EFI FOUFOULA-GEORGIOU (PhD, NAE)

UCI Distinguished Professor and Henry Samueli Endowed Chair in Engineering
Department of Civil and Environmental Engineering
Courtesy appointment: Department of Earth System Science
Associate Dean for Research and Innovation, The Henry Samueli School of Engineering
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EDUCATION

May 1985 **University of Florida,** Doctor of Philosophy in Environmental Engineering
Dec. 1982 **University of Florida,** Master of Science in Environmental Engineering
July 1979 **National Technical University of Athens, Greece,** Diploma in Civil Engineering

POSITIONS HELD

2018-	Henry Samueli Endowed Chair in Engineering, UCI
2017- 2024	Associate Dean for Research and Innovation, Henry Samueli School of Engineering, UCI
2017 -	Professor (courtesy appointment), Department of Earth System Science, School of Physical Sciences, UCI
2016 -	Distinguished Professor, Department of Civil and Environmental Engineering, Henry Samueli School of Engineering, University of California, Irvine
2016 -	Professor Emerita, University of Minnesota
2012 - 2021	Presidential Appointee to the Nuclear Waste Technical Review Board (NWTRB), Special Government Employee (SGE)
2008 - 2016	Joseph T. and Rose S. Ling Endowed Chair, Department of Civil Engineering, University of Minnesota, Minneapolis
2007 -	Honorary Professor, Sichuan University, China
2002 - 2016	McKnight Distinguished Professor, University of Minnesota
2008 - 2013	Director, National Center for Earth-surface Dynamics, University of Minnesota
1999 - 2003	Director, St. Anthony Falls Laboratory, University of Minnesota
1996 - 2016	Professor, Department of Civil Engineering, University of Minnesota
1989 - 1996	Associate Professor, Department of Civil Engineering, University of Minnesota
1986 - 1989	Assistant Professor, Department of Civil & Construction Engineering, Iowa State University, Ames
1985 - 1986	Research Associate, St. Anthony Falls Hydraulic Laboratory, University of Minnesota
1984 - 1985	Graduate Research Assistant, Department of Civil Engineering, University of Washington, Seattle
1980 - 1983	Graduate Research Assistant, Dept. of Environmental Engineering, University of Florida, Gainesville
1979 - 1980	Engineer, River Management and Urban Planning Division, Ministry of Public Works, Athens, Greece

ACADEMY MEMBERSHIP

2022	Elected Fellow of the American Academy of Arts and Science (AAA&S)
2018	Elected Member of the National Academy of Engineering (NAE)
2003	Elected Member, European Academy of Sciences (EurASc)

SOCIETY HONORS AND AWARDS

2023	International Hydrology Prize, Dooge Medal, International Association of Hydrologic Sciences (IAHS), World Meteorological Organization (WMO), and UNESCO
2023	Award for Lifetime contributions to Precipitation Research and Community Service, 14th International Precipitation Conference.
2022	Robert E. Horton Medal, American Geophysical Union (AGU)
2022	Elected Fellow of the American Academy of Arts and Science (AAA&S)
2021	Lifetime Achievement Award, Community Surface Dynamics Modeling System (CSDMS)
2020	Edison Lecturer, University of Notre Dame
2019	Walter Langbein Lecturer, American Geophysical Union (AGU)
2018	Elected Member of the National Academy of Engineering (NAE)
2018	Elected Fellow, American Association for the Advancement of Science (AAAS)
2017	Lorenz Straub Award Distinguished Lecturer, University of Minnesota
2017	Hydrologic Sciences Medal, American Meteorological Society (AMS)
2017	Hydrology Days Award, Colorado State University
2016	Robert E. Horton Lecturer in Hydrology, American Meteorological Society (AMS)
2015	NASA Group Achievement Award – GPM Post-Launch Team
2012	Presidential Appointee to the Nuclear Waste Technical Review Board – NWTRB
2012	Kiesel Distinguished Lecturer, University of Arizona
2009	Borland Distinguished Lecture Award, Hydrology Days
2008	Joseph T. and Rose S. Ling Chair in Environmental Engineering, UMN
2007	Hydrologic Sciences Award, American Geophysical Union (AGU)
2007	Honorary Professor, Sichuan University, China
2007	Moore Distinguished Lecturer, University of Virginia
2005	Fellow, American Meteorological Society (AMS)
2003	Elected Member, European Academy of Sciences
2002	Distinguished McKnight University Professor, University of Minnesota
2002	John Dalton Medal, European Geophysical Society
1999	Fellow, American Geophysical Union
1998	Fellow, Minnesota Supercomputer Institute
1995	Bush Sabbatical Fellow, University of Minnesota
1989	Presidential Young Investigator Award, National Science Foundation
1989	Editor's Citation for Excellence in Refereeing, Water Resources Research
1989	Certificate of Commendation for Contributions in Water Resources National Association of Water Institute Directors and National Association of State Universities
1988	Travel award from NATO (to present two lectures at the NATO Advanced Study Institute on Recent Advances in the Modelling of Hydrological Systems, Sintra, Portugal)
1986	National Science Foundation Engineering Initiation Award
1974	Outstanding Student Fellowship, National Technical University of Athens, Greece
1973	Second Honor, Nationwide Competition in Mathematics, Hellenic Mathematical Society

TEACHING EXPERIENCE

Engineering Hydrology and Hydraulics (senior level)
Surface Water Hydrology (graduate level)
Stochastic Hydrology (graduate level)
Stochastic Geomorphology (graduate level)
Water Resources Systems (graduate level)
Hydrology and Hydrologic Design (senior level)
Advanced Topics in Hydrology (graduate level)
Multi-scale Analysis of Geophysical and Engineered Systems (graduate level)

PROFESSIONAL SOCIETY MEMBERSHIP
American Geophysical Union (AGU)
European Geosciences Union (EGU)
American Meteorological Society (AMS)
American Association for the Advancement of Sciences (AAAS)
American Society of Civil Engineers (ASCE)
American Water Resources Association (AWRA)
Institute of Mathematical Statistics (IMS)
Society of Women Engineers (SWE)

PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE
Elected positions

- Elected Councilor, American Meteorological Society (AMS), 2020-2022
- President, Hydrology section, American Geophysical Union, (AGU): 2012-2014 President-elect; 2014-2016 President; 2016-2018 past-President
- Elected member, AGU Council Leadership Team, 2015-2017
- Elected Chair, Board of Directors, Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI), 2007-2009
- Elected Trustee, Board of Trustees, University Corporation for Atmospheric Research (UCAR), 2007-2008, 2009-2010

National Academies/ National Research Council Committees

- Member, International Search Nominating Committee (SNC), National Academy of Engineering, 2024-
- Second Vice Chair, Section 12, National Academy of Engineering (NAE), 2023-
- Member, Advisory Committee for Science Engineering Technology (TEC), American Academy of Arts and Science, 2023-
- Member, NRC Committee on "Modernizing Probable Maximum Precipitation Estimation", National Academies Press, https://nap.nationalacademies.org/catalog/27460/modernizing-probable-maximum-precipitation-estimation, 2023-2024
- Member, Board of Atmospheric Sciences and Climate (BASC), National Academies, second term, 2022-2025
- Deputy Editor, *PNAS Nexus*, 2021-2022
- Member, Committee on Membership, National Academy of Engineering (NAE), 2021-2022
- Chair, Peer Committee of Section 12, National Academy of Engineering (NAE), 2021-2022
- Vice-chair, Peer Committee Section 12, NAE, 2020-2021
- Co-chair, AGU Townhall on Federal Meteorological Enterprise Coordination for Advancing Services, Interagency Council for Advancing Meteorological Services (ICAMS), Dec., 2021
- Panelist, Earth System Predictability Research & Development Roundtable, NAS, 2020
- Member, Board of Atmospheric Sciences and Climate (BASC), National Academies, 2019-2021
- Member, European Research Council (ERC), Advanced Grants Expert Panel, 2019-
- Member, Community Advisory Committee for Water Prediction (CAC-WP), 2018-
- Board member, The Water Institute of the Gulf, 2019-
- Co-chair, Integrated Hydro-terrestrial Modeling (IHTM) workshop, a multi-agency initiative, 2019-2020
- U.S. Delegate to the International Association of Hydrological Sciences (IAHS), appointed by the NAS President to represent NAS at the 27th Scientific Assembly of IUGG (International Union of Geodesy and Geophysics), Montreal, Canada, July, 2019
- Member, U.S. National Committee for the International Union of Geodesy and Geophysics (IUGG), and U.S Representative to the International Association for Hydrologic Sciences (IAHS), 2016-

- Member, Panel on Global Hydrological Cycle and Water Resources, National Research Council Committee on Decadal Survey of Earth Observations from Space, 2016-2018
- Contributor to the Water Chapter of the Decadal Survey report "Thriving on our Changing Planet: A Decadal Strategy for Earth Observation from Space", NRC National Academies Press Report, https://doi.org/10.17226/24938, 2016-2018
- Member, NRC Committee on Earth Science and Applications from Space (CESAS), Board of Earth Sciences and Resources, NAS, 2012-2016; re-appointed: 2017-2018
- Member, NRC Mapping Sciences Committee, Board of Earth Sciences and Resources, National Academies of Sciences, 2013-2017
- Member, NRC Committee on "Challenges and Opportunities in the Hydrologic Sciences", 2010-2012
- Contributor to the report "Challenges and Opportunities in the Hydrologic Sciences", National Academies Press, https://doi.org/10.17226/13293, 2012
- Member Water Science and Technology Board (WSTB), National Academies, appointed member, 2000-2004
- Member, NRC Committee on "Progress and Priorities on US Weather Research and Research to Operations Activities", 2009-2010
- Member, NRC Committee on "Assessment of the NWS Advanced Hydrologic Prediction System", National Research Council, 2003-2005
- Member, NRC, Committee on "Risk-based Analysis Methods for Flood Damage Reduction Studies," National Research Council, 1998-2000

Service on National/International Advisory Boards and Committees

- NAE, 2nd Vice Chair Section 12: Special Fields and Interdisciplinary Engineering, 2024-2025
- NAE, Section 12 Representative to the International Exploratory Search Committee, 2024-2025
- Member, American Academy of Arts and Science, evaluation member of the Rumford Prize for contributions to the fields of heat and light (Physics, Chemistry, Biochemistry, Engineering, Astronomy and Astrophysics), 2024
- Member, Water Committee to assist in developing a "Freshwater signature program" for Virtual Institutes funded by Schmidt Future Philanthropic Organization, 2023-2024
- Panelist, Water Panel, Science Philanthropy Alliance membership meeting, Tucson, March 2023
- Member, Review committee for a faculty position on "Hydraulic Engineering and River Research with a focus on Environmental Fluid Dynamics", Universität für Bodenkultur Wien – BOKU, Vienna, 2023
- Member, Langbein Lecture Selection Committee, AGU, 2020-2023
- Member, NAS appointee as US National Representative to the International Association of Hydrologic Sciences (IAHS), International Union of Geodesy and Geophysics (IGG), second term, 2020-2024
- Member, Board of Directors, Water Institute of the Gulf, 2020–2025
- Member, AMS International Academic Volunteering Committee, 2020- 2025
- Member, Task Force, Climate Science and Services, American Meteorological Society, 2022-2023
- Member, Executive committee, NSF AI Institute I-GUIDE, University of Illinois Urbana-Champaign, 2020-2024
- Advisory Committee, Earth and Biological Sciences (EBSD) Directory, Pacific Northwest National Laboratory (PNNL), 2016 – 2020, second term: 2021-2025
- Panelist, Challenges of Climate Change, Hellenic Institute for Advanced Studies (HIAS), 2022.
- Panelist, NAS, Earth System Predictability Forum, 2021
- Moderator/Co-chair, AGU Townhall meeting, Federal Meteorological Enterprise Coordination for Advancing Services, ICAMS, 2021
- Panelist, Colorado River Hydrology Research Symposium, 2020
- NAE, Section 12, Peer Review Committee, member, vice-chair, chair, 2020- 2023
- Program reviewer, AAAS annual meeting, session reviewer for Dynamic Ecosystems, 2020
- Member, Review Panel of the University of Nevada Reno Graduate Program in Hydrology, 2021
- KAUST, Proposal Reviewer Appointment, 2021

- Panelist, NAS Roundtable on "Earth System Predictability Research and Development", March 2020
- Member, Princeton Advisory Committee of the Department of Civil and Environmental Eng., 2020
- Co-chair and co-organizer, "Integrated Hydro-Terrestrial Modeling (IHTM): Development of a National Capability", An interagency workshop, hosted by NSF, Sept. 2019
- Chair, Hydrological Sciences Medal Committee, American Meteorological Society, 2018--2021
- Member, Hydrology Research Awards (HRA) Committee, American Meteorological Society, 2018--2021
- Member, Awards Oversight Committee (AOC), American Meteorological Society, 2018--2021
- Member, Advisory Committee, "Proposal for a Center of Excellence (CoE) for NEOM Research at KAUST" (NEOM is a mega-city project), Office of Sponsored Research, London, March, 2018
- Technical Advisory Committee, CUAHSI workshop to "Envision a terrestrial modeling system to encode and formalize the knowledge from NSF WSC/INFEWS projects", 2019 --
- Reviewer and Advisory Panel of Experts, European Research Council (ERC), Brussels, 2018 --2019
- Panelist, AGU-IUGG Centennial Symposium on "Disaster Science: Risk Reduction, Resilience, Response and Recovery", Washington DC, Dec. 2018
- Panelist, Water Policy, Water and Society Technical Committee, AGU, Washington DC. Dec., 2018
- Reviewer, NAS Report on "Future Water Needs for the Nation: Water Science and Research at the U.S. Geological Survey", Water Science and Technology Board, (WSTP), NAS, 2018
- Scientific Session Proposal Reviewer, Annual AAAS Meeting, 2018
- Community Advisory Committee for Water Prediction (CAC-WP), National Water Center, NOAA, 2018-
- Member, NSF Panel on CAREER awards, 2017--2018
- Vice chair of Hydrologic Sciences Medal, American Meteorological Society (AMS), 2017- 2018
- Member, Suomi Award Committee, American Meteorological Society, 2017- 2018
- Steering Committee, Community Surface Dynamics Modeling Systems (CSDMS), 2016 – 2020
- Advisory Committee, Annual Reviews of Earth and Planetary Sciences, Invited Member, 2017
- Member, Faculty Advisory Council, Institute on the Environment, Univ. of Minnesota, 2016 – 2017
- Stockholm Water Prize (SWP) Nominating Committee, Swedish Academy of Sciences, 2012-2018
- NASA Science Advisory Council -- Earth Sciences Subcommittee, 2011-2018
- Member, Hydrology Research Awards (HRA) Committee, American Meteorological Society, 2015-2016
- Member, Search committee for CUAHSI president, 2016-2017
- Search Committee, Executive Director of CUAHSI, 2015-2016
- NOAA Science Advisory Council -- Ecosystem Science and Management Working Group, 2011-2013
- NSF, Advisory Council for Geosciences Directorate, 2008-2011
- USGCRP (U.S. Global Change Research Program) Water Cycle Initiative Study Group (1999-2000)
- Helmholtz Research Programme on "Sustainable Water Resources Management and Perspective towards a Water Science Alliance", Helmholtz Center for Environmental Research, Leipzig, Germany, Advisory Review Committee, 2009
- Argentinean Water Resources Advisory Board, Minister for Planning and Agriculture, 2010-2013
- EU (European Union)– Framework 7 Environmental Infrastructure and Collaboratories, Advisory Panel, Brussels, 2008
- NCAR, Member Nominating Committee, 2015- 2018
- Chair, AGU Fellows Committee - Hydrology section, 2012-2014
- Advisory Board, NSF Center, Sustainable Environment Actionable Data (SEAD), 2012-2016
- Scientific Council, CIMA Research Foundation, Savona, Italy, 2012-2016
- Review Editor, Third National Climate Assessment Report, Water Chapter, 2013
- Chair, Search committee, Editor-in-Chief of Water Resources Research, AGU, 2012
- Member, AGU Publications Committee, 2010-2012
- Advisory Board, EU Project DRIHM (Distributed Infrastructure for Hydrometeology), 2011-2015
- Advisory Board, NSF Project NGCHC (Northern Gulf Coastal Hazards Collaboratory), 2011-2013
- APLU (Association of Public and Land-grant Universities), Board of Atmospheric Sciences and Climate (BOAC), Executive Committee, 2009-2012

- NCAR, Science Advisory Board, Research Applications Laboratory, (2005-2012)
- NASA/PMM, Precipitation Science Team (2007-present)
- Science Museum of Minnesota Water Planet Program, Science Advisory Board (2005-2010)
- Chair, Horton Medal Committee, AGU (2008-2010)
- Panelist, Water section, Midwest Climate Change Assessment Forum, Chicago, 2010
- EGU, European Geophysical Union, Member, Scientific Committee, Plinius Conference (2007)
- University of Illinois, Urbana, Scientific Advisory Board, Hydrologic Synthesis Activities (2007-2011)
- NSF, Proposal Evaluation Panel, Cyberinfrastructure for Environmental Observatories (2006)
- AGU Fellows Nomination Committee, Hydrology Section (2005-2010)
- CUAHSI, Member, Executive Committee (2003-2010)
- Chair, CUAHSI, Board of Directors (2003-2010)
- UCAR/URC Liaison with the Research Applications Laboratory of NCAR (2003-2006)
- CUAHSI, Search Committee for Executive Director (2003)
- UCAR/NCAR, University Relations Committee (URC) (2000-2007)
- U.S. Weather Research Program Science Steering Committee (1999-2003)
- AGU, Fellow Nomination Committee (1999-2002)
- University of Western Australia, Review Committee of Center for Water Research (CWR) (1999)
- NASA, Tropical Rainfall Measuring Mission (TRMM) Science Team (1998-present)
- European Commission, Proposal Evaluation Panel, Water and Climate Programme (1997)
- NOAA, Proposal Evaluation Panel, GCIP (1995, 1997)
- Global Energy and Water Cycle Experiment, Chair, Precipitation Principal Research Area (1994)
- NSF, Proposal Review Panel, Hydrologic Sciences (1993-1996)
- AGU, Chair, Precipitation Committee, Hydrology Section (1992-1996)

Editorial Duties

- Deputy Editor, *PNAS Nexus*, 2021-
- Editorial Board, Geography Compass (2006-2012)
- Guest Editor, Water Resources Research (2005)
- Editorial Board, Nordic Hydrology (2003-present)
- Editorial Board, Advances in Water Resources (2000-2012)
- Associate Editor, Hydrologic and Earth Systems Science, European Geophysical Society (1997-2010)
- Associate Editor, Journal of Geophysical Research-Atmospheres, AGU (1997-2005)
- Editor, Journal of Hydrometeorology, AMS (1999-2001)
- Associate Editor, Water Resources Research (1992-1995)

Initiatives/Meetings/Conference Organization

- Co-organizer, Inaugural NAE Early Engineering Career Convocation (E2C2), Annual NAE meeting, Beckman Center, Irvine, February 2025
- Co-Organizer, Integrated Hydro-terrestrial Modeling (IHTM) workshop, NSF, Oct. 2019
- Organizer, Special Collection of papers for IPC12, American Meteorological Society (AMS), 2018-2020
- Reviewer, Special session proposlas for Dynamic Ecosystems, AAAS Annual meeting, 2021
- Organizer, Union session on "Data Analytics Innovations for Climate and Earth Surface Processes", AGU meeting, San Francisco, Dec. 2019
- Organizer, 12th International Precipitation Conference (IPC12), Irvine, CA, (200+ attendees), June 2019
- Organizer, "Data Analytics for Climate and Earth (DANCE)" Workshop, Arrowhead, CA, March 2019
- Organizer, First "LIFE-ECOPOTENTIAL" meeting on ecosystem management of protected areas, University of California, Irvine, November 2016
- Founder of the "Sustainable Deltas 2015" initiative endorsed by ICSU (International Council of Scientific Unions) and launched internationally, 2015
- Founder of the Paul Witherspoon Mid-career award, Hydrology Section of AGU (while President),

2014 - now

- Founder of the "Virtual Hydrologists" project, Hydrology Section of AGU (while President), 2015- http://abouthydrology.blogspot.com/2016/04/the-virtual-hydrologists-project.html
- Founder and co-organizer, NCED Summer Institute on Earth-surface Dynamics (SIESD), 2009 -- annually
- Founder and co-organizer, Working group on "Stochastic Transport and Emergent Scaling in Earth-surface Processes" (STRESS), Lake Tahoe, 2007, 2009, 2011, 2013
- Founder of "A Sip of Science: engaging the public in climate and environmental science", Minneapolis, 2009-
- Organizer, Special session on "Predictability of Extreme Hydrometeorological Events", EGU meeting, Vienna, April, 2009
- Organizer, Special session on "Stochastic Transport and Emergent Scaling on Earth's Surface", EGU meeting, Vienna, April, 2009
- Organizer, Special session on "Rainfall Downscaling", EGU Plinius Conference, Cyprus, July 2008
- Organizer, AGU Fall meeting, Special session on "Stochastic Transport and Emergent Scaling in Earth-surface Processes", Dec. 2008
- Organizer, Special session on "Precipitation Downscaling: Recent advances and hydro-geomoprhologic impacts", EGU Plinius Conference, Lake Como, Italy (2007)
- Organizer, Special session on "Stochastic Geomorphology: The role of variability and uncertainty in prediction", American Geophysical Union Spring Meeting, Baltimore (2006)
- Organizer, Special session on "Geomorphological organization and its physical basis," American Geophysical Union Fall Meeting, San Francisco (2003)
- Organizer, "Stream Restoration Workshop", NCED-NAS sponsored workshop to define challenges on the science and practice of stream restoration, Minneapolis (2003)
- Organizer, 5th International Conference on Precipitation, Elounda, Crete, Greece (1995)
- Organizer, Special session on "Applications of Wavelet Transforms in Geophysics," American Geophysical Union Spring Meeting, Baltimore (1993)
- Organizer, Special session on "Self-Similarity in Hydrologic Processes: Identification, Estimation, and Use in Modeling/Measurement/Prediction" American Geophysical Union Fall Meeting, San Francisco (1991)
- Organizer, Conference on "Operational Precipitation Estimation and Prediction", American Meteorological Society Annual Meeting, Anaheim (1990).
- Organizer, Special session on "Multisensor observations and space-time rainfall modeling," American Geophysical Union Spring Meeting, Baltimore (1989)
- Organizer, Special session on "Extreme rainfall and hydrologic design," American Geophysical Union Fall Meeting, San Francisco (1989)

University of Minnesota (UMN) Selected Committees

- International Research Task Force, VP's Office, University of Minnesota, 2014-2016
- Provost's Grand Challenges Research Strategy Team, 2015-2016
- Search Committee, Director, Institute on the Environment, 2014-2015
- Institute on the Environment, Advisory Council, 2014 - 2016
- Search Committee, Gibson chair, Dept. of Earth Sciences, 2014-2015
- Search Committee, Transportation faculty, Civil Engineering, 2014-2015
- Science Advisory Committee, VP's Office, 2007- 2010
- Distinguished McKnight University Professors, Selection Committee, 2007-2012
- Chair, Search committee for Founding Director of the Institute on the Environment, 2008
- Provost's Advisory Committee on the new Institute on the Environment, University of Minnesota, 2006
- Science and Scholarly Advisory Board, University of Minnesota, 2006 - 2010
- Search Committee for Department Chair, Department of Geology and Geophysics, 2005

- Environmental Sciences and Engineering Initiative, Strategic Planning Committee, Institute of Technology, University of Minnesota, 2005
- Search Committee for a faculty hire, Department of Ecology and Evolutionary Behavior, University of Minnesota, 2003
- Promotion and Tenure Committee, Institute of Technology, University of Minnesota, 2002-2005
- Chair, Search committee for 3 new faculty hires, Department of Civil Engineering, University of Minnesota, 1999
- Chair, Research Fellow Selection Committee, Minnesota Supercomputer Institute (MSI), 1998- 2001
- Director of Graduate Studies, Department of Civil Engineering, University of Minnesota, 1997- 1999

University of California, Irvine (UCI) Selected Committees

- Member, Search Committee, Integrated Urban Design, Civil and Environ. Engineering, 2021-2022
- Member, Review of Irvine Materials Research Institute (IMRI), 2021-2022
- Member, Working Group, Climate Change and Environmental Sustainability, 2021-2022
- Member, UCI Distinctions Committee, UCI, 2018 – 2021
- Member, Working Group, Imagining Research and Creative Activity post—COVID, 2021-2022
- Member, Associate Deans Council, 2017 - present
- Member, CalIT2 Division Council, 2017 – present
- Member, Engineering Council, Samueli School of Engineering, 2017 - present
- Member, Internal Advisory Board, Institute for Clinical and Translational Science (ICTS), 2017-2020
- Member, Search Committee for faculty in Water, Dept. of Civil and Env. Engr., 2018-2019
- Member, Search Committee for faculty in Fluids, Dept. of Mech. and Aerospace Engr., 2018-2019
- Member, Search Committee for faculty in Water, Dept. of Civil and Env. Engr., 2017-2018
- Chair, Search Committee for faculty in Water, Dept. of Civil and Env. Engr., 2016-2017

Journal Reviewer: Water Resources Research (WRR), Journal of Hydrology (JH), Journal of Applied Meteorology (JAM), International Journal of Mathematical Geology, ASCE Journal of Hydraulic Engineering, ASCE Journal of Water Resources Management and Planning, ASCE Journal of Hydrologic Engineering, Canadian Meteorological and Oceanographical Society Journal, Journal of Stochastic Hydrology and Hydraulics, Hydrology and Earth System Sciences, Journal of Geophysical Research, Journal of Hydrometeorology (JHM), Journal of Climate, Nordic Hydrology, Hydrologic Processes, Physical Review E, Geophysical Review Letters (GRL), Reviews of Geophysics, Journal of Geophysical Research-Atmospheres (JGR-Atmo), Journal of Geophysical Research-Earth Surface (JGR-ES), Proceedings of the National Academies of Science (PNAS), Science, Nature Geosciences, Nature Climate Change, Nature Communications, Scientific Reports.

Proposal reviewer: National Science Foundation (NSF), European Union (EU, Horizon 2020), U. S. Geological Survey (USGS), National Aeronautics and Space Administration (NASA), Environmental Protection Agency EPA), National Oceanic and Atmospheric Administration (NOAA), Swiss National Science Foundation, Swedish National Science Foundation, Australian Science Foundation, Austrian Science Foundation, National Environmental Research Council (NERC) UK.

REFEREED JOURNAL PUBLICATIONS

(Italics indicates student or post-doc)

2025

256. *Li, R., C. Guilloteau,* and **E. Foufoula-Georgiou**, Added value of environmental variables for satellite precipitation retrieval: A temporal co-evolution perspective and a machine learning integration assessment, *Geophysical Research Letters*, in review, 2025.

255. *Broaddus, C.*, J., Nienhuis, D. Edmonds, and *E. Foufoula-Georgiou*, Processes controlling wave-influenced delta growth and the role of fine-grained cohesive sediment, *JGR – Earth Surface*, in revision, 2025.

254. *Bui, T., M. Ramirez, D. Lafarga*, Y.T. Song, E. Foufoula-Georgiou, and S. Shen, XSLICE: An Efficient Visualization and Diagnosis Tool for 4-Dimensional Climate Dynamics, *J. Atmospheric and Oceanic Technology (JTECH)*, in revision, 2025.

253. Broaddus, C., J. Nienhuis, D. Edmonds, and **E. Foufoula-Georgiou**, Processes controlling wave-influenced delta growth and the role of fine-grained cohesive sediment, *J. Geophysical Research – Earth Surface, in revision, 2025.*

252. Mohammed, A., A. Ebtehaj, E. J. Cohen, and **E. Foufoula-Georgiou**, On elevated risk of Rain on Snow in high-latitude coastal areas of North America, *Geophysical Research Letters*, to appear, 2025.

251. Guilloteau, C., G. Kerrigan, K. Nelson, G. Migliorini, P. Smyth, R. Li, and **E. Foufoula-Georgiou**, A generative diffusion model for probabilistic ensembles of precipitation maps conditioned on multi-sensor satellite observations, *IEEE TRGS, https://doi.org/10.1109/TGRS.2025.3548518,* 2025

2024

250. *Li, R., C. Guilloteau,* P. Kirstetter, and **E. Foufoula-Georgiou**, Understanding the error patterns of multi-satellite precipitation products during the lifecycle of precipitation events for diagnostics and algorithm improvement, *J. Hydrology, https://doi.org/10.1016/j.jhydrol.2024.132610,* 2024

249. *Gao, Y., C. Guilloteau,* **E. Foufoula-Georgiou,** C. Xu, X. Sun, and J. Vrugt, Soil-moisture-cloud-precipitation feedback in the lower atmosphere from functional decomposition of satellite observations, *Geophysical Research Letters, https://doi.org/10.1029/2024GL110347,* 2024

248. Liu, T., J. Randerson, Y. Chen, D. Morton, E. Wiggins, P. Smyth, E. Foufoula-Georgiou, R. Nadler, and O. Nevo, Systematically tracking the hourly progression of large wildfires using GOES satellite observations, *Earth System Science Data*, 6, 1395–1424, doi:10.5194/essd-16-1395-2024, 2024

247. *Desai, A., C. Guilloteau,* W. Heilman, J. Charney, N. Skowronski, K. Clark, M. Gallagher, **E. Foufoula-Georgiou**, and T. Banerjee, Investigating fire–atmosphere interaction in a forest canopy using wavelets, *Boundary Layer Meteorology, 190(21), https://doi.org/10.1007/s10546-024-00862-0,* 2024.

246. Dabberdt, W, D. Baumgardner, R. Bornstein, G. Carmichael, R. Clark, J. Collett, H. Fernando, E. Foufoula-Georgiou, D. Niyogi, M. Ramamurthy, A. Robock, and J. Winkler, The Global Partners Program: A new international volunteer opportunity for AMS members, *Bull. Amer. Meteor. Soc.*,, 105, 47-49, doi:10.1175/BAMS-D-23-0049.1 , 2024

245. *Guilloteau, C.,* **E. Foufoula-Georgiou,** Life Cycle of Precipitating Cloud Systems from Synergistic Satellite Observations: Geostationary Cloud Tracking and GPM Microwave Measurements, *Journal of Hydrometeorology*, doi:10.1175/JHM-D-23-0185.1, 2024.

244. *Engsig, M.,* A. Tejedor, Y. Moreno, **E. Foufoula-Georgiou** and C. Kasmi, DomiRank Centrality reveals structural fragility of complex networks via node dominance, *Nature Communications*, 15,56, doi:10.1038/s41467-023-44257-0, 2024.

2023

243. *Guilloteau, C.,* P. V.V. Le and **E. Foufoula-Georgiou**, Preserving extremes in satellite quantitative precipitation estimates: A matter of scale, *International Geoscience and Remote Sensing Symposium, IGARSS*, doi:10.1109/IGARSS52108.2023.10281499, 2023.

242. *Guilinger, J.J.,* **E. Foufoula-Georgiou**, A.B. Gray, J.T. Randerson, P. Smyth, N.C. Barth and M.L. Goulden, Predicting postfire sediment yields of small steep catchments using airborne LiDAR differencing, *Geophysical Research Letters, 50, doi:10.1029/2023GL104626,* 2023.

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PAPERS PRESENTED IN CONFERENCES

There are over 500 papers that have been presented in major international conferences including American Geophysical Union (AGU), European Geosciences Union (EGU), Chapman Conferences, International Association of Hydrologic Sciences, International Conference on Precipitation, etc. Abstracts are published and available on the web.

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Singh, Arvind. PhD, 2011 December, **"***Statistical Mechanics of Sediment Transport*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Ganti, Vamsi. PhD, 2012, "*Non-local Theories of Geomorphic Transport: From Hillslopes to Rivers to Deltas to the Stratigraphic Record",* Adv. E. Foufoula-Georgiou, Department of Civil and Environmental Engineering, University of Minnesota.

Mohammad Ardeshir Ebtehaj, PhD, 2013, "*Hydrometeorological Inverse Problems via Sparse Regularization: Advanced Frameworks for Rainfall Downscaling, Fusion, and Assimilation",* Adv. E. Foufoula-Georgiou, Department of Civil and Environmental Engineering, University of Minnesota.

Jon Czuba, PhD, 2016, "*A network-based framework for hydro-geomorphic modeling and decision support with application to space-time sediment dynamics, identifying vulnerabilities, and hotspots of change*", Adv. E. Foufoula-Georgiou, Department of Civil and Environmental Engineering, University of Minnesota.

Jon Schwenk, PhD, 2016, "*Meandering rivers: interpreting dynamics from planform geometry and the secret lives of migrating meanders*", Adv. E. Foufoula-Georgiou, Civil and Environmental Engineering, University fo Minnesota.

Mohammad Danesh-Yazdi, PhD, 2017, "*Inferring the impacts of anthropogenic changes and catchment spatial heterogeneity on the water cycle dynamics and transport time scales*", Adv. E. Foufoula-Georgiou, Department of Civil and Environmental Engineering, University of Minnesota.

Zeinab Takbiri, PhD, 2018, "*Multi-Satellite Remote Sensing of Land-Atmosphere Interactions: Advanced Data-Driven Methodologies for Passive Microwave Retrievals of Flood and Precipitation*", Adv. E. Foufoula-Georgiou (UCI), co-adv. M. Ardeshir Ebtehaj (UMN), Department of Civil and Environmental Engineering.

Antonios Mamalakis, PhD, 2020, *"Links of climate variability and change with regional hydroclimate: Predictability, trends, and physical mechanisms on seasonal to decadal scales*", Adv. E. Foufoula-Georgiou (UCI), Department of Civil and Environmental Engineering.

Lawrence Vulis, PhD, 2023, "*Exploring the hydromorphology of arctic river deltas for process understanding and for projecting their response to climate change,"* Adv. E. Foufoula-Georgiou (UCI), Department of Civil and Environmental Engineering.

SPONSORED RESEARCH
(PI – Principal Investigator)

NSF–Presidential Young Investigator Award (lead PI)	1990-1995	$500,000
NSF–Critical Systems and Engineering Program (lead PI)	1988-1989	$100,000
NSF–Hydrologic Sciences Program (lead PI)	1992-1994	$150,000
NASA–Tropical Rainfall Measuring Mission (TRMM) (lead PI)	1992-1995	$230,000
NASA–Global Change Fellowship for P. Kumar (lead PI)	1992-1994	$90,000
NASA- Global Change Fellowship for S. Perica (lead PI)	1994-1996	$90,000
NASA- Global Change Fellowship for V. Venugopal (lead PI)	1996-1999	$90,000
NOAA–Office of Global Programs (lead PI)	1994-1997	$220,000
NSF–Hydrologic Sciences Program (lead PI)	1996-1999	$200,000
NASA–Land Surface Hydrology Program (lead PI)	1996-1999	$290,000
NOAA/NASA–Joint Program on GCIP (lead PI)	1997-2000	$330,000
NSF–U.S. Weather Research Program (lead PI)	1997-2000	$330,000
NASA–Tropical Rainfall Measuring Mission (TRMM) (lead PI)	1998-2001	$300,000
NASA–Land Surface Hydrology (lead PI)	2001-2003	$360,000
NASA–Land Surface Hydrology (co-PI with F. Porté-Agel)	2001-2005	$350,000
NSF–Mesoscale Meteorology Program (lead PI)	2001-2004	$286,000

NSF–Hydrologic Sciences Program (lead PI)	2002-2006	$262,000
NASA–Land Surface Hydrology Program (lead PI)	2002-2005	$232,700
NASA–Global Precipitation Mission (GPM) (lead PI)	2003-2006	$300,000
NSF–Science and Technology Center (NCED) (co-lead PI and co-Director, University of Minnesota)	2002-2012	$40 million (20 PIs)
NSF–Hydrology Program (co-PI with F. Porte-Agel)	2005-2008	$300,000
NASA – Land Surface Hydrology (co-PI with F. Porté-Agel)	2005-2008	$320,000
NASA – Global Precipitation Mission (GPM) (lead PI)	2006-2009	$340,000
NSF – Cyber Enabled Discovery and Innovation (lead PI)	2008-2011	$300,000
NSF – Geomorphology and Land-use Dynamics (lead PI)	2008-2011	$230,000
NSF – Mathematics in Geosciences (Geomorphic Transport Laws) (lead PI)	2008-2011	$150,000
NASA – GPM data fusion with emphasis on extremes (lead PI)	2009-2012	$280,000
UMN - Institute on the Environment – U of Minnesota (lead PI)	2011-2013	$200,000
Google Earth Engine (lead PI)	2011-2013	$200,000
NSF – Mathematics in Geosciences (Environmental Transport on river networks) (lead PI)	2009-2013	$230,000
NASA - Climate Change Education Partnership (co-PI)	2011-2013	$420,000
NASA -- Global Change Fellowship for M. Ebtehaj	2012-2015	$150,000
NASA – Towards the next generation of multi-sensor multi-scale precipitation fusion: a variational approach in the wavelet domain (GPM) (lead PI)	2013-2016	$415,000
NSF – Water Sustainability and Climate: Climate and human dynamics as amplifiers of natural change: a framework for vulnerability assessment and mitigation planning (lead PI)	2012-2017	$4.3 M ($2.3 U of M)
NSF – National Center for Earth Surface Dynamics NCED 2 (co-PI)	2012-2017	$3.5 M
NSF – Linked Institutions for Future Earth (LIFE) (lead PI)	2012-2017	$800,000
NSF – Belmont Forum: DELTAS (lead PI; 7 countries)	2013-2017	$2.0 M ($750K US)
NASA – Global Precipitation Program (lead PI)	2016-2019	$350,000
NSF – National Research Training at UCI (co-PI)	2017-2020	$2.5 M
NSF- TRIPODS+CLIMATE, Div. of Mathematical Sciences (DMS) (lead PI)	2018-2021	$300,000
NSF—Delta Channel Networks, Earth Sciences Div., Geomorphology and Land use Dynamics (GLD) Program (lead PI)	2018-2021	$335,000
NSF— Finest Time Resolution Dynamic Modeling, Engineering Directorate (co-PI)	2018-2021	$220,000
NASA- Earth Sciences Fellowship for L. Vulis (lead PI)	2018-2021	$310,000
NASA –Global Precipitation Measuring Mission (GPM) (lead PI)	2019-2021	$430,000
CA National Labs Fee and Los Alamos (student L. Vulis)	2021-2023	$150,000
NASA – Global Precipitation Measuring Mission (GPM) (lead PI)	2022-2025	$470,000
NASA - Dynamical Error Modeling and Uncertainty Quantification for Remotely-Sensed Atmospheric Variables (lead PI)	2023-2026	$450,000
NSF - Collaborative Research: Dynamic connectivity of river networks as a framework for identifying controls on flux propagation and assessing landscape vulnerability to change	2024-2027	$316,000

NSF - Expand AI2ES for 4D space-time organization of precipitation processes and extremes, visualization tools, and workforce development (lead PI)	2023-2027	$897,000
NASA- Quantifying and understanding the impacts of anthropogenic changes in fluvial sediment flux on the shorelines and channel networks of wave-dominated deltas – FINESST (funding for student C. Broaddus) (lead PI)	2023-2025	$150,000
NSF - CAIG: Data science frontiers in advancing predictive understanding of landscapes and erosional extremes under changing climatic scenarios (RISE-2425747) (lead PI)	2024-2027	$474,700
NSF - CAIG: Advancing Wildfire Science, Prediction, and Management with Machine Learning (RISE-2425748) (co-PI)	2024-2027	$889,200

Updated: April 2025