



JAMIE HOOVER

GIS FACULTY | GEOSPATIAL ECOLOGIST

BIO

I enjoy creating an open and dynamic active learning environment where geospatial science is accessible and students gain confidence through mastering applied skills. My research interests are in applied ecology, where I use a diverse toolset to explore patterns and processes at multiple spatial scales to provide better information for natural resource assessments, human impacts, and management. Through my research collaborations with the National Park Service, GIS agencies, and land trusts, I am able to assist students in gaining real-world experience to excel in the job market.

EDUCATION

- 2016** Ph.D., Ecology, Colorado State University, Fort Collins, CO
 Dissertation: Modeling plant hotspots in New Guinea and village-scale land change dynamics in Papua New Guinea
 Advisors: Stephen Leisz and Melinda Laituri
- 2012** M.S. Watershed Science, Colorado State University, Fort Collins, CO
 Thesis: Alpine wind speed and blowing snow trend identification and analyses.
 Advisor: Melinda Laituri
- 2001** B.A., Environmental Studies, University of Vermont, Burlington, VT

TEACHING EXPERIENCE

Full-time Faculty: Front Range Community College, Boulder County Campus, CO

Aug 2019 - Present

Courses developed and taught

- GIS 110 Intro to Cartography (online)
- GIS 235 Remote Sensing and Image Analysis
- GIS 312 Advanced Remote Sensing
- GIS 335 Geospatial Statistics
- GIS 280/289 Capstone/Internship

In development

- GIS 411 Hydrology Analysis with GIS
- GIS 412 Photogrammetry and Lidar

Lectures and Outreach

- Career Series Lectures: Best practices for a GIS specific resume, website, elevator pitch, and professional online profile.
- STEM GIS workshops: develop and run middle and high schools GIS education in underserved school districts.

GIS Center Coordination and Student Advising

- GeoEx Center Coordinator (co-PI, NSF funded): offer s students real-world geospatial projects with local partners in need of GIS services with the aim of reducing the employment barrier students face due to a lack of experience.
- Advise students on degrees, courses, job applications, and career opportunities.
- Direct internships for GeoEx Center projects and National Park Service research.

Instructor Education and Development

- Active Learning Institute and course redevelopment
- Teaching with Purpose: integrating teaching and learning strategies
- New Faculty Research project:
 - Geospatial writing: converting course objectives to resume skills
 - Qualitative and quantitative comparison of learning modes: online and in-person (in the same class session)

Graduate Teaching and Research Assistantships

Fall 2012; 2013	TA: Remote Sensing and Image Interpretation (NR323). Colorado State University, Fort Collins, CO
May 2012	TA: Advanced Remote Sensing for Vietnamese researchers. Colorado State University, Fort Collins, CO
2008-2012	RA: Create and manage the Geospatial Centroid @ CSU, Colorado State University, Fort Collins, CO
Oct 2010	TA: Short course on website design Geospatial Centroid, Colorado State University, Fort Collins, CO
Oct 2008	TA: Intro to GIS for High School teachers, Geospatial Centroid, Colorado State University, Fort Collins, CO

PROFESSIONAL EXPERIENCE

Aug 2019 - present	Full-time GIS Faculty: GIS Program, Front Range Community College, Boulder County Campus, Longmont, CO
Jan 2017 - Aug 2019	Spatial Ecologist: Water Resources Division, Natural Resources Stewardship and Sustainability, National Park Service, Fort Collins, CO
Jun - Dec 2014	Remote Sensing Analyst: Rangeland change detection - United States Geologic Survey, Moab, UT
Jun - Dec 2014	GIS Analyst: Streamflow mapping - Department of Civil Engineering, Colorado State University, Fort Collins, CO
May - Sep 2014	GIS Specialist: Alaska Estuary habitat mapping - Earth Systems Institute, Seattle WA & ColoradoView, Fort Collins, CO

PUBLICATIONS

Published or in press

- Hoover, J.D.**, S. Kumar, S. James, S.J Leisz, and M.E. Laituri (2017) Modeling Hotspots of Plant Diversity in New Guinea. *Tropical Ecology* 53 (3) 623-640. Full draft available (11 citations).
- Hoover, J.D.**, S.J. Leisz, M.E. Laituri (2017) Comparing and combining Landsat Satellite imagery and participatory data to assess land-use and land-cover change in a coastal village in Papua New Guinea. *Human Ecology* 45 (2), 251-264. Full draft available. (14 citations)
- Hoover, J.D.**, N. Doesken, K. Elder, M.E. Laituri, and G.E. Liston (2014) Alpine wind speed and blowing snow trend identification and analysis. *Journal of Applied Meteorology and Climatology*, 53 (3) 676-693. Full draft available (10 citations).
- Saleeby, S.M., W.R. Cotton and **J.D. Fuller*** (2011) The Cumulative Impact of Cloud Droplet nucleating Aerosols on Orographic Snowfall in Colorado. *Journal of Applied Meteorology and Climatology*, 50 (3) 604-625. Full draft available (48 citations). *surname change.

In revision, review or preparation

- Derek M. Schook, D.M, Friedman, J.M, **Hoover, J.D.**, Rice, S.E, Thaxton, R.E, Cooper, D.J. (in review Ecohydrology) Riparian forest decline initiated by streamflow diversion then amplified by atmospheric drought.
- Hoover J.D.**, and Penrod, N.H., (in prep for *Journal of Great Lakes Research*) Multi-scale and -relief approach to BRESS modeling and the integration into the Coastal and Marine Ecological Classification Standard.
- Laituri, M.L., Allegretti, A.M., Luizza, M., **Hoover, J.D.**, (in prep) A critique of Participatory mapping and how equity is defined, demonstrated and practiced.
- Friedman, J., **Hoover, J.D.**, Thaxton (in prep) River geomorphology change and Cottonwood decline in Theodore Roosevelt National Park.

SOURCES OF FUNDING

Funding total: \$217,000

- 2020 Cooperative Ecosystem Services Unit (CESU) with National Park Service for three bathymetric mapping projects:
Habitat maps for Sleeping Bear Dunes National Lakeshore (\$22,000)
Intertidal habitat mapping Golden Gate and Point Reyes National Parks (\$50,000);
Topo-bathymetric digital elevation models for 10 National Parks (\$20,000)
- 2017 Great Lakes Benthic Mapping, National Park Service internal funding agreement with Midwest Region (\$125,000)

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Graduate Student funding: \$8,550

- 2013 Center for Collaborative Conservation grant and fellowship (\$5,000) - Colorado State University
- 2013 Graduate School Professional Development Grant (\$1050) - Colorado State University
- 2013 Ph.D. Scholar (\$1000) - Information Science and Technology Center, Colorado State University
- 2012 Graduate Student Scholarship (\$1500) - GIS Colorado

PRESENTATIONS

Hoover, J.D., Glase, J., Lafrancois-Moraska, B, (2021) Status of Benthic Habitat Mapping at Sleeping Bear Dunes National Lakeshore. Greatlakes Mapping Symposium, February 2021.

Hoover, J.D. Participatory mapping methods in Papua New Guinea. Spatial Methods in Conservation course, Guest Lecture, Colorado State University, Fort Collins, CO. March 2020.

Hoover, J.D., "Benthic Mapping and Other Neat-o projects at the National Park Service". Northern Colorado GIS Professional meet-up. Greeley, CO. May 2019.

Hoover, J.D., and D. Schook. "Surviving, Not Thriving: Cottonwood Assessments in Great Basin National Park". International Association for Landscape Ecology Conference Fort Collins, CO. April 2018.

Ziegler, T., **Hoover, J.D.**, and M. Wood. "Harmful Algal Blooms across Ocean and Coastal National Parks". US Symposium on Harmful Algae, Baltimore. November 2017.

Hoover, J.D., S Litschert, and C. Ownby. "Estuarine habitat Modeling in Southeast Alaska" GIS in the Rockies, Denver University, CO. September 2013.

Hoover, J.D. and S. Leisz. "Conservation of tropical lowland forests of Papua New Guinea: Is there hope?" GIS Day at Colorado State University, Fort Collins, CO. November 2012.

Hoover, J.D. and S. Leisz "Land change in Papua New Guinea: How much does subsistence agriculture contribute? Ecological Society for America Portland, OR 2012.

Hoover, J.D., K. Elder, M. Laituri, G. Liston. Alpine wind speed and blowing snow trend identification and analysis. Front Range Student Ecology Symposium, Fort Collins, CO. February 2010.

Fuller, J.D.*, and S. Linn. "Geospatial Science in Higher Education Institutions", GIS in Colorado Higher Education Summit, Colorado State University, Fort Collins, CO September 2009. *surname change.