensitivity of Simulated Central U.S. Summer Precipitation and Atmospheric Moisture Budget to Both the Spatial Distribution and the Amount of Initial Soil Moisture, *AGU Fall Meeting,* December 6-10, 2002.

2. Georgescu, M., Weaver, C.P., Avissar, R., Walko, R.L. (2002), The Impact of Initial Soil Moisture Amount and Spatial Distribution on the Simulation of Precipitation during the 1995, 1996, and 1997 GCIP ESOPs. *Mississippi River Climate and Hydrology Conference,* 13-17 May 2002.

1. Georgescu, **M.,** Weaver, C.P., Avissar, R. (2001), Sensitivity of Regional-Scale Precipitation During GCIP to Mesoscale Landscape Heterogeneity. *AGU Spring Meeting,* May 29-June 2, 2001.

SERVICE PRESENTATIONS

I have received invitations from both professional and non-professional associations within the state of Arizona to communicate scientific progress. The invitations listed below are distinct from pure research talks and fall under the category of outreach and broader communication associated with research and research applications. Professional academic groups with interest in climate impacts (e.g., the Central Arizona Project Long-Term Ecological Research Network [CAP LTER], community colleges and hobby clubs, as well as proposal competitions to host international conferences, form the general basis of the presentations listed below).

11. Georgescu M. (2020), The What, Where and How of (Regional) Climate Modeling, Thursday, November 19, 2020 (**Invited speaker for the ASU School of Geographical Sciences and Urban Planning Monthly Research Showcase, Arizona State University - delivered through Zoom because of COVID-19 pandemic**).

10. Georgescu M. (2018), Urban Climate and Climate Change, Monday, November 26, 2018 (**Invited speaker for the ASU-BBU-UGA cooperation, Arizona State University, Tempe, AZ**).

9. Georgescu M. (2016), Addressing Sustainability Concerns, Friday, January 15, 2016 (**Invited Talk at 18th Annual CAP LTER All-Scientists Meeting, Arizona State University, ASU Skysong, USA**).

8. Georgescu M. (2015), The Urban Water Innovation Network (U-WIN): A Multi-Institutional Partnership, School of Geographical Sciences and Urban Planning Colloquium, Arizona State University, November 13, 2015 (**Colloquium speaker jointly with Sharon Harlan**).

7. Georgescu M. (2015), Proposal to host the 10th International Conference on Urban (Joint with 14th Symposium on the Urban Environment), **Toulouse, France**, July 19, 2015 (**ASU was one of four remaining competitors in global competition – meeting granted to New York City and City University of New York**).

6. Georgescu M. (2015), Panelist on *Sustainable Cities Network Special Session on Climate/Extreme Weather*, January 8th, 2015, Thursday, Sheraton Hotel, Phoenix, AZ (**Invited Expert Panelist and only representative from ASU**).

5. Georgescu M. (2014), Environmental Impacts of Large-Scale Urbanization, Sun City West AZ, October 3, 2014 (**Invited Talk for the Engineers Club of the West Valley**).

4. Georgescu M. (2014), The utility of computational modeling to address climate and sustainability challenges**,** Arizona State University, Tempe, AZ, April 1, 2014 **(Invited Talk for XSED@Arizona High Performance Computing Workshop)**.

3. Georgescu M. (2013), Using climate models to examine urban expansion and adaption impacts, Mesa Community College, AZ, October 23, 2013 (**Invited talk for the AZ Chapter of the American Meteorological Society**).

2. Georgescu M. (2013), Challenges Associated with Sustainable Urban Development, Arizona Association of Environmental Professionals, Scottsdale, AZ, September 24, 2013 (**Invited**).

1. Georgescu M. (2013), Using Mathematical Modeling to Address Sustainability Challenges, School of Mathematical and Statistical Sciences, Arizona State University, April 25, 2013 (**Invited Colloquium for Math Awareness Month**).

College and University Service

- 2021-2022, Research Advancement Committee (Member: Fall 2021; Chair Spring 2022)
- 2020-2021, Faculty Awards Committee for SGSUP, Research Advancement Committee for SGSUP, Undergraduate Committee for SGSUP
- 2018-2019, Co-Lead, Team Leadership Academy (Selected by Knowledge Enterprise Development leadership)
- 2016-2019, Associate Director for Research Based Graduate Programs, SGSUP
- 2015-2017, Arizona State University Research Computing Steering Committee
- 2014-2017, SGSUP Graduate Recruiting and Admissions Committee (GRAC)
- 2016, SGSUP Director Hiring Committee, SGSUP Policy Committee
- 2015-2016, CLAS (College of Liberal Arts and Sciences) Senate Committee
- 2014-2015, SGSUP Communications Committee, SGSUP 'Climate' Hiring Committee (2 Positions: 1 Junior Rank and 1 Open Rank), SGSUP Ad Hoc Committee for the development of SGSUP Urban Climate Research Center
- School of Geographical Sciences and Urban Planning (SGSUP) Scholarships/Awards Committee: 2013-2014

COURSES TAUGHT

Listing of courses and metrics of courses I have taught from the years of my initial appointment as tenure-track faculty within SGSUP at ASU, with most recent courses delivered listed first. Please note that all courses were self-developed and self-taught (i.e., no co-instructor courses delivered). Rating scale at ASU is **1 = Excellent**; **5 = Poor;** Real values may range between 1-5 to depict mean score.

Year	Term	Course Number	Course Title	Credit Hours	Grad (G) or Undergrad	Number of	Mean Rating	Number of TAs	Grader Assigned

					(U)	Students	Score of course	provided	
2022	Spring	494/598	Regional Climate Modeling	3	U(3)/G(0)	3	*NA*	0	N
2022	Spring	213	Climate and Weather	3	U	103	*NA*	0	N
2021	Fall	212	Intro to Meteorology	3	U	50	*1.5*	0	N
2021	Spring	494/598	Regional Climate Modeling	3	U(1)/G(7)	8	*NA*	0	N
2021	Spring	213	Climate and Weather	3	U	78	*1.58*	0	N
2020	Fall	212	Intro to Meteorology	3	U	53	*1.26*	0	N
2020	Spring	Sabbatical – No Teaching							
2019	Fall	212	Intro to Meteorology	3	U	35	*1.56*	0	N
2019	Spring	213	Climate and Weather	3	U	122	*1.4*	0	Y
2018	Fall	212	Intro to Meteorology	3	U	43	*1.4*	0	N
2018	Spring	213	Climate and Weather	3	U	104	*1.3*	0	Y
2017	Fall	212	Intro to Meteorology	3	U	60	*1.5*	0	N
2017	Spring	213	Climate and Weather	3	U	120	*1.3*	0	Y
2016	Fall	212	Intro to Meteorology	3	U	52	*1.1*	0	N
2016	Spring	213	Intro to Climatology	3	U	99	*1.4*	0	Y
2015	Fall	212	Intro to Meteorology	3	U	68	*1.2*	0	N
2015	Spring	213	Intro to Climatology	3	U	71	*1.2*	0	N
2014	Fall	598	Boundary Layer Meteorology	3	G	7	*1.6*	0	N
2014	Fall	212	Intro to Meteorology	3	U	46	*1.2*	0	N
2014	Spring	213	Intro to Climatology	3	U	60	*1.1*	0	N
2013	Fall	591	Water Sustainability and Climate	3	G	6	*2*	0	N

2013	Fall	212	Intro to Meteorology	3	U	59	*1.6*	0	N
2013	Spring	598	Regional Climate Modeling	3	G	7	*2.2*	0	N
2013	Spring	213	Intro to Climatology	3	U	70	*2.3*	0	N

Prior to ASU

- Delivered *Synoptic Analysis I* (400-level Class at Rutgers University; ~20 students) - Fall 2003
- Teaching Assistant: *Synoptic Analysis I, II* (Fall 1999 - Spring 2001) – Rutgers University

RESEARCH TRAINING and MENTORING

My research training on behalf of students and young scholars falls into four categories: **(i)** research training of Post-doctoral Scholars, **(ii)** research training of graduate students (including doctoral and masters students), **(iii)** research training of undergraduate students, and **(iv)** research training of high school students with aspirations of attending university. Below is a listing of the students and scholars I have mentored or co-mentored in each of the aforementioned categories.

POST-DOCTORAL SCHOLARS, RESEARCH TECHNICIANS and RESEARCH SCIENTISTS

Name	Start Date – End Date	Start Title and Position, Institution	Current Title and Position, Institution	Female?	Under-represented Minority?	Sole-mentor or Co-mentor?
Dr. Francisco Salamanca	August 2021 - Current	Assistant Res. Professor	NA	No	No	Sole
Dr. Meng Wang	October 2018 – March 2019	Research Technician, ASU	Discover Card Financial Services Analyst	Yes	No	Sole
Dr. Ashley Broadbent	February 2017 – March 2021	Post-doctoral Scholar, Asst. Res. Prof. ASU	National Institute of Water and Atmospheric Research, New Zeal.	No	No	Sole
Dr. Scott Krayenhoff	February 2016 – December 2017	Post-doctoral Scholar, ASU	Assistant Professor (tenure track),	No	No	Sole

			Guelph University			
Dr. Francisco Salamanca	August 2012 – July 2015	Post-doctoral Scholar, ASU	Assistant Research Professor, ASU	No	No	Co

PhD Students

Name	Graduation Date	Degree Program, Institution	Female?	Under-represented Minority?	Supervisory Role
Joseph Karanja	Expected Spring 2025	SGSUP, ASU	No	Yes	Chair
Aldo Brandi	Expected Spring 2023	SGSUP, ASU	No	No	Chair
Michelle Stuhlmacher	Completed Spring 2020	SGSUP, ASU	Yes	No	Co-Chair
Nazli Uludere	Completed Spring 2020	SGSUP, ASU	Yes	No	Chair
Meng Wang	Completed Summer 2018	School of Mathematical and Statistical Sciences, ASU	Yes	No	Co-Chair
Stephanie Jacobs	Completed Summer 2018	School of Earth Atmosphere and Environment, Monash University	Yes	No	Committee member
Qian Cao	Completed Spring 2016	Beijing Normal University	Yes	No	Committee member
Shai Kaplan	Completed Spring 2014	SGSUP, ASU	No	No	Committee member

Masters Students

Name	Graduation Date	Degree Program, Institution	Female?	Under-represented Minority?	Supervisory Role
Haven Guyer	Completed Spring 2020	SGSUP, ASU	Yes	No	Co-Chair
Valeria Benson-Lira	Completed Spring 2015	SGSUP, ASU	Yes	Yes	Chair

Undergraduate (The Barrett Honors College at ASU) Student Theses [TH]; Honors Contracts [CO]; Research Experience for Undergraduates [REU]

Name	Graduation Date	Degree Program, Institution	Female?	Under-represented Minority?	Supervisory Role
Brysen Rebischke [**TH**]	Expected 2023	W.P. Carey School of Business	No	No	Chair
Brenna Garcia [**CO**]	Spring 2022	The College of Lib Arts & Sci - Psychology	Yes	No	CHair
Jessica Leffel [**CO**]	Spring 2021	SGSUP, ASU	Yes	No	Chair
Lolya McWest [**REU**]	Spring 2020	Applied Environmental Science, Rutgers University	Yes	Yes	Chair
Samuel Meltzer [**REU**]	Spring 2019	SGSUP, ASU	No	No	Chair
Vincent Weis [**CO**]	Spring 2015	SGSUP, ASU	No	No	Chair
Jeffrey Milne [**TH**]	Spring 2014	SGSUP, ASU	No	No	Chair
Danielle Lorenz [**TH**]	Spring 2013	SGSUP, ASU	Yes	No	Chair

High School Students

Name	Graduation Date	High School; Enrollment as Undergraduate at designated University	Female?	Under-represented Minority?	Supervisory Role
Sarthak Gupta	Spring 2019	BASIS HS, Peoria, AZ; Barrett, The Honors College at Arizona State University	No	No	Chair
Vishesh Gupta	Spring 2018	BASIS HS, Scottsdale, AZ; Stanford University	No	No	Chair

LANGUAGES

English – fluent (Reading/writing); Romanian – fluent (Reading/writing); French – basic; Spanish – basic

MEMBERSHIP in Professional Societies

- American Geophysical Union
- American Meteorological Society
- International Association for Urban Climate

Other Activities

- *Intern*, Mount Washington Observatory, NH: Summer 1996, 1997
- *Co-Publisher and Columnist*, StateofRutgers.com [formerly a subsidiary of Scout.com network, an integrated sports publishing company, owned and operated by FoxSports.com]: 2002 – 2009