

Matthew E. Aiello-Lammens

Curriculum Vitae

Department of Environmental Studies and Science
Pace University
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Google Scholar: <https://goo.gl/e7Ox5b>

Education

- 2007 – 2014 **Stony Brook University**, Stony Brook, NY
Ph.D., Ecology and Evolution, Dissertation: *Patterns and Processes of the Invasion of Frangula alnus: An Integrated Model Framework*, Advisor: Dr. H. Resit Akçakaya
- 1999 – 2003 **Columbia University**, New York, NY
B.A. in Physics

Experience

- 2015 – **Assistant Professor and Interim Director of Graduate Program in Environmental Science**, Pace University, Pleasantville, NY
Department of Environmental Studies and Science
- 2013 – 2015 **Postdoctoral Research Assistant**, University of Connecticut, Storrs, CT
Carry out community ecology field research and analysis as part of the multi-faceted NSF Dimensions of Biodiversity project “Parallel Evolutionary Radiations in *Protea* and *Pelargonium* in the Greater Cape Floristic Region.”
Supervisor: Dr. John Silander, Jr.
- 2009 – 2012 **Research Assistant**, Stony Brook University, Stony Brook, NY
Integrated climate change and threatened bird population modeling to carry out impact assessments and inform land management decisions on Florida military installations.
Supervisor: Dr. H. Resit Akçakaya
- 2009 **Graduate Assistant**, Stony Brook University, Stony Brook, NY
Assisted in organizing and carrying out field surveys for long-term monitoring of Long Island Pitch Pine demography.
Supervisor: Dr. Jessica Gurevitch
- 2008 – 2009 **Research Consultant**, Applied Biomathematics, Setauket, NY
Developed and applied models of population level effects of aquatic toxins.
Supervisor: Dr. Lev Ginzburg

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2005 – 2007 **Research Assistant**, P.A.I.N. Group, McLean Hospital, Belmont, MA
Analyze large datasets from neuroimaging research studies on neurological pain disorders and maintain computation systems for P.A.I.N. research group.
Supervisor: Dr. David Borsook

Publications (peer-reviewed Ecology)

- Merow, C. Allen, J.M., **Aiello-Lammens, M.E.**, Silander, J.A., Jr. 2016. *Improving niche and range estimates with Maxent and point process models by integrating spatially explicit information*. Global Ecology and Biogeography. 25:1022-1036.
- Aiello-Lammens, M.E.**, Slingsby, J., Merow, C., Kilroy Mollmann, H., Euston-Brown, D., Jones, C., Silander, J.A., Jr. 2016. *Processes of community composition in an environmentally heterogeneous, high biodiversity region*. Ecography (In Press)
- Aiello-Lammens, M.E.** and Akçakaya, H.R. 2016. *Global sensitivity analysis for impact assessments*. Conservation Biology (In Press)
- Prowse, T.A.A., Bradshaw, C.J.A., Delean, S., Cassey, P., Lacy, R.C., Wells, K., Aiello-Lammens, M.E., Akçakaya, H. R., Brook, B.W. 2015. *An efficient protocol for global sensitivity analysis for stochastic ecological models*. Ecosphere 7(3): e01238.
- Aiello-Lammens, M.E.**, Boria, R.A, Radosavljevic, A., Anderson, R.P. 2015. *spThin: An R package for spatial thinning of species occurrence records for use in ecological niche models*. Ecography 38: 541-545.
- Pearson, R.G., Stanton, J.C., Shoemaker, K.T., **Aiello-Lammens, M. E.**, Ersts, P.J., Horning, N., Fordham, D.A., Raxworthy, C.J., Ryu, H.Y., Mcnees, J., Akçakaya, H.R. 2014 *Life history and spatial traits predict extinction risk due to climate change*. Nature Climate Change 4: 217–221.
- Cahill, A.E.*, **Aiello-Lammens, M.E.***, Fisher-Reid, M.C., Hua, X., Karanewsky, C.J., Ryu, H.Y., Sbeglia, G.C., Spagnolo, F., Waldron, J.B., and Wiens, J.J. 2014. *A review of the causes of warm-edge range limits: proximate factors and implications for climate change*. Journal of Biogeography 41: 429-442. (* These authors contributed equally to this study)
- Watts, M.J., Fordham, D.A., Akçakaya, H.R., **Aiello-Lammens, M.E.**, and Brook, B.W. 2013. *Tracking metapopulation range margin changes using geographical centroids of patches weighted by population size and density*. Ecological Modeling 269: 61-69.
- Fordham, D.A., Mellin, C., Russel, B., Akçakaya, H.R., Bradshaw, C., **Aiello-Lammens, M.E.**, Caley, M., Connell, S., Mayfield, S., Shepherd, S., Brook, B.W. 2013. *Population dynamics can be more important than physiological limits for determining range shifts under climate change*. Global Change Biology 19: 3224-3237.
- Linhoss, A.C., Kiker, G.A., **Aiello-Lammens, M.E.**, Chu-Agor, M.L., Convertino, M., Muñoz-Carpena, R., Fischer, and R., Linkov, I. 2013. *Decision analysis for species preservation under sea-level rise*. Ecological Modelling 263: 264-272

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- Cahill, A.,* **Aiello-Lammens, M.E.***, Fisher-Reid, M.C., Hua, X., Karanewsky, C.J., Ryu, H.Y., Sbeglia, G.C., Spagnolo, F., Waldron, J.B., Warsi, O., and Wiens, J.J. 2013. *How does climate change cause extinction?* Proceedings of the Royal Society B 280: 20121890.
(* These authors contributed equally to this study)
- Lowry, E., Rollinson, E.J., Laybourn, A., Scott, T., **Aiello-Lammens, M.E.**, Gray, S., Mickely, J., and Gurevitch, J. 2012. *Biological Invasions: a field synopsis, systematic review and database of the literature*. Ecology and Evolution 3(1):182-196.
- Aiello-Lammens, M.E.**, Chu-Agor, M.L., Convertino, M., Fischer, R., Linkov, I., and Akçakaya, H.R. 2011. *The impact of sea-level rise on Snowy Plovers in Florida: Integrating hydrological, habitat, and metapopulation models*. Global Change Biology 17(12): 3644-3654.
- Chu-Agor, M.L., Muñoz-Carpena, R., Kiker, G., **Aiello-Lammens, M.E.**, Akçakaya, H.R., Convertino, M., and Linkov, I. 2011. *Simulating the fate of Florida Snowy Plovers with sea-level rise: Exploring research and management priorities with a global uncertainty and sensitivity analysis perspective*. Ecological Modelling 224(1): 33-47.

Publications (peer-reviewed Neuroscience)

- Moulton, E.A., Pendse, G., Morris, S., **Aiello-Lammens, M.E.**, Becerra, L.R., and Borsook, D. 2009. *Segmentally arranged somatotopy within the face representation of human primary somatosensory cortex*. Human Brain Mapping 30:757–765.
- Lebel, A., Becerra, L.R., Wallin, D., Moulton, E.A., Morris, S., Pendse, G., Jasciewicz, J., Stein, M., **Aiello-Lammens, M.E.**, Grant, E., Berde, C., and Borsook, D. 2008. *fMRI reveals distinct CNS processing during symptomatic and recovered complex regional pain syndrome in children*. Brain 131:1854–1879.
- Borsook, D., Moulton, E.A., Pendse, G., Morris, S., Cole, S.H., **Aiello-Lammens, M.E.**, Scrivani, S., and Becerra, L.R. 2007. *Comparison of evoked vs. spontaneous tics in a patient with trigeminal neuralgia (tic douloureux)*. Molecular Pain 3:34.
- Moulton, E.A., Pendse, G., Morris, S., Strassman, A., **Aiello-Lammens, M.E.**, Becerra, L.R., and Borsook, D. 2007. *Capsaicin-induced thermal hyperalgesia and sensitization in the human trigeminal nociceptive pathway: An fMRI study*. NeuroImage 35:1586–1600.

Publications (book chapters)

- Convertino, M., Kiker, G.A., Chu-Agor, M.L., Muñoz-Carpena, R., Martinez, C.J., **Aiello-Lammens, M.E.**, Akçakaya, H.R., Linkov, I. 2011. *Integrated modeling to mitigate climate change risk due to sea-level rise: Imperiled shorebirds on Florida coastal military installations*. NATO Science for Peace and Security Series C: Environmental Security 4:433-464.

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Publications (in review)

Schliep, E., Gelfand, A., Mitchell, R., **Aiello-Lammens, M.E.**, Silander, J.A. *Assessing the joint behavior of species traits as filtered by environment*. Methods in Ecology and Evolution.

Publications (in preparation)

Aiello-Lammens, M.E. *Reconstructing the historical spread of Frangula alnus using herbarium records*

Aiello-Lammens, M.E., Merow, C., Slingsby, J., Silander, J.A., Jr.. *Patterns of taxonomic and functional diversity across ecological scales*.

Meeting Abstracts

Aiello-Lammens, M.E. *Using integrated demographic and occurrence models to study processes of species invasion*. Oral presentation. North American Congress of Conservation Biology, Madison, Wisconsin.

Aiello-Lammens, M.E., Merow, C., Kilroy, H., Euston-Brown, D., Slingsby, J., Silander, J.A., Jr. 2015. *Processes of community composition in an environmentally heterogeneous, high biodiversity region*. Oral presentation. Ecological Society of America, Baltimore, Maryland.

Aiello-Lammens, M.E., Merow, C., Kilroy, H., Euston-Brown, D., Slingsby, J., Silander, J.A., Jr. 2014. *Processes of community composition in an environmentally heterogeneous, high biodiversity region*. Poster presentation. Graybill Conference on Modern Statistical Methods for Ecology. Fort Collins, Colorado.

Aiello-Lammens, M.E., Akçakaya, H.R. 2013. *Global sensitivity analysis for impact assessments*. Oral presentation. Ecological Society of America, Minneapolis, Minnesota.

Aiello-Lammens, M.E. 2012. *Using herbaria records to examine the spread of the invasive woody plant Frangula alnus*. Poster presentation. Ecological Society of America, Portland, Oregon.

Aiello-Lammens, M.E., Akçakaya, H.R., Fischer, R., Convertino, M., Chu-Agor, M. L., Martinez, M., and Linkov, I. 2011. *Integrated climate change and threatened bird population modeling to assess risks from changes in sea-level and weather patterns*. Oral presentation, International Congress for Conservation Biology, Edmonton, Alberta, Canada.

Stanton, J.C., **Aiello-Lammens, M.E.**, and Akçakaya, H.R. 2009. *Relationship between abundance and range size trends in North American breeding birds*. Poster presentation, Ecological Society of America, Albuquerque, New Mexico.

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Invited Talks

- May 2016 *Integrating ecological models to determine processes of species invasions.*
Queens College at the City University of New York
- Mar. 2016 *Integrating species distribution and population demographic models.* New York
Species Distribution Modelling Discussion Group
- Mar. 2014 *Using integrated demographic and occurrence models to study invasive species.*
Harvard Forest
- Dec. 2013 *Patterns and Processes of the Invasion of Frangula alnus: An Integrated Model
Framework.* Suffolk County Community College
- Apr. 2012 *Introduction to demographic modeling and applications to invasive species
assessment and management.* Long Island Invasive Species Management Area Scientific
Review Committee Cultivar Subcommittee

Book Reviews

- Aiello-Lammens, M.E.** 2013. Review of *Maximum Entropy and Ecology: A Theory of
Abundance, Distribution, and Energetics*. The Quarterly Review of Biology 88(2):133-
134
- Aiello-Lammens, M.E.** 2012. Review of *Practical Computing for Biologists*. The Quarterly
Review of Biology 87(4):372
- Aiello-Lammens, M.E.** 2010. Review of *A Primer of Ecology with R*. The Quarterly Review of
Biology 85(3):350
- Aiello-Lammens, M.E.** 2009. Review of *Ecological Models and Data in R*. The Quarterly
Review of Biology 84(3):288

Sponsored Research Awards

- NYS Department of Environmental Conservation, award # DEC01-T00135GG-3350000*
“Culvert Management Planning for Amphibian Connectivity”
Hudson River Estuary Program – Local Stewardship Planning
\$48,520 research budget, including student support
1 June 2016 to 5 May 2018

Teaching Experience (as instructor of record, unless otherwise noted)

Pace University

- Introduction to Environmental Studies and Science (ENV 100), Fall 2016
Environmental Science I (ENS 610), Fall 2016
Plant Ecology and Conservation (ENS 511), Fall 2016
Biostatistics (ENS 798), Spring 2016
Introduction to Environmental Science (ENV 221), Spring 2016
Independent Study in Marine Population Ecology (ENS 798), Spring 2016

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Science for Environmental Lawyers (LAW 802), Fall 2015
Independent Study in Biostatistics (ENS 798), Fall 2015

Stony Brook University

Biometry – Teaching Assistant (BEE 552), Spring 2013
Ecology Laboratory – Teaching Assistant (BIO 352), Fall 2012
Introduction to R Workshop – Instructor/ designer, Spring 2011
Critical Issues in the Environment – Teaching Assistant (SSO 102), Spring 2009
Fundamentals of Scientific Inquiry – Lab Instructor (BIO 204), Fall 2008
Applied Ecology and Conservation Biology – Lab Instructor (BIO 356), Spring 2008
The Living World – Teaching Assistant (BIO 150), Fall 2007

Software Carpentry and Data Carpentry Foundations – Volunteer Instructor

SWC Two-day Workshop – New York University, USA, May 2016
DC Two-day Workshop – Stony Brook University, USA, January 2016
SWC Two-day Workshop – University of Cape Town, South Africa, July 2015
SWC Two-day Workshop – University of Connecticut, USA, April 2015
SWC Two-day Workshop – New York Academy of Sciences, USA, March 2015

Awards, Fellowship, Scholarships

2015 Team member on project Wallace, finalist to the GBIF Nielsen Challenge
(<http://gbif.devpost.com/submissions>)
2013 Top Graduate Student Award, The Graduate School at Stony Brook University
Conservation Leadership Award, Department of Ecology and Evolution, Stony
Brook University
2010 Departmental Service Award, Department of Ecology and Evolution, Stony
Brook University
2009 George C. Williams Award, Department of Ecology and Evolution, Stony Brook
University
2007 – 2010 Presidential Recruitment Fellowship, Stony Brook University

Service

2016 – Vice Chair – Ecological Society of America Early Career Ecologists Section
2015 – Pace University, Department of Environmental Studies and Science Curriculum
Committee
2015 – Lower Hudson Partnership for Regional Invasive Species Management, Pace
University representative
2014 – Software Carpentry Instructor
2015 – 2016 Secretary – Ecological Society of America Early Career Ecologists Section
2008 – 2013 Volunteer mechanic, Secretary, and President of Stony Brook University
FreeWheel Bicycle Collective
2010 – 2013 Graduate Student Representative to University Bicycle Use Committee

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2009 – 2011 Departmental Senator for Graduate Student Organization
2010 – 2011 Graduate Student Representative to University Senate Campus Environment
Committee
2010 – 2011 Graduate Student Representative to Department of Ecology and Evolution Faculty
2009 – 2010 Graduate Student Representative to University Senate Graduate Council

Professional Societies

Society for Conservation Biology (since 2008)
Ecological Society of America (since 2007)

Peer Reviewer

Ecology Letters, PLoS ONE, BioScience, Global Change Biology, Global Ecology and
Biogeography, Ecography, Ecological Modelling, Animal Conservation, Population Ecology,
Journal of Mammology, Biological Invasions