

NATALIA DAMBE

Department of Geography, University of Florida

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EDUCATION

- 2026 (expected) Ph.D. in Geography, Geographical Information Systems Major
University of Florida, Department of Geography
ABD Status, anticipated dissertation defense date: 16 November 2026
Dissertation Title: A Holistic Approach to Renewable Energy Transition
Research Advisor: Dr. Johanna Engstrom
- 2020 Master of Philosophy (MPHL): Geomatics (GIS and Remote Sensing)
University of Cape Town
Dissertation Title: Riverine flooding using GIS and remote sensing in Chikwawa, Malawi
Research Advisor: Dr. Julian Smit
- 2016 Honours Degree in GIS
University of Cape Town
- 2014 Bachelor's Degree in Geomatics (Land Surveying)
University of Malawi

PROFESSIONAL APPOINTMENT/ EMPLOYMENT

2019 – 2022 ENETRAG South Africa, Wind and Solar project Development Department, GIS
Project Planner, Cape Town, South Africa

PUBLICATIONS

Manuscripts in Preparation

Dambe, N., Engstrom, J., *Impacts of climate variability on wind energy production and Electricity Prices in the Contiguous United States. (Targeted for Journal of Renewable Energy)*. Expected submission: 30th May 2026

Dambe, N., Engstrom, J., *Do climate extremes like drought influence wind power development in the Contiguous United States? (Targeted for Journal of Renewable and Sustainable Energy)*. Expected submission: 15 August 2026

Dambe, N., Engstrom, J., *Social Economic Impacts of Wind Energy Development in Surrounding Communities, South Africa. (Targeted for Space Fostering African Societies. Southern Space Studies. Springer)*. Expected submission: November 2026

Book Chapter

Dambe N., Smit J. (2021). Application of Low- to Medium-Resolution *Data for Hydrological Modeling in Malawi*. In: Froehlich A. (eds) *Space Fostering African Societies. Southern Space Studies*. Springer, Cham. https://doi.org/10.1007/978-3-03059158-8_4

MASTER'S THESIS

Dambe, N. (2020) *Riverine flooding using GIS and remote sensing*, Engineering and the Built Environment, School of Architecture, Planning and Geomatics.

<https://hdl.handle.net/11427/31738>

AWARDS AND HONORS

- 2025 Dale Carnegie Training Award, Florida's Women in Energy Leadership Forum (FWELF)
- 2025 UF Water Institute Travel Award, University of Florida
- 2025 John and Fawn Dunkle Travel Award, University of Florida
- 2025 Graduate Student Travel Award, Graduate Student Council, University of Florida
- 2024 David L. Niddrie Award, the Department of Geography, University of Florida
- 2023 Graduate Student Travel Award, University of Florida
- 2019 Best Student Research Award, Carnegie Mellon University
- 2017 UCT Mastercard Scholarship; MasterCard Foundation, University of Cape Town
- 2016 Mandela Rhodes Scholarship, Mandela Rhodes Foundation, University of Cape Town

CONFERENCE ACTIVITY/ PARTICIPATION

Papers Presented

- 2026 Impacts of climate variability on wind energy production in the US, American Association of Geographers, San Francisco, CA (March 17 – 22)
- 2026 Impacts of climate variability on wind energy production in the US, American Association of Geographers, Gainesville, FL (February 20– 22)
- 2025 The Impact of Climate Extremes on Wind Power Development in the United States, American Association of Geographers, Detroit, MI (March 24 – 29)
- 2024 Do climate extremes like drought influence wind power development in the United States? American Association of Geographers, Honolulu, HI (April 16 – 21)
- 2024 Do climate extremes like drought influence wind power development in the United States? Florida Society of Geographers (FSG), Gainesville, FL (February 22 – 24)
- 2024 Is drought a driver of renewable energy development? University of Florida Water Institute Symposium, Gainesville, FL (February 20-21)
- 2023 What drives wind power development in the United States? 78th Annual Meeting of the Southeastern Division of the American Association of Geographers (SEDAAG), Norfolk, VA (November 18 – 20)
- 2022 Comparison of the Wind Power Landscapes in South Africa and the United States of America, Southeastern Division of the American Association of Geographers (SEDAAG), Atlanta, GA, (November 20 – 22)

CAMPUS OR DEPARTMENTAL TALKS

- 2022 Comparison of the Wind Power Landscapes in South Africa and the United States of America, Department of Geography Symposium

CURRICULUM VITAE

TEACHING EXPERIENCE

University of Florida (UF), Department of Geography

The World & Big Data Spring (As Instructor of Record - Online, I designed and sole taught)

Avg. 25 students per semester:

Spring: 2026, 2025, 2024, and 2023

Summer 2024 and 2023

Fall 2023 and 2022

Global/Regional Economy (Instructor of Record - Online)

Avg. 120 students per semester:

Summer 2026, 2025, and 2024

The Future of Energy (Teaching Assistant – In Person):

Fall 2024 (75 Students)

Geography of Florida (Teaching Assistant – Online):

Fall 2025 (134 Students)

University of Cape Town (UCT), Geomatics Department

(Tutor or Demonstrator)

Undergraduate courses

Engineering Surveying (Second Semester 2016 and First Semester 2017)

Introduction to Geographic Information Systems (GIS) (2nd Semester, 2017)

Graduate courses

Advanced Geographic Information Systems (2nd Semester, 2017)

Programming in GIS with 21 Honours GIS students (First Semester 2017)

Cape Peninsula University of Technology (CPUT), Geomatics Department

(Part-time Lecturing)

Fundamentals of Remote Sensing – Online (First and Second Semester 2021)

RESEARCH EXPERIENCE

2018 Department of Civil Engineering, University of Cape Town, Research Assistant
Collaborated with ChildSafe Organization, where I utilized ArcGIS, IBM SPSS, and Excel to map and analyze pediatric road injury data for a UNICEF-funded project, contributing spatial visualizations and methodology concept notes to formal safety reports

SERVICE TO THE PROFESSION

2025 AAG Conference Assistant, American Association of Geographers

2024 Session Organizer and Chair, "Renewable Energy Development," American Association of Geographers (AAG) Annual Conference

2024 AAG Conference Assistant, American Association of Geographers

RELEVANT PROFESSIONAL SKILLS

Geospatial Analysis and Remote Sensing

Software: ArcGIS Pro/Desktop, QGIS, Google EarthPro, ENVI, ERDAS IMAGINE

Satellite Imagery: Processing and analysis of multispectral and hyperspectral data

Technical Skills: Photogrammetry, Image Classification (Supervised/Unsupervised), and Spatial Statistics

Data Science and Geoinformatics

Languages: Python, R Studio (spatial, ggplot2), SQL

Visualization: PowerPoint presentation and advanced cartographic design

Databases: Management of PostgreSQL/PostGIS and cloud-based spatial data warehouses

Energy Systems and Modeling

Analysis: Renewable energy site suitability modeling and grid infrastructure mapping

Optimization: Experience with renewable energy load forecasting and resource assessment using geospatial inputs

CERTIFICATIONS & SPECIALIZED TRAINING

- 2023 Women Lead - UF Institute for Early Career Scholars
- 2022 Fostering Inclusive Communities – Teaching Certificate, the University of Florida
- 2018 Certificate in Sustainability in ICT Entrepreneurship, UCT & Nelson Mandela University, Cape Town, South Africa
- 2018 Certificate in Sustainability in ICT Entrepreneurship, UCT & Nelson Mandela University, Cape Town, South Africa
- 2018 Certificate in Design Thinking, Hasso Plattner Institute of Design Thinking, UCT, Cape Town, South Africa
- 2017 Certificate in Radar Remote Sensing, Friedrich-Schiller University in Jena, Germany

TEACHING AREAS/COURSES PREPARED TO TEACH

Geospatial Modeling for Resource Demand

Sustainable Data Center Development and Policy

Participatory GIS and Community-Based Modeling

The World & Big Data

Global/Regional Economy

The Future of Energy

Geography of Florida

Geography of Africa

Introduction to Geographical Information Systems

Advanced to Geographical Information Systems

Remote Sensing

Land Surveying

Statistics

CURRICULUM VITAE

LANGUAGES

English:

Speaking: Fluent
Reading: Excellent
Writing: Excellent

Chichewa or Nyanja:

Speaking: Native
Reading: Native
Writing: Native

PROFESSIONAL AFFILIATIONS

(As a Student Member)

Southeastern Division of the American Association (SEDAAG)
American Association of Geographers (AAG)
AAG African Studies Specialty Group
UF Center for African Studies
Energy and Environment Specialty Group
Florida Society of Geographers
St Augustine Catholic Church and UF Student Center
South African Geomatics Council (SAGC) Professional Body
The Geo-Information Society of South Africa (GISSA)