

Marguerite Madden, Abbreviated CV

POSITION: Professor and Director
Center for Geospatial Research (CGR),
Department of Geography, The University of Georgia
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EDUCATION:

B.A.	1979	State University of New York, Plattsburgh	Biology
M.A.	1984	State University of New York, Plattsburgh	Biology
Ph.D.	1990	The University of Georgia, Athens	Ecology

EMPLOYMENT HISTORY:

1981-1982 National Wetlands Inventory Analyst, State Univ. of New York
1985-1990 Graduate Research Assistant, CRMS, Geography Dept., Univ. of Georgia
1990-2005 Research Scientist, CRMS, Geography Dept., Univ. of Georgia
2005-2008 Associate Professor and Director, CRMS, Geography Dept., Univ. of Georgia
2008-Present Professor and Director, CRMS/CGR, Geography Dept., Univ. of Georgia

RESEARCH INTERESTS: GIScience, including remote sensing, geographic information systems (GIS), spatio-temporal analysis, geovisualization and geographic object-based image analysis, as applied to landscape-scale biological/physical processes and human-impacts on the environment.

MAJOR ADVISOR FOR POST DOCS/STUDENTS: Since appointed faculty in 2005, 10 Postdoctoral Researchers, 27 Ph.D. and 21 MS/MA. Currently major advisor for 4 Ph.D. and 1 MS students.

SELECTED HONORS AND PROFESSIONAL SERVICE:

Member, Mapping Science Committee, National Academies of Sciences, Engineering and Medicine (2021-2024)
Fellow Award, International Society for Photogrammetry and Remote Sensing (2020)
Lifetime Achievement Award, American Society for Photogrammetry and Remote Sensing (2020)
NASA Silver Achievement Medal, Awarded by Maj. Jim Bridenstine, Director, National Aeronautics and Space Administration, "For excellence in developing future scientific leaders in the use of NASA's Earth Science data to enhance decision making for societal benefit." (2018)
International Society for Photogrammetry and Remote Sensing (ISPRS), Chair, Working Group IV/6, SDI: Internet of Things and Spatial Decision Support (2016-2020)
International Society for Photogrammetry and Remote Sensing (ISPRS), The ISPRS Foundation Chief-Financial-Officer and Executive Board Member (2011-2020)
International Society for Photogrammetry and Remote Sensing (ISPRS), Council 2nd Vice President (2012-2016)
Special Achievements in Geographic Information Science (SIG) Awards received by the Center for Geospatial Research (CGR), ESRI, Inc. (2009 and 2015).
International Society for Remote Sensing and Mapping Science (ISPRS), Technical Commission IV, President, Geodatabases and Digital Mapping (2008-2012)
American Society for Photogrammetry and Remote Sensing, Conference Management Award (2014), SAIC Estes Memorial Teaching Award (2011), Presidential Citations (2011, 2009, 2005), Outstanding Service Award (2010), Fellow Award (2010), Col. Claude H. Birdseye President's Citation (2008)
American Society for Photogrammetry and Remote Sensing, Vice-President, President-Elect, President and Past-President (2005-2009)
International Society for Photogrammetry and Remote Sensing (ISPRS) Willem Schemerhorn Award by The Netherlands Society for Earth Observation and Geo-Informatics (2004)

SELECTED EDITORIAL ACTIVITIES:

Madden, M. (Ed.) 2009. *The Manual of Geographic Information Systems*, American Society for Photogrammetry and Remote Sensing, Bethesda, Maryland, 62 chapters, 1330 p.
Associate Editor, *ISPRS Journal of Photogrammetry and Remote Sensing* (2004-2005)
Associate Editor for *Wetlands*, Journal of the Society of Wetlands Scientists (1997 - 2000)
Member, Editorial Boards, *ISPRS International Journal of Geo-Information*, *Geo-Spatial Information Science*, *International Journal of Health Geographics*.

SELECTED PUBLICATIONS: (from +90 under Madden and Remillard, *Advisees noted with **)

Bernardes*, S., M. Madden, A. Walker, A. Knight*, N. Neel, A. Mendki, D. Bhanderi, A. Guest, S. Healy* and T. Jordan, 2020. Emerging geospatial technologies in environmental research, education and outreach. *Geosfera Indonesia*, *Accepted 1 November 2020*.

Mertzlufft, C.*, M. Madden, N. Gottdenker, J. Velasquez Runk, A. Saldana, S. Tanner, J. Calzada and X. Yao, Landscape disturbance impacts on *Attalea butyracea* palm distribution in central Panama: Implications for Chagas disease transmission, *International Journal of Health Geographics*, submitted 07/12/220, *accepted November 2020* 19(58): 17 p. <https://doi.org/10.1186/s12942-020-00244-y>

Johnson Gaither, C., A. Aragon*, M. Madden, S. Alford, A. Wynn and M.R. Emery, 2020. “Black Folks Do Forage”: Examining wild foods gathering in Southeast Atlanta Communities, *Urban Forestry & Urban Greening*, 56: 9 p., *Accepted 15 October 2020*. <https://doi.org/10.1016/j.ufug.2020.126860>

Çöltekin, A., I. Lochhead, M. Madden, S. Christophe, A. Devaux, A., C. Pettit, O. Lock, S. Shukla, L. Herman, Z. Stachoň, P. Kubiček, D. Snopkova, S. Bernardes and N. Hedley, 2020. Extended reality in spatial sciences: A review of research challenges and future directions, Invited Paper in, Li, S., S. Zlatanova, M.A. Brovelli and M. Sester (Eds.) Special Issue, State-of-the-Art in Spatial Information Science, *ISPRS International Journal of Geo-Information*, *Accepted (12 July 2020)* 9(7), 439, 29 p, <https://doi.org/10.3390/ijgi9070439>

Presotto, A.*, C. Remillard*, N. Spagnoletti, R. Salmi, M. Verderane, K. Stafford, R. Rodrigues dos Santos, M. Madden, D. Fragaszy, E. Visalberghi, P. Izar, 2020. Rare bearded capuchin (*Sapajus libidinosus*) tool-use culture is threatened by land use changes in northeastern Brazil, *International Journal of Primatology*, 20 pp. *Accepted (7 May 2020)*, DOI 10.1007/s10764-020-00166-3

O’Hare*, N., C.R. Carroll, L. Mu, T.R. Jordan and M. Madden. 2020. Amphibian distribution in the Georgia Sea Islands: Implications from the past and for the future. *Journal of North American Herpetology*, 2020(1): 18-28.

Bernardes*, S., and M. Madden, 2020. Characterization of Canopy Anisotropies over a Forested Area using a Multispectral Imager Integrated into an Unmanned Aerial System: the Dronimeter Experiment. *Earth and Space Science Open Archive*. DOI:10.1002/essoar.10502014.1

Bernardes*, S., A. Howard*, A. Mendki, A. Walker, D. Bhanderi, L. Le, A. Tsao and M. Madden, 2020. Innovative Technologies in Teaching and Learning: Incorporating Recent Developments in Virtual and Augmented Reality into Active Learning at the University of Georgia. *Earth and Space Science Open Archive*. doi:10.1002/essoar.10502013.1

Aragon, A.*, C. Johnson Gaither, M. Madden and S. Goodrick, 2019. The “Efficiency Concern”: Exploring wildfire risk on Heir’s Property in Macon-Bibb County, Georgia, United States of America, *Human Ecology Review*, 25(2): 51-68. DOI: 10.22459/HER.25.02.2019.05

Madden, M., T. Jordan, S. Bernardes*, C. Goetcheus, K. Olson and D. Cotten, 2019. Small Unmanned Aerial Systems (sUAS) and Structure from Motion (SfM) for Identifying, Documenting and Monitoring Cultural and Natural Resources, In, J.B. Sharma (Ed), *Applications of Small Unmanned Aircraft Systems: Best Practices and Case Studies*, CRC Press Taylor & Francis Group, Boca Raton, 179-209.

Bernardes*, S., L. Manglass*, S.T. Bacchus* and M. Madden, 2019. Analysis and extent of Santa Fe River flooding in North Florida attributed to rainfall and wind damage associate with Hurricane Irma, *Journal of Geosciences and Environmental Protection*, 7:253-279. DOI: 10.4236/gep.2019.711019

- Presotto*, A., R. Fayrer-Hosken, C. Curry and M. Madden, 2019. Spatial mapping shows that some African Elephants use cognitive maps to navigate the core but not the periphery of their home ranges, *Animal Cognition*, 22(2): 251-263. <https://doi.org/10.1007/s10071-019-01242-9>
- Singh, K.K., J. Gray, M. Madden and R.K. Meentemeyer. 2018. The managed clearing: An overlooked landcover type in urbanizing regions? *PLOS ONE*, 13(2). <https://doi.org/10.1371/journal.pone.0192822>
- Xu, W. *, S. Bernardes*, S. Bacchus* and M. Madden. 2018. Management of panther habitat should consider influence of aquifer fractures on ecosystem and habitat suitability for panther dens. *J. of Geoscience and Environmental Protection*, 6:184-208. Madden, M., T. Jordan, S. Bernardes, D. Cotten, N. O'Hare and A. Pasqua, 2015. Unmanned Aerial Systems (UAS) and Structure from Motion (SfM) Revolutionize Wetlands Mapping, Invited_Chapter 10, In, R. Tiner, M. Lang and V. Klemas (Eds), *Remote Sensing of Wetlands: Applications and Advances*, CRC Press Taylor & Francis Group, Boca Raton, Florida, 10: 195-222.
- Madden, M., T. Jordan, M. Kim, H. Allen and B. Xu, 2009. Integrating remote sensing and GIS: From overlays to GEOBIA and geo-visualization, In, M. Madden (Ed-in-Chief), *The Manual of Geographic Information Systems*, American Society for Photogrammetry and Remote Sensing, Maryland, 701-720.
- Madden, M., 2004. Remote sensing and GIS methodologies for vegetation mapping of invasive exotics, (*Invited Paper*), *Weed Technology*, 18:1457-1463.
- Madden, M., D. Jones and L. Vilchek, 1999. Photointerpretation key for the Everglades Vegetation Classification System, *Photogrammetric Engineering and Remote Sensing*, 65(2): 171-177.
- Welch, R., M. Madden and R. Doren, 1999. Mapping the Everglades, *Photogrammetric Engineering and Remote Sensing*, 65(2): 163-170.
- Remillard, M. and R. Welch. 1993. GIS technologies for aquatic macrophyte studies: II Modeling applications. *Landscape Ecology*, 8(3): 163-175.
- Remillard, M. and R. Welch. 1992. GIS technologies for aquatic macrophyte studies: I. Database development and changes in the aquatic environment. *Landscape Ecology*, 7(3): 151-162.
- Welch, R., M. Remillard and J. Alberts, 1992. Integration of GPS, remote sensing and GIS techniques for coastal resource management. *Photogrammetric Engineering and Remote Sensing*, 58(11): 1571-1578.
- Welch, R., M. Remillard and R. Slack. 1988. Remote sensing and geographic information system techniques for aquatic resource evaluation. *Photogrammetric Engineering and Remote Sensing*, 54(2): 177-185.
- Bogucki, D.J., G.K. Gruending and M. Madden. 1980. Remote sensing to monitor water chestnut growth in Lake Champlain. *J. of Soil and Water Conservation*. 35(2): 79-81.