

Curriculum Vitae

Mariana Barreto Alfonso Fragomeni, B.S., M.E.P.D., Ph.D.

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EDUCATION

2014 – 2019 **Ph.D. Geography and Integrative Conservation,**
University of Georgia, U.S.A.

Dissertation Title: When Cities Plan for Heat Health Impacts: A Collaborative Framework to Integrate Planning and Climate.

Areas of study: Urban climatology (major), Human bioclimatology (minor), Political ecology (cognate)

Advisors: J. Marshall Shepherd and Rosanna Rivero

Committee members: Jennifer L. Rice, Andrew Grundstein, and Nik Heynen

2012 – 2014 **M.E.P.D. Master in Environmental Planning and Design,**
University of Georgia, U.S.A.

Thesis Title: Planning with Climate: Urban Design as a Tool for Adaptation.

Advisor: Rosanna Rivero

Committee members: John Crowley, Lupita McClenning, and J. Marshall Shepherd

2010 - 2011 **Specialization in Architectural and Urban Sustainable
Environmental Rehabilitation,**
Universidade de Brasilia, Brazil.

Manuscript: The Applicability of the Technical Quality Requisite of Energy Efficiency Levels in Existing Commercial Buildings: the Prospection Problem.

Advisor: Cláudia N. D. Amorim

2002 - 2007 **B.S. Bachelor in Architecture and Urbanism,**
Universidade Federal da Bahia, Brazil.

Undergraduate Thesis: Low Income Housing with Environmental Comfort.

Advisor: Jussana M. F. G. Nery

ACADEMIC APPOINTMENTS

2020 - Present **Assistant Professor**
Plant Science and Landscape Architecture
University of Connecticut, Storrs/CT, USA.

Research focus:

Analysis of thermal vulnerability

Collaborative research and design for sea level rise adaptation in coastal towns in Connecticut.

Teaching focus:

LAND 3430: Design III – Program Development (Spring 2020)

LAND 3310: Construction I – Site Engineering (Fall 2020)

LAND 4340: Theory IV - Professional Practice (Fall 2020)

2019 – 2020

Adjunct Faculty

Plant Science and Landscape Architecture
University of Connecticut, Storrs/CT, USA.

Research focus:

Collaborative research and design for sea level rise adaptation in coastal towns in Connecticut.

Teaching focus:

LAND 2410: Site Analysis (Spring 2019)

LAND 3310: Site Engineering (Fall 2019)

REFEREED PUBLICATIONS (2005 – 2019)

Cited as

Fragomeni, M.B.A./ Fragomeni, M.A./ Fragomeni, Mariana A./ Alfonso, M.B./ Alfonso, Mariana B./ Alfonso, Mariana Barreto

In press

Haupt, S. E., Hanna, S., Askelson, M., Shepherd, M., **Fragomeni, M. A.**, Debbage, N., Johnson, B. (2019). 100 years of progress in applied meteorology. Part II: Applications that address growing populations. *Meteorological Monographs*, 59, 23-1.

Submitted/ Under review

Fragomeni, M.B.A., Bernardes, S., Shepherd, J.M., Rivero, R.G., In Review. A Collaborative Approach to Heat Response Planning: A Case Study to Understand the Integration of Urban Climatology and Land-use Planning. *Urban Climate*.

Fragomeni, M.B.A., Rice, J.L., Rivero, R.G., Shepherd, J.M., In Review. First Policy, Then Action: A Co-Production Approach to Understand the Application of Urban Climate Knowledge in Land Use Planning. *Journal of Extreme Events*.

Manuscripts in preparation

Fragomeni, M.B.A., Shepherd, J.M., Rivero, R., A 20-Year Analysis of Land Cover and Land Surface Temperature Changes in Chatham County, Georgia, United States, for Remote Sensing of Environment.

Chapters in Books

Rivero, R G., Smith, A.L., and **Fragomeni, M.B.A.** In Review. Resilience in coastal regions: the case of Georgia, USA. In Steinberg, S.L. and S. Steinberg GIS Applications for Resilience: Across Spatial Geographies. Environmental Systems Research Institute, Inc. (Esri).

Alfonso, M.B., Amorim, C. N. D. "The applicability of the Technical Quality Requisite of Energy Efficiency Levels in existing commercial buildings: the prospection problem." A aplicabilidade do Requisito Técnico da Qualidade do Nível de Eficiência Energética em

edificações comerciais existentes: a problemática da prospecção. Olhares da reabilitação ambiental sustentável. 1ed.Brasília: FAU-UnB, 2012, v. 1, p. 132-156

Other Publications

Gambill, J., Russell, M., Spratt, K., Whitehead, J., **Alfonso, M.**, Hopkinson, C.S., Evans, J.M., 2017. St. Marys Flood Resiliency Project. Final Report. March, 2017.

AWARDS AND HONORS

2016 – “Four for the Future” Award by Georgia Trend magazine for the St. Marys Flood Resiliency Project.

2017 – Award of Excellence at the University Economic Development Association Annual Summit in Long Beach, California for the St. Marys Flood Resiliency Project.

2017 – 4th Symposium on Integrative Conservation Logo Design Award (\$100).

2018 – International Conference on Urban Climate (ICUC-10) and National Science Foundation Working Group Knowledge Transference in Urban Climatology (\$750)

2018 – Best Oral Presentation Award by American Meteorological Society and International Conference on Urban Climate (\$400)

GRANTS ACTIVITY

2015 An integrative approach to planning for coastal cities in Georgia: Evaluating scenarios for urban climate interactions and impacts to ecological and human health. March 2015, Georgia Sea Grant Request for Proposal 2016-2018 funding cycle. **Co-PI**. Not funded (\$148,608).

2017 When Cities Plan for Heat Health Impacts: A Collaborative Framework to Integrate Planning and Climate. February 2017, National Science Foundation – Geography and Spatial Science Program: Doctoral Dissertation Research Improvement Award. **Co-PI**. Not funded (\$15,162).

2017 When Cities Plan for Heat Health Impacts: A Collaborative Framework to Integrate Planning and Climate. March 2017, University of Georgia Innovative and Interdisciplinary Research Grant for Doctoral Students. **PI**. Funded (\$2,500).

2018 Post-Hurricane Heat Emergency Response Planning. March 2018, University of Georgia Summer Research Travel Grant. **PI**. Funded (\$1,986).

2018 University of Georgia Travel Grant to attend Annual AAG Conference (\$750).

2019 Using a Community-Based and Collaborative-Design based approach to Improve Implementability of Sea Level Rise adaptation solutions. February 2019, Connecticut Sea Grant Request for Proposal 2020-2022 funding cycle. **Co-PI**. Not funded (\$142,839).

CONFERENCE ACTIVITY

Papers and Abstracts Presented

- 2005** Oliveira, Mário Mendonça de, **Alfonso, Mariana Barreto**. “*An equipment proposal for pull-off analysis.*” Uma proposta de equipamento para ensaios de arrancamento (pull-off). In: VI Simpósio Brasileiro de Tecnologia de Argamassas - VI SBTA, 2005, Florianópolis. VI Simpósio Brasileiro de Tecnologia de Argamassas - VI SBTA, 2005. Proceeding Paper.
- 2006** Nery, Jussana M. F. Guimarães , Freire, Márcia Rebouças , **Alfonso, Mariana Barreto** , Santos Junior, Luiz Rogério Rosário Dos, Costa, Isadora Novaes Scheffler Barbosa, Corrêa, Carlos José Ribeiro Bahia. “Thermal Comfort In Class Rooms In UFBA.” Conforto Térmico Em Salas De Aula Da UFBA. 2006. Poster Presentation.
- 2013** Crowley, J., **Alfonso, M.**, Downtown Athens Master Plan 2030. In: Georgia Chapter of the American Planning Association Fall 2013 Conference, 2013. Jekyll Island/GA. October 9, 2013. Oral Presentation.
- 2014** **Alfonso, M.**, Rivero, R., Climate Planning in Coastal Georgia. In: American Planning Association 2014 National Planning Conference, 2014, Atlanta/GA. Poster Presentation.
- 2014** Gambill, J., **Alfonso, M.**, Planning for Sea Level Rise and Flood Resiliency in Coastal Georgia. In: Southeastern Division of the Association of American Geographers Annual Meeting, 2014, Athens/GA. November, 2014. Oral Presentation.
- 2014** **Alfonso, M.**, Gambill, J., Evans, J., Learning How to Become Resilient: St. Marys Flood Resiliency Plan. In: Southeastern Division of the Association of American Geographers Annual Meeting, 2014, Athens/GA. November, 2014. Poster Presentation.
- 2015** Gambill, J., Evans, J., **Alfonso, M.**, A Radical Trans-Disciplinary Approach to Sea Level Rise Planning in the Southeast. In: Association of American Geographers Annual Meeting, 2015, Chicago/IL. April 21, 2015. Oral Presentation.
- 2015** **Alfonso, M.**, Gambill, J., Evans, J., Visualizing Climate Change: Strategic Communications, Graphic Design and GIS as a Tool in Climate Adaptation Planning. In: Association of American Geographers Annual Meeting, 2015, Chicago/IL. April 24, 2015. Poster Presentation.
- 2017** **Fragomeni, M.A.**, Urban Climate Planning: A Collaborative Methodological Approach to Integrate Land-Use Planning Practices and Human Bioclimatology in Savannah – GA. In: Symposium on Integrative Conservation, 2017, Athens/GA. January 27, 2017. Oral Presentation.
- 2018** **Fragomeni, M.A.**, When Cities Respond to Heat. In: Symposium on Integrative Conservation, 2018, Athens/GA. January 26, 2018. Oral Presentation.
- 2018** **Fragomeni, M.A.**, Shepherd, J.M., Rivero, R., Using Collaborative GIS to Address Heat Vulnerability: A Case Study in Savannah-GA. In: Association of American Geographers Annual Meeting, April 2018, New Orleans/LA. Oral Presentation.
- 2018** **Fragomeni, M.A.**, Shepherd, J.M., Rivero, R., Integrating Planning and Climate: A Collaborative Framework to Address Heat Vulnerability. In: 10th International Conference on Urban Climate/14th Symposium on the Urban Environment, August 2018, New York/NY. Oral Presentation.

2020 Fragomeni, M.A., Long-term Spatial Temporal Analysis Of Land Cover And Land Surface Temperature Changes In Chatham County - GA. In: 15th Symposium on the Urban Environment/ American Meteorological Society's 100th Annual Meeting, January 2020, Boston/MA. Poster Presentation.

Organized Panels and Workshops

2018 Shannon, J., Scott, D., Evans, M., **Fragomeni, M.A.**, Community Mapping and GIS. In: 1st Integrative Conservation Conference, September 2018, Athens/GA.

Non-Academic Presentations

2010 Mascarenhas, A. C. R., **Alfonso, Mariana Barreto**. Energy Efficiency in Brazil: Presenting the Neoenergia Group. USEA/USAID – Global Energy Efficiency Workshop. Washington, D.C. March 8, 2010.

2012 Mascarenhas, A. C. R., **Alfonso, Mariana Barreto**. Electrification Sustainability: Going Beyond the Meter. ESMAP/Cities Alliance Practitioners Workshop - Energy Access for the Urban and Periurban Poor. Washington, D.C. May 7, 2012.

TEACHING EXPERIENCE

University of Connecticut, Storrs, CT

Undergraduate Courses:

LAND 3430 – Design III: Program Development. Assistant Professor

LAND 3310 – Construction I: Site Engineering. Adjunct Faculty (Fall 2019)

LAND 2410 – Design I: Site Analysis. Adjunct Faculty (Spring 2019)

Received an Excellence in Teaching recognition letter from the University of Connecticut, given high evaluation score.

University of Georgia, Athens, GA

Graduate Courses:

LAND 6950 – Research Strategies. Teaching Assistant (Spring 2018)

EDES 8020 - Research Techniques in Environmental Design and Planning. Teaching Assistant (Fall 2017)

Universidade Federal da Bahia, Salvador, Brazil

Undergraduate Courses:

ARQ048 - Environmental Comfort Lab II, College of Architecture. Teaching Assistant (2007).

RESEARCH EXPERIENCE

2020 - Present

Assistant Professor

Climate Design Lab

Plant Sciences & Landscape Architecture

University of Connecticut, Storrs/CT, USA

Research focus:

Understand spatial-temporal relationships between thermal variation and land-use and land cover changes.

Support the development of climate adaptive decision-making and design processes.

2018 - 2019

Postdoctoral Scholar and Intern
Community Research & Design Collaborative
University of Connecticut, Storrs/CT, USA.

Research focus:

Collaborative research and design for sea level rise adaptation in coastal towns in Fairfield and New Haven counties, in Connecticut, contracted by the Connecticut Institute for Resiliency and Climate Adaptation (CIRCA).

2014 – 2018

Graduate Research Assistant
Integrative Conservation Program
University of Georgia, Athens/GA, USA.

Research focus:

PhD research project focused on the use of collaborative planning methods to incorporate heat vulnerability in city scale planning. Project uses the city of Savannah/GA as a case study.

2014 – 2015

Graduate Research Assistant
St Marys, GA/ Hyde County, NC – Coastal Hazard Adaptation Plan
Carl Vinson Institute of Government and Georgia Sea Grant
University of Georgia, Athens/GA, USA.

Research focus:

GIS analysis and mapping of vulnerability and impacts of sea level rise on St. Marys/GA and Hyde County/NC. This also included gathering and managing datasets, aiding in a participatory planning process using VCAPS (Vulnerability, Consequences, and Adaptation Planning Scenarios) and the development of communication strategies for public engagement.

2013 (Feb – Dec)

Graduate Research Assistant
Athens Downtown Master Plan
College of Environment and Design,
University of Georgia, Athens/GA, USA.

Research focus:

Development of the Downtown Athens Master Plan for the Athens Downtown Development Authority. This project involved extensive community engagement and GIS analysis.

2003 – 2005

Undergraduate Research Assistant
Nucleus of Technology Preservation and Restoration
Universidade Federal da Bahia, Salvador, Brazil.

RESEARCH INTERESTS

In broad terms, my professional and academic background in architecture, planning, design, and urban climatology have led me to focus on applied research and the extension of scientific knowledge to practice.

My main interests involve:

- Use of collaborative GIS and Geodesign methods as tools for incorporating urban climatology in planning practices.

- Understanding challenges and constraints to the application of urban climatology in land-use planning and decision-making.
- Application of bioclimatology in urban design and decision making.
- Application of urban climatology in resiliency planning theory, focused particularly in extreme weather preparedness in coastal environments.

RESEARCH PROJECTS OVERVIEW

2014 - 2019 When Cities Plan for Heat Health Impacts: A Collaborative Framework to Integrate Planning and Climate.

This research project has focused on developing collaboration with practitioners in local, state and federal governmental agencies, in the fields of climate, planning and public health. It aims to create a heat response plan (HRP), for the city of Savannah/ GA, as a way of better understanding the challenges of incorporating urban climatology concepts in practice. It uses collaborative GIS and Geodesign methods, through an online interface that allows participants to work simultaneously on maps and design collectively the HRP.

2014 – 2015 St. Marys Flood Resiliency Project

This project focused on using sea level rise models to aid decision makers and residents of St. Marys/GA, to visualize areas that are vulnerable to flooding. This was then combined to interviews and VCAPS (Vulnerability, Consequences, and Adaptation Planning Scenarios) public participation modelling, to develop a flood resiliency plan for the city.

2012 – 2014 Planning with Climate: Urban Design as a Tool for Adaptation

This research explored urban bioclimatology simulations to determine how urban form impacts the human perception of climate. It explores ways in which designers and planners can understand urban climate interactions and evaluate urban heat island mitigation strategies. It focuses on the city of Savannah/GA and looks particularly on the effects of urban greening and the use of open spaces to promote wind circulation.

NON-ACADEMIC EMPLOYMENT

2005 - 2008

Junior Architect/ Intern

Spatium Arquitetura e Paisagismo
(*Spatium Architecture and Landscape Architecture*)

Salvador, Bahia, Brazil.

2008 - 2009

Energy Efficiency Analyst

Cooperação para Desenvolvimento e Morada Humana
(*Cooperation for Human Development and Habitat*)

Salvador, Bahia, Brazil.

2009 - 2010

Project Coordinator and Energy Efficiency Analyst

Fundação de Apoio à Pesquisa e à Extensão
(*Foundation for Research and Extension Support*)

Salvador, Bahia, Brazil

2010 - 2012

Project Coordinator and Energy Efficiency Analyst

Companhia de Eletricidade do Estado da Bahia

(Bahia State Electric Utility Company)

Salvador, Bahia, Brazil

SERVICE TO PROFESSION

Journal Manuscript Review:

2019 Urban Climate Journal

EXTRACURRICULAR UNIVERSITY SERVICE

2014 - 2018

**Organized ICON Network & Cooperative
Graduate Student Organization for ICON Program**

University of Georgia, Athens/GA, USA

2017-2018 Student Liaison (Student representative for ICON faculty meetings)

2016-2017 Student Liaison (Student representative for ICON faculty meetings)

2016 Co-developed the Coastal Inter-Cohort Collaborative Effort, a semester focused on congregating students researching coastal issues to support networking and collaboration.

2015 Co-organized the Integrative Conservation (ICON) reading group

2014 Co-organized the Integrative Conservation (ICON) peer review group

Symposium on Integrative Conservation

2018 Publicity Committee Chair

2017 Program Committee Chair and co-organizer

2016 Souvenir Committee Chair

2015 Member of the Culinary and Logistics Committee

National Integrative Conservation Conference (ICC)

2018 Executive committee member for the 1st ICC

Organized Mini Charrette Session

2016 - 2017

GIS Day

University of Georgia, Athens/GA, USA

2017 Publicity Committee Chair

2016 Public Relations Committee Chair

2015 - 2019

Community Mapping Lab

University of Georgia, Athens/GA, USA

2018 Organized Workshop for Integrative Conservation Conference

2015 – 2018 Active member and participant of monthly meetings that discussed approaches to the application of GIS (GISystems and GIScience) in community engaged research that improves equity and health in local communities.

RELATED PROFESSIONAL SKILLS

GIS software: ArcGIS, Saga GIS, QGIS

Bioclimate/ Thermal Comfort Simulation tools: Envi-Met, Ecotect, Vasari, Rayman

Qualitative Data Analysis: MAXQDA

Design tools: AutoCAD, Adobe Creative Suites

Programing language: Python

Statistical computational tools: R

LANGUAGES

Portuguese (Fluent) and English (Fluent).

PROFESSIONAL AFFILIATION

Brazilian Council for Architecture and Urbanism – (2008-2017)

American Planning Association – (2012-Present)

Association of American Geographers – (2014-Present)

International Association for Urban Climate – (2014-Present)

American Meteorological Society – (2018-Present)