

**Darcy Boellstorff, Ph.D.**  
Professor of Geography  
Bridgewater State University  
Bartlett College of Science and Mathematics  
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## Education

- 2004            Ph.D. University of Nebraska - Geography with Professional Specialization in Community and Regional Planning. Dissertation: [\*Impacts of the European Union's Common Agricultural Policy set -aside scheme on soil erosion in Castilla-La Mancha.\*](#)
- 2000            M.A. University of Nebraska - Geography. Thesis: *Using DEM Data for Updating Soil Surveys.*
- 1996            B.S. University of Nebraska - Environmental Studies in Anthropology, Minor: Geography.
- 1990 – 1992   Undergraduate study in Oceanography - University of Washington

## Professional

- 2023 – Present   **Member** of [Board of Directors for the GIS Certification Institute](#) (GISCI), representative of the Association of American Geographers (AAG).
- 2017 – Present   **Chairperson**, Department of Geography, Bridgewater State University, Bridgewater, MA.
- 2017 – 2018     **Faculty Fellow**, College of Science and Mathematics, Bridgewater State University, Bridgewater, MA.
- 2017 – Present   **Professor**, Department of Geography, Bridgewater State University, Bridgewater, MA.
- 2012 – 2017     **Associate Professor**, Department of Geography, Bridgewater State University, Bridgewater, MA.
- 2005 – 2012     **Assistant Professor**, Department of Geography, Bridgewater State University, Bridgewater, MA.
- 2004 – 2005     **Adjunct Faculty**, Department of Geography, University of Southern Maine, Gorham, ME.
- 2004 – 2005     **Mapping Technician**, DeLorme, Yarmouth, ME.
- 2004             **Cartographic Technician**, NRCS-USDA National Soil Survey Center, Lincoln, NE.
- 2003 – 2005     **Adjunct Faculty**, Department of Geography, Metropolitan Community College, Omaha, NE.
- 1996 – 2000     **GIS Specialist**, Nebraska Department of Natural Resources, Lincoln, NE.

## Licenses and Certifications

- 2023 – Present   GIS Fundamentals Foundation 2201 Esri Certification
- 2017 – Present   FAA Remote Pilot License – Small Unmanned Aircraft Systems (Part 107)
- 2017 – Present   GISP Certification - GIS Certification Institute (GISCI)
- 2019 – Present   sUAS Level I Thermographer (FLIR Infrared Training Center)

## Courses taught

- GEOG 121 - Physical Geography
- GEOG 121L - Physical Geography laboratory
- GEOG 122 - Global Physical Systems
- GEOG 130 - Environmental Geography
- GEOG 213 - Introduction to Geographic Information Systems
- GEOG 213L - Introduction to Geographic Information Systems laboratory
- GEOG 285 - Spatial Public Health Applications
- GEOG 299 - SYS Land Use and Sustainability
- GEOG 214 - Satellite Image Processing Applications to the Environment
- GEOG 315 – Environmental Applications in Spatial Analytics
- GEOG 413 - Applications in Geographic Information Systems
- GEOG 413L - Applications in Geographic Information Systems laboratory

## Student Internships

- Flaherty, Shayla, 2024, Middleboro Conservation Commission, GIS Internship
- Osborne, Joseph, 2022, Middleboro Conservation Commission, GIS Internship
- Cady, Matthew, 2021, Old Colony Planning Council, GIS Internship
- Scopa, Jesse, 2019, New England Coastal Wildlife Alliance, UAS data collection and analysis.
- Scopa, Jesse, 2019, BSU Center for Sustainability, thermal imaging applications for campus sustainability
- Cabral, Jacob, 2018, New England Coastal Wildlife Alliance, UAS data collection and analysis.
- CocoGenitti, Joseph, 2017, BSU Center for Sustainability, sustainability resources on campus [web map](#)
- Taylor, Deborah, 2017, West Bridgewater Conservation Commission, Bridgewater, MA.
- Brennan, Stephan, 2017, Department of Public Works, Avon, MA.
- Ratcliffe, Eva, 2016 Electric Department, North Attleboro, MA.
- Wood, Lawrence, 2016 Planning Department, Brockton, MA. Identifying and mapping conforming and nonconforming land parcels based on square footage and frontage.
- Roberts, Andrew. 2015 Planning Department, Carver, MA. Developing parcel maps requested by landowners.
- Herrera, Ninoska, 2015 Old Colony Planning Council, Brockton, MA. Creation and management of GIS data, field data collection, development of cartographic products.
- Smith, Nicholas, 2015 Engineering Department, Taunton, MA. Flood zone mapping, Wampanoag Tribe casino land purchase map, police sector mapping.
- Pina, Cidalia, 2015 Easton Children's Museum Developing Geography Instructional Interactive Displays. Easton, MA.
- Leahy, Mackenzie, 2015 Foxboro Planning Board, Foxboro, MA. Smart Growth zoning overlay district act (MA Community Planning, Chapter 40R) mapping.
- Zampini, Nicholas, 2015 Westfield Department of Engineering, Westfield, MA.
- Ward, Matthew, 2015 Planning Department, Bridgewater, MA. Smart Growth zoning overlay district act (MA Community Planning, Chapter 40R) mapping.
- Walker, Leah, 2015 Planning Department, Mansfield, MA.
- Corvi, Dennis. 2014. Department of Public Works, Avon, MA.

- Weigel, Katelyn, 2014 Planning Department, Carver, MA.
- Benson, Rachel, 2014 Planning Department, Bridgewater, MA.
- Rousseau, Elliott, 2014 Planning Department, Bridgewater, MA.
- Bianchi, Matthew, 2014 Planning Department, Wareham, MA.
- Wood, Lawrence, 2013 Planning Department, Carver, MA.
- Rogers, Debbi, 2012 Planning Department, Bridgewater, MA.

### Continuing scholarship - Research and Mentored Student Research

- Sezen, Lindsay, 2024. [The Unidentified of New England](#), Massachusetts Undergraduate Research Conference.
- Potvin, Matt, 2024. [Using Remotely Sensed Spectral Indices to Assess the Efficacy of Massachusetts Cranberry Bog Wetland Restoration Projects](#), NASA Summer Fellowship.
- Potvin, Matt, 2023. [Mapping Restored Wetland Hydrology and Vegetation](#).
- Cady, Matthew, 2022. *Past and Present: The Essential Role of the Quequechan River*. StARS 2022. [Past and Present: The Essential Role of the Quequechan River \(arcgis.com\)](#)
- Osborne, Joseph, 2022 (updated in 2024). [Pratt Farm Conservation and Recreation Area \(arcgis.com\)](#)
- Scopa, J. and D. Boellstorff, 2019. *UAS Applications for the Jones River Dam Removal Project* poster presentation at the [Jones River Restoration Celebration](#).
- Cabral, Jacob, 2019. [Flood Risk Analysis Suffolk County, MA.](#)
- Cabral, Jacob, 2018. [Using remote sensing technology to analyze coastal erosion and vegetation loss in Aucoot Marsh in Marion Massachusetts, and its effect on diamond terrapin \(malaclyemys terrapin\) nesting sites.](#) Association of American Geographers Meeting, Washington D.C. (Mentor Dr. Darcy Boellstorff)
- Fischer, Ryan, 2018. [Light Rail Site Suitability for Tampa, Florida.](#) Association of American Geographers Meeting, Washington D.C. (Mentor Dr. Darcy Boellstorff)
- Boellstorff, D. and Ninoska Herrera, 2017. "UAV Imagery Processing Effects on NDVI Values at Different Spatial Resolutions". Northeast Regional Arc Users Conference.
- Boellstorff, D. and Ninoska Herrera, 2017. [Investigation of the Impacts of Ground Sampling Distance on Image Statistics.](#) Association of American Geographers Meeting, Boston.
- 2016, BSU Center for the Advancement of Research and Scholarship Summer Grant. Project Title: *Relation of NDVI measurements to soil and topographic characteristics for an agricultural area of Southeast Nebraska.*
- Boellstorff, D. et al. 2015. [Slope Analysis for Glaciofluvial Soils in Plymouth County, Massachusetts.](#) Association of American Geographers Meeting, Chicago.
- Walker, Leah and Cidalia Pina, 2015 - student research. [Hydraulic Fracturing: Is the Short Term Gain Worth the Long Term Risk?](#), Association of American Geographers Meeting, Chicago.
- Winters, Anthony, 2015 - student research. [How Baker Beat Coakley: A Spatial Analysis of the 2014 Massachusetts Gubernatorial Election](#), Association of American Geographers Meeting, Chicago.
- Campbell, Michael, 2015 - student research. ATP funded student research project: *Understanding Sea Turtle Distribution and Strandings in the Gulf of Maine.*
- 2014, BSU Center for the Advancement of Research and Scholarship Summer Grant. Project Title *Understanding the Spatial Intersection of Environmental Justice Populations and Public Health Concerns for Achieving a Healthier Future*

- Boellstorff, D. 2013. [\*Terrain Derivative Values and Automated Mapping for Glaciofluvial Soil Survey Map Units in Plymouth County, Massachusetts\*](#). Association of American Geographers Meeting, Los Angeles.
- Boellstorff, D. and Z. Venter. 2011. [\*Geographic Information Accessibility for Improving Horticultural-Based Income Generation in the Mzimba District of Malawi\*](#). Association of American Geographers Meeting, Seattle.
- Boellstorff, D. 2010. [\*Research-Embedded Instruction for Engaging Second-Year Non-Majors\*](#). Association of American Geographers Meeting, Washington, DC.
- Claret, V., K. Sheehan and W. Sutcliffe, 2010. *Comparison of Infrastructure Development in Minimizing the Effect of Earthquake-related Incidents between Haiti and Chile*. BSU Undergraduate Research Symposium.
- Desharnais, E., M. Goodrich and J. Stanley, 2010. *Nicaragua; a Geographic Look at the Country, its Coffee Industry, From the Farmer to Market, Fair Trade Issues, and Landmine Problems throughout the Country*. BSU Undergraduate Research Symposium.
- Pearce, A., 2010. *Comparison of Soil Properties for Organic vs. Non-Organically-Managed Soils in Southeastern Massachusetts*. BSU Midyear Research Symposium.
- AuCoin, E. and C. Bussiere, 2010. *Geography Implementation of Wind Turbines in Eastern Massachusetts*. BSU Undergraduate Research Symposium.
- Emery, T. E. McLean and N. Richardson, 2010. *Preferable Habitats for Piping Plovers in Suffolk and Bristol County*. BSU Undergraduate Research Symposium.
- Ferris, D. and S. Henry, 2010. *Implementation of Wind Turbines in Eastern Massachusetts*. BSU Undergraduate Research Symposium.
- Bousquet, J., W. Demers, M. Levine and D. Zoino, 2010. *Integrating a Sensor Network and Computer Modeling on GIS to Determine Land-Use Impacts on Landfills and Recycling Centers: Plymouth County*. BSU Undergraduate Research Symposium.
- Pearce, Alena, C. St. Andre and J. Tautkus, 2010. *The Green Dream: Investigating the Plausibility of Green Energy in Massachusetts*. BSU Undergraduate Research Symposium.
- Boellstorff, D. 2009, [\*Soil Organic Carbon Pools Influenced by Agricultural Land Management in A Semiarid Cereal-Growing Region In Central Spain\*](#), *Journal of Arid Environments* 73: 389–392.
- Boellstorff, D. 2009. [\*Land Use Transition and Dynamic Soil Property Assessment for An Agricultural Soil of Plymouth County, Massachusetts\*](#). Association of American Geographers Meeting, Las Vegas
- Christopher St. Andre, 2009 - student research. [\*Solar and Topographical Breeding Habitat Preferences of Two Damselflies: Calopteryx aequabilis and Calopteryx maculata\*](#), Association of American Geographers National Conference, Las Vegas.
- Christopher St. Andre, 2009 - student research. [\*Solar and Topographical Breeding Habitat Preferences of Two Damselflies Calopteryx aequabilis and Calopteryx maculata, The Undergraduate Review Volume 5.\*](#)
- Boellstorff, D. 2008, [\*The Potential Impact of Agricultural Management Change on Soil Restoration of the Cereal-growing Regions of Central Spain\*](#), 3rd International Conference on Geo-Environment and Landscape Evolution, Wessex Institute, The New Forest, UK. Conference Proceedings.
- Boellstorff, D. and P. Tanes, 2008, *Campus Carbon Emissions Inventory: Commuter Contributions and Campus-Land Offsets*, Association of American Geographers Meeting, Boston, MA.

- Boellstorff, D., 2007, [\*Soil Carbon and Agricultural Land Management in a Typical Semi-Arid Region of Central Spain\*](#), Annual Association of American Geographers Meeting, San Francisco, CA.
- Hellstrom, R., Boellstorff, D., M. Desmarais, P. McDonough, J. Wicks, 2006, [\*Integrating Automatic Weather Station Data into GIS\*](#), Massachusetts Office of Geographic and Environmental Information (MassGIS), GIS Day Meetings.
- Hellstrom, R., R. Amey, D. Boellstorff, K. Curry, P. Saccocia, M. Wakin and J. Hayes-Bohanan, 2007. [\*Climate and Land Use Change: Implications for Southeastern Massachusetts\*](#). Center for the Advancement of Research and Teaching Plenary Session, Bridgewater.
- Boellstorff, D. and G. Benito, 2006, [\*Impacts of Set-Aside Policy on the Risk of Soil Erosion in Central Spain\*](#), Association of American Geographers Annual Meeting, Chicago, IL.
- Boellstorff, D., 2005, *Agricultural policy and soil health in central Spain*, presentation at New England - St. Lawrence Valley Division of the Association of American Geographers, Keene State College, Keene, New Hampshire.
- Boellstorff, D. and G. Benito, 2005, [\*Impacts of Set-Aside Policy on the Risk of Soil Erosion in Central Spain. Agriculture, Ecosystems & Environment, 107 \(2-3\):231-243.\*](#)
- Boellstorff, D. and G. Benito, 2004, *Analysis of the 1992 CAP set-aside policy and soil health in Torrijos, Spain*, poster presentation at the 8<sup>th</sup> National Conference on Geomorphology: Natural and Human Risks in Geomorphology, (VII Reunión Nacional de Geomorfología, Riesgos Naturales y Antrópicos en Geomorfología, Toledo, Spain, September 22-25.
- Gaber, J., S. Gaber, J. Vincent, and D. Boellstorff, 2004, [\*An Analysis of Refugee Resettlement Patterns in the Great Plains, Journal of Great Plains Research, 14 \(2\):165-184.\*](#)
- Boellstorff, D., 2001, *Mead Agricultural Research Development Center Land Use Planning Using SSURGO Database*, Nebraska GIS Conference, Cornhusker Hotel, Lincoln, Nebraska.
- Narumalani, S., K. Dewey, D. Boellstorff, J. Maeder, 2000, *Climate Atlas of Nebraska* (digital) distributed by University of Nebraska Center for Advanced Land Management Information Technologies, Nebraska Atlas Project.
- Boellstorff, D., J. Conklin, P. Dappen, S. Hatten, P. Lamb, J. Taylor, M. Tooze, M. Warner, J. Wolf, 1997. [\*Center-Pivot Irrigation Systems in Nebraska \(1:1,000,000\) University of Nebraska Conservation and Survey Division Map Publication.\*](#)
- Boellstorff, D. and J. Biskup, 1996 [\*The Effects of a Long-term Drought on the Economic Roles of Hacendado and Ejidatario Women in a Mexican Ejido\*](#), Nebraska Anthropologist Volume 12:1
- Boellstorff, D. 1996. [\*Women in Development: The Need for a Grassroots Gender Planning Approach\*](#), Nebraska Anthropologist Volume 12:1.

#### **Continuing scholarship - Grants and Awards**

- USDA-NRCS The National Cooperative Soil Survey (NCSS) Northeast Region 2024 conference agreement (\$15,000).
- BSU Center for the Advancement of Research and Scholarship Travel Grants \$500 - \$1,200 each 2024, 2023, 2022, 2019, 2018, 2017, 2016, 2015, 2013, 2011, 2010, 2009, 2008, 2007, and 2006.
- 2017, Core Curriculum Steering Committee proposal funding, BSU Office of the Provost. \$15,000 for 6 faculty proposal-writers for summer 2017.
- 2016, QuAC Course Development Summer Grant \$1,000, [\*New Quantitative Reasoning Skills for GEOG 122.\*](#)



- 2016, Engaged Student Learning in the STEM disciplines pedagogy grant, \$500. *Scaffolding GIS from skill to skill-set to integrated solution.*
- 2016, 2014 Center for the Advancement of Research and Scholarship Summer Research Grants, \$3,000 each.
- 2015, BSU Office of Teaching and Learning Summer Grant \$2,000, Learning outcome development for GEOG 213, Introduction to GIS.
- 2014, BSU Institute for Social Justice Course Development Grant \$1,500
- 2014, *Educating for a Sustainable Future*, Massachusetts Clean Energy Center grant. \$145,000. With Jonathan Shapiro Head of the Brockton High Science Department and Jeff Williams - Physics. Developed site and topic specific [GIS instruction](#) as a professional development workshop (3 day) for Brockton High science teachers.
- 2011, Bridgewater Magazine (Vol. 21(2): 28-29) [GIS Leads the Way: Dr. Darcy Boellstorff uses technology to help improve crop growth in Malawi, Africa.](#)
- 2010 – 2011, USAID Horticulture Collaborative Research Support Program (HORT CRSP) Exploratory Grant (\$85,000) - Project title: *Geographic Information Accessibility for Improving Horticultural-Based Income Generation in the Mzimba District of Malawi.*
- 2009, BSU Award for Academic Excellence
- 2008, BSU Center for the Advancement of Research and Scholarship Research Grant, \$5,000
- 2008, BSU Adrian Tinsley Program Undergraduate Research Grant \$3,000.
- 2008, BSU Teaching and Technology Center Online Course Development Grant \$2,000
- 2007, BSU Center for the Advancement of Research and Scholarship Research Grant, \$5,000, Project title: [Identifying associations among surface soil properties and site characteristics in a semi-arid agricultural region](#)
- 2006, BSU Center for the Advancement of Research and Scholarship Research Grant, \$5,000,
- 2005, BSU Center for the Advancement of Research and Scholarship Research Grant, \$12,000,
- Graduate School: Fulbright Fellowship (Madrid, Spain 2002-03), Maude Hammond Fling Graduate Fellowship University of Nebraska.

## Service and Outreach

- 2024, panel organizer Association of American Geographers (Honolulu, Hawaii) for “GIS Certificates – Tips for Getting Started” and “GIS Certificates – tips for improving and growing programs”.
- 2024, Co-host for the National Cooperative Soil Survey (NCSS) Northeast Region 2024 conference
- 2023-present, GIS Certification Institute Board of Directors, representative of the American Association of Geographers
- GIS Day @ BSU organizer (2022, 2023)
- 2024, Northeast Arc Users spring conference (Salem State University) planning committee
- 2024, Greenlight for Girls workshop leader
- 2022, Bridgewater-Raynham HS STEM Week drone workshop
- 2022, GIS Workshop with Dr. BoAh Kim, designed for BSU faculty, staff, and students
- 2022, New Heights Charter School thermal imagining workshop
- 2021, Geography Alumni Night
- 2014-2017, BSU Geography Department Internship Coordinator

- 2013-2018, BSU Core Curriculum Steering Committee Member
- 2013-2018, BSU Institutional Review Board Member
- 2016, *Integrative Learning in the Core and Departments*. With Maura Rosenthal, Ruth Slotnick, Laura McAlinden and Jordon Barkalow. CARS May Celebration, BSU.
- 2016, *Engaged Student Learning Pedagogy in STEM Courses*. With Ed Brush, Stephen Waratuke and Jeffrey Williams. CARS May Celebration, BSU.
- 2016, [Nunkatessett Greenway online mapping application](#) - integrated as a course project for GEOG 413: Applications in GIS, and later internship for student Eva Ratcliffe as part of the [Greenway Project](#) aimed at linking an existing network of land trails in Bridgewater and West Bridgewater into a contiguous natural recreation area.
- 2016, Workshop GIS Mapping for Climate, Weather and Atmosphere, BSU Center for the Advancement of STEM Education (CASE) Annual CASE Conference
- 2015-2016, Massachusetts Department of Higher Education, MassTransfer STEM Disciplinary Segment Leader. Focus: Community Colleges and 4-year institutions to develop a STEM block for Community College transfer students.
- 2015, Bridgewater Town Planning Smart Growth Zoning Overlay District Act (Chapter 149 of the Acts of 2004, codified as M.G.L. chapter 40R) project - integrated as a course project for GEOG 413: Applications in GIS, and later internship for student Matthew Ward.
- 2014, [Massachusetts Clean Energy Center Internship Program](#), provided [Brockton High School Science Teachers Professional Development GIS Workshop](#)
- 2014, BSU Internship Steering Committee Bartlett College of Science and Mathematics representative.
- 2014, BSU Geography Department Self-Study Report Co-Coordinator
- 2014, Pulaski Boulevard corridor revitalization planning project for Town of Bellingham Planning department - integrated as a course project for GEOG 413: Applications in GIS.
- 2013-2014, Co-coordinated GIS Minor and GIS Certificate programs with Dr. Madhu Rao
- 2013, BSU Learning Management System Selection Committee Member (to select new LMS for BSU)
- 2012, BSU Search Committee for new Dean of Graduate Studies
- 2008-2010, BSU Geography Department - Saturdays at Bridgewater and Fall Preview Day.
- 2007-2010, BSU Undergraduate Curriculum Committee Member
- 2008, BSU Center for Sustainability Summer Coordinator, 2008
- 2008, BSU Center for the Advancement of Research and Teaching Annual Conference. [Adventures in Online Assessment](#) Panelist.
- 2007-2009, BSU Center for the Advancement of Research and Teaching Advisory Board Member
- 2007-2008, BSU Center for Sustainability Faculty and Librarian Development Team Leader
- 2007, BSU Center for the Advancement of Research and Teaching Annual Conference. [Sustainability and Social Justice](#) Moderator.

## Professional Memberships

Northeast Arc Users

Soil and Water Conservation Society

New England Environmental Justice Research Network Associate

Society of Soil Scientists of Southern New England Associate

Association of American Geographers (AAG)  
New England and St. Lawrence Valley Region Chapter of the AAG

### **Manuscript and Textbook Review**

Journal of Arid Environments, Catena, Geoderma, Land Use Policy, Agriculture, Ecosystems & the Environment, African Journal of Agricultural Research, Applied Geography, Wiley Press, Oxford University Press.

### **Research Interests**

Soils geography and mapping, thermography, UAS (drone) applications to land use analysis and mapping, land change and sustainability, climate change effect on land change, environmental justice, renewable energy, STEM/Geography education