

Matei Georgescu

Associate Professor, School of Geographical Sciences and Urban Planning
Associate Director for Research Based Graduate Programs, School of Geographical Sciences and
Urban Planning

Senior Sustainability Scientist, Global Institute of Sustainability
Honors Faculty, The Honors College at Arizona State University
Arizona State University, Tempe, AZ 85287-5302

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Research Interests

Urban climate/meteorology; Urban adaptation/mitigation; Renewable energy; Biofuels;
Modeling of regional climate/climate change; Land-atmosphere interactions; Sustainability

Education

- 2008 Ph.D. Rutgers University, Atmospheric Science
Dissertation: Evaluating the effect of land-use and land-cover change on Regional
Climate in the Greater Phoenix, AZ, Region
- 2003 M.S. Rutgers University, Environmental Sciences
Dissertation: Sensitivity of Model-Simulated Summertime Precipitation over the
Mississippi River Basin to the Spatial Distribution of Initial Soil Moisture
- 1999 B.S. Rutgers University, Meteorology
Thesis Title: Investigation of the Surface and Upper-Air conditions associated with heavy
Precipitation in New Jersey

Positions Held

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

Honors and Awards

- NASA Earth System Science Fellow 2005-2008
Department of Environmental Sciences
Rutgers University, Award granted for project entitled: "Impact of Anthropogenic Land-Use/Land-Cover Change on Climate & Hydrologic Cycle of a Semi-Arid Region"
- George H. Cook Scholar, Cook College, Rutgers University 1999

Research Grants Awarded

As PI/Co-PI, responsible for >\$6.85 million in extramural funding to ASU

- National Science Foundation, **Principal Investigator**, "Sustainable Large-Scale Deployment of Perennial Biomass Energy Crops," Grant Amount: **\$1,484,950**, Funding Period: 2012-2017.
- Belmont Forum - European Joint Programming Initiative Collaborative Research: Hydro-social and environmental impacts of sugar cane production on land use and food security. **ASU PI** (PI is Tim Hess, Cranfield University), ASU Grant Amount: **\$28,419**, Funding Period: 2014-2016.
- National Science Foundation, **Co-PI** (PI is Hallie Eakin, Arizona State University), "CNH: The Dynamics of Multi-Scalar Adaptation in Megacities", Grant Amount: **\$1,498,870**, Funding Period: 2014-2017.
- National Science Foundation, **Co-PI** (PI is Alex Mahalov, Arizona State University), "EASM-3: Collaborative Research: Physics-Based Predictive Modeling for Integrated Agricultural and Urban Applications", Grant Amount: **\$1,161,522**, Funding Period: 2014-2019.
- National Institute of Food and Agriculture (USDA), **Co-PI** (PI is Alex Mahalov, Arizona State University), "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-PI** (\$12,000,000 divided among 14 participating institutions), Sustainability Research Networks. "The Urban Water Innovation Network (U-WIN): Transitioning Toward Sustainable Urban Water Systems." **ASU PI** (PI is Mazdak Arabi, Colorado State University), ASU Grant Amount: **\$1,191,572**, Funding Period: 2015-2020.
- National Science Foundation, **Co-PI** (PI is Brian Stone, Georgia Tech), Hazards SEES: Enhancing Emergency Preparedness for Critical Infrastructure Failure during Extreme Heat Events, Total Collaborative Grant Amount: \$2,325,000, ASU Grant Amount: **\$738,767**, Funding Period: 2015-2019.

Professional Activities and Service

Editorial Service

Associate Editor, Journal of Geophysical Research – Atmospheres (IF: 3.426), April 2016 – Current (>20 manuscripts per year)

Guest Editor, Proceedings of the National Academies of Sciences (USA) (IF: 9.423), 2016 (1 manuscript)

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.

Referee of professional journals

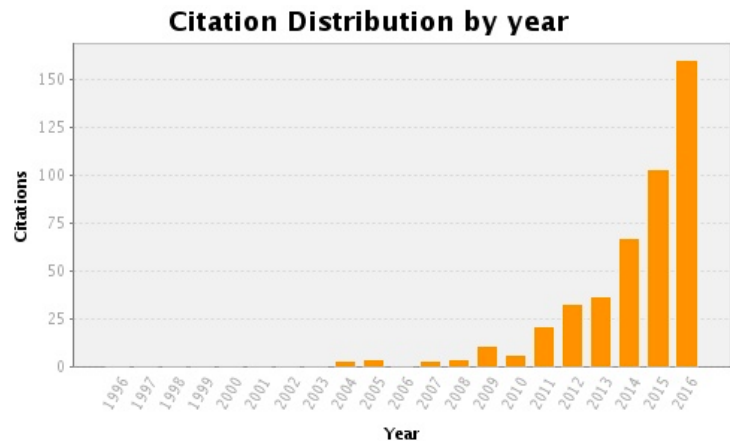
Manuscript reviewer for more than two-dozen national and international journals, and globally distinguished geophysics magazines (33 distinct journals and magazines; more than a dozen reviews per year):

Atmosphere; Boundary-Layer Meteorology; Climate Dynamics; 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 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); Soil Science Society of America Journal; Sustainable Cities and Society; Urban Climate; Water Resources Research.

Refereed Publications

Citation Impact (ISI Web of Knowledge, December 2016)

- Total Items = 32
- Sum of Times Cited = 453
- Average Citations Per Item = 14.2
- H-Index = 12



Student co-authors: undergraduate students are underlined; graduate students are *italicized*; Postdoctoral Scholars are preceded with an asterisk “*”. Impact Factor (IF) listed is single year value corresponding to year and time of publication (Source: ISI Web of Knowledge).

2017

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. Moustouai, J. Miller, A. VanLoocke, J. E. Bagley, C. J. Bernacchi, and **M. Georgescu** (2016), On the long-term hydroclimatic sustainability of perennial bioenergy crop expansion over the conterminous U.S., *J. Climate*, In Press. (IF = **4.85**)

2016

34. *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**)
33. *Wagner, M., M. Wang*, G. Miguez-Macho, J. Miller, A. VanLoocke, J. E. Bagley, C. J. Bernacchi, and **M. Georgescu** (2016), A realistic assessment of perennial biofuel crop deployment: A southern Great Plains perspective, *Global Change Biology – Bioenergy* [**In Press**] (IF = **6.151**)
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.*, **120**, doi:10.1002/2015JD024102 (IF = **3.43**)
30. Salamanca, F., **M. Georgescu**, A. Mahalov, M. Moustouai, 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*, 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. Moustouai (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 Moustouai, 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. Moustouai, 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. Moustouai (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. Moustouai, 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. Moustouai, 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. Moustouai, 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. Moustouai (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. Moustououi, 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

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

2009

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.

4. **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.

2008 or Prior

3. **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.

In Preparation/Review

Student co-authors: undergraduate students are underlined; graduate students are *italicized*; Postdoctoral Scholars are preceded with an asterisk “*”.

Gonzales, J.E., **M. Georgescu**, M.C. Lemos, N. Hosannah, and D. Niyogi (2016), The Climate Pulse of MesoAmerica and the Caribbean, Submitted to *EOS*. [In Review]

Hunt, J. C. R., Y. D. Aktas, A. Mahalov, M. Moustou, F. Salamanca, and **M. Georgescu** (2017), Climate change and growing megacities I: Hazards and vulnerability, Submitted to *Proceedings of the Institution of Civil Engineers – Engineering Sustainability* [In Review].

Hunt, J. C. R., Y. D. Aktas, A. Mahalov, M. Moustou, F. Salamanca, and **M. Georgescu** (2017), Climate change and growing megacities II: Impacts and policies, Submitted to *Proceedings of the Institution of Civil Engineers – Engineering Sustainability* [In Review].

Clinton, N., A. Miles, **M. Georgescu**, and P. Gong (2017), A Global Geospatial Ecosystem Services Estimate of Urban Agriculture, To be Submitted in Jan. 2017.

Cao, Q., D. Yu, **M. Georgescu**, and J. Wu (2017), Warmer, cooler, or drier: various effects of land use and land cover change on regional climate across China, To be Submitted in February 2017.

Georgescu, M., and G. Miguez-Macho (2017), Deployment of Perennial bioenergy crops over abandoned and degraded farmland: A hydrological Perspective, To be Submitted in March 2017.

Li., X. X., **M. Georgescu**, and L. K. Norford (2017), Street versus roof-level urban heat island mitigation strategies: a tropical perspective, To be Submitted in April 2017.

Molina, G. M., G. Mascaro, E. Vivoni, and **M. Georgescu** (2017), The relative importance of hydraulic infrastructure relative to urban expansion for Valley of Mexico flooding, To be Submitted in 2017.

Georgescu, M., N. Clinton, et al. (2017), A Global High-Resolution Representation of Historical Urban Expansion, To be Submitted in July 2017.

External Grant Reviewer (number in parenthesis indicates reviews performed)

National Science Foundation (9, including 2 CAREER Awards); Illinois Water Resources Center (1); Swiss National Science Foundation (1); Royal Society (1)

University Service

School of Geographical Sciences and Urban Planning (SGSUP) Scholarships/Awards Committee: 2013-2014

SGSUP Communications Committee: 2014-Current

SGSUP Graduate Recruiting and Admissions Committee (GRAC): 2014-Current

SGSUP Policy Committee: 2016-Current

SGSUP Staff Hiring Committee (1 Position): 2014

SGSUP 'Climate' Hiring Committee (2 Positions: 1 Junior Rank and 1 Open Rank): 2014-2015
SGSUP Ad Hoc Committee for the development of SGSUP Climate Research Center: 2014-2015
CLAS (College of Liberal Arts and Sciences) Senate Committee: 2015-2016
Arizona State University Research Computing Steering Committee: 2015-Current
SGSUP Director Hiring Committee: 2016

Media and Science Communication

Research has received extensive media attention (TV, Print, national, and international) and limited summary includes the following outlets:

Print: *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](#)); *Environmental Research Web* ([Perennial bioenergy crops 'lower surface temperature'](#)); *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](#))

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

Sailor, D., **M. Georgescu**, and M. Hart (2016), An Anthropogenic Heating Database for US Cities, *LAUC*, **60**, pp. 6-10. (**Invited** feature article for International Association for Urban Climate Quarterly Newsletter)

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

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

Sessions Convened at Professional Conferences

Georgescu M. (Co-Convener), Cheval S. (Convener), Kourtidis, K. (Convener), Matthias Demuzere, Hendrik Wouters (2016), Urban climate, urban heat island and urban biometeorology, CL2.01/AS4.1, European Geosciences Union General Assembly, Vienna, Austria, Apr. 18, 2016.

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.

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.

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 Geosciences Union General Assembly, Vienna, Austria, Apr. 17, 2015.

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, GA, Feb. 3, 2014.

Invited Colloquia/Panels

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

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

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

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), **Invited Panelist for American Association of Geographers Annual Meeting**, Friday, April 1, 2016, San Francisco, USA.

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

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

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**).

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**).

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

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

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**).

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**).

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**).

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

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**).

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 (**Invited Talk at Beijing Normal University**).

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**).

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**).

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**).

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**).

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**).

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**).

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**).

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**).

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**).

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

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

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

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

Professional Conference Presentations (Lead Author Only)

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.

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.

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.

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

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.

Georgescu, M., Moustouai, 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.

Georgescu, M., Moustouai, 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.

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

Georgescu, M., Moustouai, 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.

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

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

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.

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.

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

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.

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.

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.

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.

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

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).**

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).**

Georgescu M. (2015), Proposal to host the 10th International Conference on Urban Climate, 9th International Conference on Urban Climate (Joint with 12th Symposium on the Urban Environment), Toulouse, France, July 19, 2015 **(ASU was one of four remaining competitors in global competition).**

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).

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**).

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**).

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**).

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

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**).

Postdoctoral Associates Supervised

- Scott Krayenhoff, Arizona State University, April 2016 - Current. Research Topic: Interacting hydroclimatic impacts of urban expansion and large-scale climate change
- Francisco Salamanca, Arizona State University, 2012-2015. Research Topic: Multi-scale modeling of urban atmospheres in a changing climate

Graduate Students Currently in Supervision

- Nazli Uludere, Arizona State University, 2014-Present. Research Topic - Economic Impacts of large-scale bioenergy crop deployment. [Ph.D. Chair]
- Melissa Wagner, Arizona State University, 2013-Present. Research Topic - Climatic Impacts of bioenergy crop expansion over the Central United States. [Ph.D. Chair]
- Meng Wang, Arizona State University, 2013-Present. Research Topic - Hydroclimatic Impacts of Large-Scale Bioenergy Crop expansion. [Ph.D. Committee Member]
- Renee Elder, Arizona State University, 2014-Present. [Ph.D. Committee Member]

Graduate Students Supervised

- Qian Cao, Ph.D., 2016 (Beijing Normal University). Thesis: (**Complete**): [Ph.D. Committee Member]
- Jianhua Huang, Ph.D., 2016 (Arizona State University). Thesis: (**Complete**): Impacts of Climate Change on US Commercial and Residential Building Energy Demand [Ph.D. Committee Member]
- Valeria Benson-Lira, M.A., 2015 (Arizona State University). Thesis (**Complete**): Simulated Climate Impacts of Mexico City's Historical Urban Expansion. [M.A. Chair]

- Shai Kaplan, Ph.D., 2014 (Arizona State University). Thesis (**Complete**): Land Use/Land Cover Response to Drought: Implications for Water Security. [Ph.D. Committee Member]

Undergraduate Students Supervised

- Vincent Weis (Freshman), Barrett Honors College, Arizona State University, 2015, Fall Semester (**Complete**): Produced instructional video exploring the connections between sound and weather, the effects on each by the other, and how they relate.
- Jeff Milne (Senior), Barrett Honors College, Arizona State University, 2013-2014. Thesis Topic (**Complete**): Developing Anthropogenic Heating Profiles for Urban Areas Across the United States. [First Reader]
- Danielle Lorenz (Senior), Barrett Honors College, Arizona State University, 2012-2013. Thesis Topic (**Complete**): US Urbanization in 2100: Evaluating domestic climate consequences. [First Reader]

High School Students Supervised

- Vishesh Gupta (Sophomore), Basis High School, Scottsdale, AZ, Summer 2016: Urban Water Innovation Network

Courses Taught

- Boundary Layer Meteorology (500-level Graduate Class at ASU; 7 students) – Fall 2014
- Water Sustainability and Climate (500-level Graduate Class at ASU; 6 students) – Fall 2013
- Intro. to Meteorology (200-level at ASU; 50-100 students) – Fall 2013, 2014, 2015, 2016
- Intro. to Climatology (200-level at ASU; 50-100 students) – Spring 2013, 2014, 2015, 2016
- Topics in Regional Climate Modeling (500-level Graduate Class at ASU; 7 students) – Spring 2013
- Synoptic Analysis I (400-level Class at Rutgers; ~20 students) - Fall 2003

Languages

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

Membership in Professional Societies

- American Geophysical Union
- American Meteorological Society

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