

Nima Madani

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Professional Emphasis

- Terrestrial carbon cycle modeling.
- Remote sensing and Geographical Information System data production and processing.
- Species distribution modeling.
- Statistics and Geo-statistics modeling.

Education

PhD of Systems Ecology **2011-2017**

The University of Montana, USA

PhD student of applied remote sensing **2009-2010**

UPM, Malaysia

Transferred to University of Montana

MA of Environmental Planning and Management **2006-2008**

University of Tehran, Iran

BA of Natural Resource Engineering-Environment **1998-2001**

University of Allame Mohades Noori, Iran

Professional Experience

- Postdoctoral fellow. Jet propulsion Laboratory. 2018-present.
- Research Scientist. NASA SMAP L4C product validation and maintenance. NTSG, College of Forestry & Conservation, University of Montana (2016-2018).
- Graduate Research Assistant. NTSG, College of Forestry & Conservation, University of Montana (2011-2015).

Teaching responsibility

- Guest lecturer: Integrated Systems Ecology- BIOS534- NRS532

Publications

- **Madani, N.**, J.S. Kimball, A. P. Ballantyne, D. L.R. Affleck, P. M. van Bodegom, P. B. Reich, J.Kattge, A. Sala, M. Nazeri, M. O. Jones, M. Zhao, S. W. Running. (2018). Future global productivity will be affected by plant trait response to climate. *Nature Scientific Reports*, 18.

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- Media: <http://news.umt.edu/2018/03/030518plan.php>
- **Madani, N.**, J. S. Kimball, L. A. Jones, N. C. Parazoo, K. Guan (2017). Global Analysis of Bioclimatic Controls on Ecosystem Productivity Using Satellite Observations of Solar-Induced Chlorophyll Fluorescence. *Remote Sensing*. 9 (530).
- **Madani, N.**, J. S. Kimball, S. W. Running. (2017). Improving global gross primary productivity estimates by computing optimal light use efficiency using flux tower data. *J. Geophys. Res. Biogeosciences*, 122.
- Jones, L., Kimball, J., Reichle, R., **Madani, N.**, Glassy, J., Ardizzone, J. et al. (2017). The SMAP Level 4 Carbon Product for Monitoring Ecosystem Land-Atmosphere CO₂ Exchange. *IEEE Trans.* 99.
- M. Fonseca, L. Anderson, E. Arai, Y. Shimabukuro, H. Xaud, M. Xaud, **N. Madani**, F. Wagner, L. Aragão. (2017). Climatic and anthropogenic drivers of northern Amazon fires during the 2015/2016 El Niño event. *Ecological Applications*. 1628. DOI: 10.1002/eap.1628
- **Madani, N.**, J. S. Kimball, D. L. R. Affleck, J. Kattge, J. Graham, P. M. van Bodegom, P. B. Reich, and S. W. Running (2014). Improving ecosystem productivity modeling through spatially explicit estimation of optimal light use efficiency, *J. Geophys. Res. Biogeosciences*, 119 (9).
- **Madani, N.**, Kimball, J., Nazeri, N., Kumar, L. Affleck, D. L. R (2016). Remote sensing derived fire frequency, soil moisture and ecosystem productivity explain regional movements in emu over Australia. *PlosOne*, 11, 1-11.
- Nazeri, M., **Madani, N.**, Kumar, L., Salman Mahiny, A., & Kiabi, B. H. (2015). A geostatistical approach to model Asiatic cheetah, onager, gazelle and wild sheep shared niche and distribution in Turan biosphere reserve-Iran. *Ecological Informatics*, 29, 25–32.
- Nazeri, M., Jusoff, K., **Madani, N.**, Mahmud, A. R., Bahman, A. R., & Kumar, L. (2012). Predictive Modeling and Mapping of Malayan Sun Bear (*Helarctos malayanus*) Distribution Using Maximum Entropy. *PLoS ONE*, 7(10).
- Nazeri, M., Jusoff, K., Rani, B., **Madani, N.** 2010. Modeling the potential distribution of wildlife species in the Tropics. *World Journal of Zoology*. 5, 225-231.

Conferences

- Jones, L., **Madani, N.**, Kimball, J., Reichle, R., Ardizzone, J. 2017. Effects of Recent Regional Soil Moisture Variability on Global Net Ecosystem CO₂ Exchange. AGU Fall Meeting. New Orleans.
- Kimball, J., Jones, L., Kunding, T., **Madani, N.**, Reichle, R., Ardizzone, J. 2018. Level 4 Carbon (L4C) Status and Updates. Science Team Meeting. JPL. Pasadena CA.
- **Madani, N.**, Kimball, J., Jones, L., Glassy, J., Reichle, R., Ardizzone, J. 2017. Level 4 Carbon (L4C): Results & Status. SMAP Cal/Val workshop. June 20-22. Amherst, MA.
- Kimball, J., Jones, L., Glassy, J., **Madani, N.**, Reichle, R. 2017. Monitoring ecosystem atmosphere CO₂ exchange response to recent (2015-2016) climate variability using the SMAP L4 carbon product. IGARSS 2017. Fort Worth, Texas.
- Kimball, J., Jones, L., Joe Glassy, **Madani, N.**, Reichle, R. 2017. Monitoring ecosystem atmosphere CO₂ exchange response to recent (2015-2016) climate variability using the SMAP L4 carbon product. IGARSS. Texas. USA.

- Jones, L., Kimball, J., **Madani, N.**, Reichle, R., 2017. Synthesis of Soil Moisture Active Passive (SMAP) Mission Observations for Monitoring Global Net Ecosystem CO₂ Exchange Variability: SMAP Level 4 Carbon (L4C). NACP Ameriflux Meeting in Bethesda, MD.
- Jones, L., Kimball, J., **Madani, N.**, Reichle, R., Glassy, J., Ardizzone, J., Colliander A. 2016. The SMAP level 4 carbon product for monitoring terrestrial CO₂ exchange. SMAP Cal/Val workshop #7. New York City, NY.
Jones, L., Kimball, J., **Madani, N.**, Reichle, R., Glassy, J., Ardizzone, J., 2016. The SMAP level 4 carbon product for monitoring terrestrial ecosystem-atmosphere CO₂ exchange. IGARSS conference Beijing-China.
- **Madani, N.**, Kimball, J. S., & Running, S. W. (2014). Spatially Explicit Estimation of Optimal Light Use Efficiency for Improved Satellite Data Driven Ecosystem Productivity Modeling. In *American Geophysical Union Fall Meeting*. San Francisco, Calif. (Invited talk).
- Nazeri, M., Jusoff, K. **Madani, N.** 2010. Habitat models as a research gap in biodiversity conservation in tropical rain forest of Southeast Asia. International congress on environmental modeling and software modeling for environmental sake. Fifth biennial meeting, Ontario, Canada.
- **Madani, N.**, Nazeri, M. 2008. An overview on habitat evaluation techniques. For first conference of Environmental management engineering: University of Tehran.
- Torabian, A., **Madani, N.**, Nazeri, M. 2007. Chlorinated water by –product risk assessment: cancer risk of chloroform in Tehran drinking water, Proceedings from the Third International Conference on Environmental Science and Technology, Houston, Texas, USA.
- **Madani, N.**, Nazeri, M. 2007. Degradation of wildlife and habitats as a result of misunderstanding of the concept of sustainable development. First conference of the environment day. University of Tehran.
- Nazeri, M., **Madani, N.** 2007. Environmental impact assessment of constructed dam on Choghakhor wetland. Wetland and sustainability seminar in Malaysia (oral presentation).
- **Madani, N.**, Tohidi, T. 2007. Human activities affecting function and values of Band Ali Khan wetland. Wetland and sustainability seminar in Malaysia 2007 (oral presentation).

Data sets and Technical Documents

- Kimball, J., Jones, L., Glassy, J., Stavros, N., **Madani, N.**, Reichle, R., Jackson, T., Colliander, A., 2015. Soil Moisture Active Passive (SMAP) Project Calibration and Validation for the L4_C Beta-Release Data Product. National Snow & Ice Data Center.
- **Madani, N.**, Kimball, J., Global Optimum light use efficiency and related GPP data. NTSG-UM http://files.ntsg.umd.edu/data/Optimum_LUE.
- Kimball, J., Jones, L., Glassy, J., Stavros, N., **Madani, N.**, Reichle, R., Jackson, T., Colliander, A. 2016. Soil Moisture Active Passive Mission L4_C Data Product Assessment (Version 2 Validated Release). Global Modeling and Assimilation Office, NASA Goddard Space Flight Center.

Meetings and workshops

- American geophysical unions' fall meeting. Dec 14-18, 2015. San Francisco California.
- Google Earth Engine workshop. 2015. San Francisco California.

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Honors & Awards

- Robert L. Dennee Scholarship. University of Montana 2016. \$1200.
- IOP outstanding reviewer award for the journal of Environmental Research Letters 2017.
- Google Earth Engine Scholars grant (2015). ~\$2000.
- George E. Bright Memorial Scholarship. College of forestry and conservation. University of Montana (2015). \$2125.
- Bertha Morton Scholarship, University of Montana (2015). \$3000.
- PhD research assistantship, University of Montana (2011-2015). ~\$100k.
- Master's degree full scholarship, University of Tehran (2006). ~\$12k.
- First rank in Master's degree national entrance exam (out of ~700 contesters) - University of Tehran (2006).
- University of Tehran, Student research fund (2007). \$300
- University of Tehran, Scholarship for participating in conference (2007). \$550.
- University of Tehran, Best poster award in the first conference of the environment day (2008).

Professional Memberships

- Member of Advancing Science, Serving Society (AAAS). Member number: 20324323.
- Member of American Geophysical Union.
- Member of American Meteorological Society

Services

Journal Review: International journal of Remote Sensing, Remote Sensing, JGR Biogeosciences, PlosOne, Environmental Research Letters, Nature-Scientific Reports, Austral Ecology, Ecological indicators, Axios, Journal of Wildlife Management and Wildlife Monographs.

Proposal Review: NASA Carbon Cycle and Ecosystems Review Panel (2018).