



THE HENRY SAMUELI SCHOOL OF ENGINEERING
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING
SOROOSH SOROOSHIAN, DISTINGUISHED PROFESSOR & SAMUELI CHAIR
DIRECTOR, CENTER FOR HYDROMETEOROLOGY AND REMOTE SENSING
(CHRS)
E/4130 ENGINEERING GATEWAY, IRVINE CA 92697-2175 USA

IRVINE, CALIFORNIA 92697-2175
949/824-8825; 949/824-8831 Fax
Email: soroosh@uci.edu
URL: <https://www.chrs.web.uci.edu>

New Scientist Award for Climatology Selection Committee
American Association of State Climatologists (AASC)

April 9, 2025

Dear Selection Committee:

As the Director of the Center for Hydrometeorology and Remote Sensing (CHRS), Henry Samueli School of Engineering, University of California, Irvine, it is my pleasure to give my strongest recommendation to Dr. Eric Jay Shearer, a Research Civil Engineer at the US Army Corps of Engineers, Engineer Research and Development Center, Coastal and Hydraulics Laboratory (USACE-ERDC-CHL), for The New Scientist Award in Applied Climatology for 2025 awarded by the American Association of State Climatologists (AASC). As Dr. Shearer's doctoral advisor at the Center for Remote Sensing and Hydrometeorology in the Department of Civil and Environmental Engineering, University of California, Irvine, from 2017 to 2022, I had the privilege of overseeing his exceptional research in applied climatology. Eric is among the very handful of students I have experienced, in research terms, that "thinks outside-of-the-box" with an interdisciplinary approach.

The paper submitted for consideration, *"Unveiling Four Decades of Intensifying Precipitation from Tropical Cyclones Using Satellite Measurements,"* provides critical empirical data on quantifiable increases in tropical cyclone precipitation rates and volumes, especially over land, in all tropical cyclone basins globally, with significant increases occurring in the United States, the Caribbean, India, and Oceania. These findings are critical for applied climatology as they provide actionable data for enhanced flood risk management and coastal infrastructure planning. Moreover, this research is useful in informing policy actions by identifying locations with outdated building codes and land use planning in more flood-prone areas so that communities can prepare themselves for the escalation of tropical cyclone effects. This interdisciplinary remedy is reflective of the worth of applied climatology in translating climate research into practice for the benefit of society.

Dr. Shearer has continued to build on this work to bridge the divide between climatology research and engineering applications in the real world as a Research Civil Engineer with the Coastal and Hydraulics Laboratory. His current work evaluating precipitation forecasts for the implementation of Forecast Informed Reservoir Operations (FIRO) strategies in USACE-owned and -operated dams is an outstanding example of climate science translation into real world application, namely developing coastal and hydraulic structures' resilience against the backdrop of a changing climate.

To recognize Dr. Shearer's contribution via The New Scientist Award in Applied Climatology would be not only an individual recognition of his contribution but also highlight the critical need to rapidly utilize the latest climate science in translating climate research into operational practice that will have a profound impact affecting the national and global community. Dr. Eric Jay Shearer has my strongest recommendation and is well qualified for the New Scientist Award in Applied Climatology for 2025

A handwritten signature in black ink, reading "Sorooshian".

Soroosh Sorooshian, Ph.D., NAE

Distinguished Professor and Samueli Chair in Engineering, Departments of Civil & Environmental Engineering and Earth System Science, and Director, Center for Hydrometeorology and Remote Sensing, University of California, Irvine, 92697-2175