EFI FOUFOULA-GEORGIOU (PhD, NAE)

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

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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- 2023	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	UNESCO/IAHS/WMO International Hydrology Prize, Dooge Medal
2023	Award for Lifetime contributions to Precipitation Research and Community Service, 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
2019	Walter Langbein Lecture Award, American Geophysical Union (AGU)
2018	Elected Member, National Academy of Engineering (NAE)
2018	Elected Fellow, American Association for the Advancement of Science (AAAS)
2017	Hydrologic Sciences Medal, American Meteorological Society (AMS)
2017	Hydrology Days Award, Colorado State University
2016	Robert E. Horton Lecture Award, American Meteorological Society (AMS)
2015	NASA Group Achievement Award – GPM Post-Launch Team
2012	Presidential Appointee to the Nuclear Waste Technical Review Board – NWTRB
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
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

NAMED LECTURES

2023	Harleman Distinguished Lecture, Penn State University
2017	Lorenz Straub Award Distinguished Lecture, University of Minnesota
2020	Edison Distinguished Lecture, University of Notre Dame
2012	Kiesel Distinguished Lecture, University of Arizona
2007	Moore Distinguished Lecture, University of Virginia

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

- NAE, Co-organizer of Early Career Engineering Convocation (E2C2), National Academy of Engineering (NAE), 2024-
- NAE, Second Vice Chair/Vice Chair/Chair, Section 12, National Academy of Engineering (NAE), 2024-2025/ 2025-2026/ 2026-2027
- NAE, Section 12 Representative to the International Exploratory Search Committee, 2024-2025
- Member, Advisory Committee for Science Engineering Technology (SET), 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, Physical Sciences and Engineering, *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; second term 2022-2026
- Member, European Research Council (ERC), Advanced Grants Expert Panel, 2019-2021
- Member, Community Advisory Committee for Water Prediction (CAC-WP), 2018- 2021
- 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

- 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, Physical Sciences and Engineering, *PNAS Nexus* (2021- 2022)
- 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 proposals 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, Academies Forum Advisory Board, UC Irvine, 2025-
- Member, Search Committee for Dean of School of Physical Sciences, UC Irvine, 2025
- Chair, Honors Committee, Department of Civil and Environmental Engineering, 2025-
- Member, Faculty Review Committee, Hydrogen Blending Demonstration Project at UCI, 2024
- Chair & Member, Faculty Merit Review Committees, Department of Civil and Environmental Engineering, 2018-
- 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 - 2024
- Member, CalIT2 Division Council, 2017 – 2024
- Member, Engineering Council, Samueli School of Engineering, 2017 - 2024
- 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.

CO-AUTHORED REPORTS AS MEMBER OF NATIONAL COMMITTEES

Co-authored National Academies (NASEM) Reports

NASEM, Modernizing Probable Maximum Precipitation Estimation, 2024
NASEM, Thriving on our Changing Planet: A Decadal Survey for Earth Observation from Space, 2018
NASEM, Challenges and Opportunities in the Hydrologic Sciences, 2012
NASEM, When Weather Matters: Science and Service to Meet Critical Societal Needs, 2010
NASEM, Toward a New Advanced Hydrologic Prediction Service (AHPS), 2006
NASEM, Report on a Workshop on Predictability and Limits to Prediction in Hydrologic Systems, 2002
NASEM, Envisioning the Agenda for Water Resources in the Twenty-First Century, 2001
NASEM, Review of the USGCRP Plan for a New Science Initiative on the Global Water Cycle, 2001
NASEM, Risk Analysis and Uncertainty in Flood Danage Reduction Studies, 2000.

Co-authored Nuclear Waste Technical Review Board Reports to US Congress and the Secretary of Energy

NWTRB, Six Overarching Recommendations for How to Move the Nation's Nuclear Waste Management Program Forward, 2021.
NWTRB, Filling the Gaps: The Critical Role of Underground Research Laboratories in the US Department of Energy Geologic Disposal Research and Development Program, 2020.
NWTRB, Preparing for Nuclear Waste Transportation: Technical Issues That Need to Be Addressed in Preparing for a Nationwide Effort to Transport Spent Nuclear Fuel and High-Level Radioactive Waste, 2019.
NWTRB, Geologic Repositories: Performance Monitoring and Retrievability of Emplaced High-Level Radioactive Waste and Spent Nuclear Fuel, 2019.
NWTRB, Management and Disposal of U.S. Department of Energy Spent Nuclear Fuel**,** 2017.
NWTRB, Board Activities for the Period January 1, 2013 – December 31, 2015, 2016. NWTRB, Survey of National Programs for Managing High-Level Radioactive Waste and Spent Nuclear Fuel: Update 2016.
NWTRB, Technical Evaluation of the U.S. Department of Energy Deep Borehole Disposal Research, 2016.
NWTRB, Designing a Process for Selecting a Site for a Deep-Mined, Geologic Repository for High-Level Radioactive Waste and Spent Nuclear Fuel: An Overview and Summary, 2015.
NWTRB, Designing a Process for Selecting a Site for a Deep-Mined, Geologic Repository for High-Level Radioactive Waste and Spent Nuclear Fuel: Detailed Analysis, 2015NWTRB, Evaluation of Technical Issues Associated with the Development of a Separate Repository for U.S. Department of Energy-managed High-level Radioactive Waste and Spent Nuclear Fuel**,** 2015.
NWTRB, Board Activities for the Period January 1, 2008 – December 31, 2012, 2014.
NWTRB, Review of U.S. Department of Energy Activities to Preserve Records Created by the Yucca Mountain Repository Project, 2013.

EDITED BOOKS AND SPECIAL COLLECTIONS

Foufoula-Georgiou, E. and P. Kumar, (editors), *Wavelets in Geophysics*, Academic Press, 373 pages, 1994.

Foufoula-Georgiou, E. and C. Stark (editors), "Stochastic Transport and Emergent Scaling on Earth's surface", A special collection of papers, *J. Geophysical Research – Earth Surface*, 2009

Foufoula-Georgiou, E. and A. Tsonis (editors), "Space-time Variability and Dynamics of Rainfall", A special collection of papers, Reprinted from *J. Geophysical Research -- Atmospheres*, 1997.

REFEREED JOURNAL PUBLICATIONS
(Italics indicates student or post-doc)

2026

266. Guilloteau, C. and **E. Foufoula-Georgiou,** Data-driven estimation of optimal spatial filters for the identification of forced temporal signals in climate data, *Journal of Climate*, in review, 2026.

265. *Gao, Y.* , R. Li, H. Chen, **E. Foufoula-Georgiou,** and J. Vrugt, Systematic Underestimation of Nonlinear and Synergistic Soil Moisture-Precipitation Coupling in Convection-Permitting Models, *Journal of Geophysical Research – Atmospheres*, in revision, 2026.

264. Engsig M., A. Tejedor, Y. Moreno, C. Kasmi, G. W. Johnson, P. Smyth, J. T. Randerson, and **E. Foufoula-Georgiou**, Designing Effective Wildfire Mitigation Strategies via Connectivity-Driven Fuel-Break Placement, *PNAS Nexus*, in review, 2026.

263. Hong, Y., V. Lakshimi, **E. Foufoula-Georgiou,** S. Sorooshian, J. Famiglietti, V. Maggioni, E. Anagnostou, S. Zhu, M. Chen, and S. Yan, Comment on Beven (2025) "the Seven Ages of Hydrology": Recognizing the Remote Sensing Era of Hydrology (1990s -), *Hydrologic Processes, https://doi.org/10.1002/hyp.70560,* 2026.

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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.

INVITED PRESENTATIONS

There are over 200 invited presentations in meetings, special guest lectures, plenaries, and University colloquia.

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Kumar, Praveen. MS, 1989 April*, "A Stochastic Simulation Model for Space-time Description of Rainfall"* Adv. E. Foufoula-Georgiou, Department of Civil Engineering, Iowa State University.

Griffin, Geoffrey. Master of Science, 1991 August, *"Reservoir Operation Optimization: A case Study for the Lake Zumbro Hydropower Facility*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Helmlinger, Keith. MS, 1992 November, ***"****Estimation of Morphometric and Scaling Properties of River Networks from Digital Elevation Data*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Rasmussen, Thomas. Master of Science, 1992 May, *"Analysis of Atrazene Levels in the Lower Missouri River*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Jankovic, Igor. Master of Science, 1993 May, *"Numerical Simulation of Groundwater Recharge: Spatial and Temporal Analysis*", Adv. R. Andricevic, E. Foufoula-Georgiou and R. Barnes, Department of Civil Engineering, University of Minnesota.

Kumar, Praveen. PhD, 1993 April, *"Multiscale Study of Rainfall Fields Via Wavelet Transforms for Identifying Scaling Characteristics*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Venugopal, Vuruptur. Master of Science, 1995 November, ***"****Time-Frequency-Scale Analysis of Temporal Rainfall",* Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Carsteanu, Alin-Andrei. PhD, 1997 December, ***"****Space-Time Rainfall Modeling: Considerations of Scaling and Dynamics*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Nykanen, Deborah. MS, 1997 June, ***"****Study of the Morphology and Spatial Scaling of Braided Rivers Using Synthetic Aperture Radar Imagery*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Venugopal, Vuruptur. PhD, 1999 January, "*Spatio-Temporal Organization and Space-Time Downscaling of Precipitation Fields*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Zepeda-Arce, Jesus. Masters, 1999 February, ***"****Multiscale Statistical Measures for Assessment of Quantitative Precipitation Forecasts*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Nykanen, Deborah K. PhD, 2000 November, "*Space-Time Variability of Rainfall and Soil Moisture in Coupled Land-Atmosphere Modeling: Issues of Scale and Effect on Predicted Water and Energy Fluxes*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Tustison, Benjamin T. MS, 2001 May, ***"****Mutliscale Techniques for the Verification of Quantitative Precipitation Forecasts*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Dodov, Boyko A. PhD, 2003 August, *"Analysis of the Effects of Channel Morphometry and Network Topology on the Nonlinearity of Hydrologic Response as a Function of Scale*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Basu, Sukanta. PhD, 2004 December, ***"****Large-Eddy Simulation of Stably Stratified Atmospheric Boundary Layer Turbulence: A Scale-Dependent Dynamic Modeling Approach*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Gupta, Rohit. MS, 2004 June. "*Parametric and Non-Parametric Approaches for Validation and Blending of Multi-Sensor Precipitation Estimates*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Smedsmo, Jamie L. MS, 2004 June, "*A Statistical View of the Vertical Structure of Modeled and Observed Clouds: Insights for QPF Verification and Remote Sensing of Precipitation*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Passalacqua, Paola. Master's 2005 December, "*Scale Dependence and Subgrid-Scale Closure in Numerical Simulations of Landscape Evolution*", Adv. F. Porte-Agel, E. Foufoula-Georgiou and C. Paola, Department of Civil Engineering, University of Minnesota.

Tilman, Elizabeth A. MS, 2005 May, "*Scaling Relationships for the Depth and Width of Channels in an Experimental Braided River*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Theodoratos, Nikos. MS, 2006 June, "*The Effect of Channel-Floodplain Interactions on the Scaling of Floods*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Gangodagamage, Chandana. PhD, 2009 September, "*Scale Invariance and Scaling Breaks - New Metrics for Inferring Process Signature from High Resolution LiDAR Topography*", Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

Paola Passalacqua. PhD, 2009, "*On the geometric and statistical signature of landscape forming processes,"* Adv. E. Foufoula-Georgiou, Department of Civil Engineering, University of Minnesota.

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.

Yifu Gao, PhD, 2025 (co-advised with Prof. Jasper Vrugt), "*High Dimensional Model Representation in Hydroclimate Studies: Theory, Hydrologic Modeling, and the Disentanglement of Soil Moisture-Precipitation Coupling,"* Department of Civil and Environmental Engineering, UCI.

Dani Lafarga, PhD, 2025 (co-advised with Prof. Samuel Shen, SDSU), *"Three-dimensional empirical orthogonal functions for big climate data: Computation, visualization and interpretation",* San Diego State University.

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 (lead PI)	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

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