FRANCISCO MUÑOZ ARRIOLA

School of Natural Resources and Department of Biological Systems Engineering, University of Nebraska-Lincoln, 620 Hardin Hall Lincoln, NE 68583, United States.

EDUCATION

Ph.D. - Duke University, Civil and Environmental Engineering, 2007
Committee members: R. Avissar, A. P. Barros, A. Porporato, M. Medina Jr., and H. P. Gavin
M.Sc. - Universidad Autónoma de Baja California, Coastal Oceanography, 1997
B.Sc. - Universidad Autónoma de Baja California, Oceanography, 1994

APPOINTMENTS

School of Natural Resources and Department of Biological Systems Engineering, University of Nebraska-Lincoln, Associate Professor, since 2019

Department of Biological Systems Engineering and School of Natural Resources, University of Nebraska-Lincoln, Assistant Professor, 2013-2019

Luiz Quiroz College of Agriculture, Department of Biosystems Engineering, Universidade do Sao Paulo, Adjunct Professor, since 2018

California Water Science Center-San Diego, United States Geological Survey, Volunteer for Science, 2010-2018

Scripps Institution of Oceanography, Division of Climate, Atmospheric Science, and Physical Oceanography, University of California, San Diego, Research Associate, 2010-13

Department of Civil and Environmental Engineering, University of Washington, Research Associate, 2007-2010

Instituto de Investigaciones Oceanológicas, Universidad Autónoma de Baja California, Research Scientist, 1999

Departamento de Investigación Científica y Tecnológica, Universidad de Sonora, Researcher, 1996-1998

AWARDS AND HONORS

College of Law – Nebraska Governance and Technology Center, Faculty Fellow, 2020
College of Engineering - Annual Recognition Teaching Award, 2020
Inclusion and Diversity Faculty Fellow, 2018-2019
College of Engineering Research - Annual Recognition Award, 2018
Parent Association and Teaching Council-Contributions to Students Award, 2015
AMS/NSF-Summer Policy Colloquium Fellow, 2014
Dougherty Water for Food Global Institute, Faculty Fellow, Recipient, since 2014
CONACYT, Sistema Nacional de Investigadores, México, 2010-2012

SELECTED ARTICLES

Sarzaeim[1], P., F. Muñoz-Arriola, and D. Jarquin (2022). *Climate and genetic data enhancement using deep learning analytics to improve maize yield predictability.* Journal of Experimental Botany

Wilson, A., R. Cifelli, F. Munoz-Arriola, J. Giovannettone, J. Vano, T. Parzybok, A. Dufour, J. Jasperse, K. Mahoney, and B. McCormick (2021). *Efforts to Build Infrastructure Resiliency to Future Hydroclimate Extremes.* In Geo-Extreme 2021, pp. 222-233.

Munoz-Arriola, F., T. Abdel-Monem, and A. Amaranto[1] (2021). *Common pool resource management: assessing water resources planning processes for hydrologically connected surface and groundwater systems. Hydrology.*

Kumar, A.[1], RAAJ Ramsankaran[3], Luca Brocca, and Francisco Munoz-Arriola (2021). *Expanding Machine learning modeling for improving near-real-time satellite-based rainfall-runoff forecasts in India.* Journal of Hydrology.

Ramanathan, A.L.R., S. Chidambaram, M.P. Jonathan, M.V. Prasana, P. Kumar, and F. Munoz-Arriola (2021). *ENVIRONMENTAL RESILIENCE AND TRANSFORMATION IN TIMES OF COVID-19: CLIMATE CHANGE EFFECTS ON ENVIRONMENTAL FUNCTIONALITY.* Elsevier.

Amaranto[1], A., F. Pianosi, D. Solomatine, G. Corzo-Perez, and F. Munoz-Arriola (2020). *Sensitivity Analysis of Hydroclimatic Controls of Data-driven Groundwater Forecast in Irrigated Croplands.* Journal of Hydrology.

Ou[2], G., F. Munoz-Arriola, D. Uden[2], D. Martin and C. Allen (2018). *Climate change implications for irrigation and groundwater in the Republican River Basin, USA.* Climatic Change.

Livneh, B., T. Bohn, D. Pierce, F. Munoz-Arriola, B. Nijssen, R. Vose, D. Cayan, L. Brekke (2015): *A spatially comprehensive, hydrometeorological data set for Mexico, the U.S., and southern Canada 1950-2013.* Nature - Scientific Data,

Frans, C, Istanbulluoglu, E., M. Vimal, F. Munoz-Arriola and D. P. Lettenmaier (2013). *On runoff trends in the Upper Mississippi River Basin: influences of climate and land use.* Geophysical Research Letters. 40.

Tang, Q., E. Vivoni, F. Munoz-Arriola, and D. P. Lettenmaier (2012). *Predictability of evapotranspiration patterns using remotely-sensed vegetation dynamics during the North American monsoon.* Journal of Hydrometeorology, 13(1), 103-121.

Sheffield, J, E. Wood and F. Munoz-Arriola (2010). *Long-term regional estimates of evapotranspiration for Mexico based on downscaled ISCCP data.* Journal of Hydrometeorology, 11(2), 253-275.

Munoz-Arriola, F., D.P. Lettenmaier, Zhu, C., and R. Avissar (2009). *Water resources sensitivity of the Rio Yaqui Basin, México to agriculture extensification under multi-scale climate conditions.* Water Resources Research, 45, W00A20,

PROFESIONAL ACTIVITIES AND MEMBERSHIPS

AMS 2022 Annual Conference, co-Chair for Food and Security, 2022.
Associate editor, Groundwater (National Groundwater Association, Wiley), since 2020
GEO-Extreme (ASCE International Conference in Geo-extremes proceedings), 2020-21
Ingenieria del Agua (a journal of the International Water Association publishing), since 2019
AMS Water Resources Committee, member (since 2015)
Breakthrough Recruitment for Inclusive Diversity Growth and Excellence.UNL, contributor, 2022.
Faculty of Color Symposium, co-organizer, 2020 and 2021
Task Force on Diversity and Inclusion Report, College of Engineering, UNL, 2020.

American Geophysical Union, member (since 2005); *American Meteorological Society*, member (since 2008); *American Association for the Advancement of Science*, member (2010-2018); *European Geosciences Union*, member (since 2017); *International Association of Hydrogeologists, member (*since 2019); *American Society of Agricultural and Biological Engineers*, member (since 2017).