

Board Nominees

Jon Duncan

Affiliation and Role: Associate Professor of Hydrology, Penn State University



Brief Description of Affiliation/Experience: I am an Associate Professor of Hydrology at Penn State University in the Department of Ecosystem Science & Management where I've been since 2017. My research centers around the impacts of anthropogenic disturbance on streamflow generation and water quality genesis. In particular, our group is examining how the spatial heterogeneity of disturbance (current and historic) controls temporal dynamics of water quality patterns. We are working to apply this understanding to improve watershed management. I'm currently serving as the Director for the Pennsylvania Water Resources Center, one of the 54 USGS funded centers across the country aimed at advancing water research, education, and extension.

What experiences do you bring: I have substantial experience that I believe will benefit CUAHSI and its mission. I worked at CUAHSI way back when the organization was new (I was employee #4). I was fresh out of a joint MS degree program in hydrology and MPA in public administration where I took classes on nonprofit management, budgeting, and program evaluation. With only three of us working at CUAHSI, we shared many tasks relating to nonprofit operations and building the water sciences community. These were formative years for me: learning about different scientific philosophies, science communication, and working in a nonprofit. My time at CUAHSI helped shaped my academic worldview and now that I've navigated thru tenure, I'm keen to re-engage with the organization and serve on the Board of Directors.

How would you contribute to CUAHSI's goals: CUAHSI has identified four goals in the recent strategic plan: growing community, creating infrastructure to advance water science, expanding their reach and prominence in the water community, and refining the governance and business models. I think doubling down on CUAHSI's strengths in hydroinformatics will be at the center of meeting multiple goals. Providing more tools to help scientists manage data streams, perform QA/QC, and publish data, particularly for sensors, is important and something I would like to invest time in. Secondly, I think for CUAHSI to continue its success, water research and education programs must be successful at our home institutions. One idea is for CUAHSI to work with the academic hydrologic sciences community to explore and share what's working to organize water efforts on our campuses. By re-engaging with representatives (past and present) and recruiting new people to synthesize what's working we can forge broader support for water research and education at CUAHSI and our home institutions.

Paul C. Hanson

Affiliation and role: Research Professor, University of Wisconsin – Madison, Center for Limnology



Brief Description of Affiliation/Experience: As a Research Professor at the Center for Limnology (CFL), I run a portfolio of projects supported mostly by federal grants. My research focuses on processed-based and machine learning modeling of surface water quality. For nearly 20 years, I have also grown and led (for 10 years) the Global Lake Ecological Observatory Network (GLEON), which currently has about 1K members from more than 60 countries. I have also been a co-PI of the Environmental Data Initiative (EDI) for nearly a decade and for the past 2 years have been the lead PI, helping to lead EDI through a sustainability transition.

What experiences do you bring: I have been a chief architect of GLEON, helping to grow this organization from a loose affiliation of scientists to a highly successful international research network. GLEON has trained hundreds of graduate students, produced hundreds of peer-reviewed publications and an abundance of other

science-related products. The success of GLEON can be attributed to its focused mission, spirit of inclusivity, and sound leadership. Through GLEON, I have gained experience in organization development and leadership, parlaying these capacities into funding. I have applied these successes to another organization, the Environmental Data Initiative (EDI). Supported by funding from the new NSF TIP directorate, EDI has spent the past year working with consultants in business development, with an aim toward long term sustainability. Outcomes include a voice of customer and marketing plan, a business plan, pitch decks for foundations and prospective customers, and the establishment of a nonprofit, the Environmental Data Institute.

How would you contribute to CUAHSI's goals: I could contribute to any of the 4 strategic goals of CUAHSI. My experience in team science builds upon principles of inclusivity and emphasizes interdisciplinary and cross-institutional collaboration (Goal 1). I currently co-run a graduate student training program that is an instantiation of these principles. I can contribute to the execution of initiatives articulated in Goal 2 for an ecosystem of technical resources supporting CUAHSI's community. My current research in AI, including LLMs directed toward better use of data packages, could help CUAHSI step further into the domain of automation for data curation and archiving. My leadership in EDI, which emphasizes the importance of organizational development and governance, would apply to CUAHSI's goals of expanding its reach (Goal 3) and refining its business model toward sustainability (Goal4)

Melissa A. Kenney

Affiliation and Role: Director of Research and Knowledge Initiatives and Principal Environmental Decision Support Scientist, University of Minnesota, Institute on the Environment



Brief Description of Affiliation/Experience: Dr. Kenney's interdisciplinary, partner-engaged social science research program seeks to understand and improve the processes (e.g., stakeholder engagement) and tools (e.g., indicators, visualizations, models) that aid these decisions, both in the public and private sectors. Over the past decade, this work has led to multiple awards; over 75 publications; approximately \$22M in grants awarded; more than 200 invited talks, including at the National Academies of Sciences; multiple invited White House events integrating her research findings; and opportunities to translate decision science findings as policy memos or decision support prototypes to federal agencies and the highest levels of government.

What experiences do you bring: As an academic administrator, I have responsibilities to lead UMN IonE's research enterprises towards priorities consistent with the strategic plan and a futuristic vision of impactful sustainability research. This strategic academic leadership has required creating clarity and vision into ambitious but feasible strategic plan scaling, complex budgeting for primarily externally funded staff, and expectations and accountability given programmatic priorities. Additionally, and complementary to this role, for the Ecological Forecasting Initiative, I recently chaired an External Advisory Board to explore models for transitioning an informal grassroots organization into a formal legal entity that can support an international community that includes thousands of affiliated scholars and multiple international chapters. This has provided me with important insights into how diverse organizations, similar to CUAHSI's structures, have developed organizational models to facilitate their strategic priorities.

How would you contribute to CUAHSI's goals: I have experience in leading work across CUAHSI's four goal areas. Given my administrative experience, I could uniquely and meaningfully contribute to Goal 4 to support sustainable funding models and staffing structures that advance CUAHSI's strategic plan. In particular, I can build on experiences that I've implemented for organizations to clarify fractional funding models for staff salaries, to set targets and medium-term strategies for external fundraising goals, and to develop critical program building opportunities for investing in core capabilities by multiple institutions. In addition, I can contribute to Goal 1 focused on the inclusivity of the CUAHSI water community. Notably, I have worked to increase the inclusivity of professional cultures and the diversity of scholars within the fields of ecological forecasting (<https://ecoforecast.org>) and decision analysis as well as within the research community that I direct at the University of Minnesota's Institute on the Environment.

Ashley M. Matheny

Affiliation and Role: Associate Professor, Department of Earth and Planetary Sciences University of Texas at Austin



Brief Description of Affiliation/Experience: I am a civil engineer and ecohydrologist. I became interested in working in hydrology when working as an engineer for the U.S. Army Corps of Engineers on lock and dam construction and a variety of environmental remediation projects. My work with USACE inspired me to transition from structural engineering to hydrology for my graduate studies. For the last seven years, I have been a professor at the University of Texas where a research group and I focus on observing and modeling water storage and movement inside of vegetation and on how this flux connects the subsurface geology to weather and climate.

What experiences do you bring: I have served on the CUAHSI Board of Directors for the past year and a half. During this time, I have helped revamp CUAHSI's by-laws and have pushed myself to learn more about the financial management of the nonprofit. I hope to leverage this prior experience to be more active on the Board in the coming years. My experiences in managing projects through work with USACE and my research lab at UT Austin are helpful guides in serving as a steward of success through careful resource management and strategic planning. As a scientist, I regularly contribute and use Open Access databases, and I look forward to bringing this experience to bear on helping advise actions and decisions surrounding the Strategic Plan's Goal 2 of helping to create the infrastructure to drive the advancement of water science.

How would you contribute to CUAHSI's goals: I am excited by how forward looking CUAHSI's 2023-2028 Strategic Plan is. Particularly, I am enthusiastic to support our efforts towards growing a vibrant and diverse water science community. As someone who found their passion for hydrology late in their academic career and who works across disciplines, CUAHSI's focus on developing an inclusive national and international community of scientists spanning career stages and backgrounds is particularly important to me. CUAHSI's focus on education, mentorship, and support for innovative collaborations is an area that I look forward to prioritizing as a Director. In my view, CUAHSI's initiatives to continue to leverage their infrastructure and resources to advance the water science community lend themselves naturally to the promotion of such new inclusive collaborations. The emphasis on Open Science and access to model and data sharing are critical to ensuring equitable access to conduct top-notch research, regardless of the availability of local resources.

Jennifer Merrill, Ph.D.

Affiliation and Role: Director of Marketing and Communication, Stroud Water Research Center



Brief Description of Affiliation/Experience: My experience aligns well with CUAHSI's mission to advance water science through collaboration and shared resources. Early work in freshwater ecosystem ecology set my foundation in the aquatic science. With a Ph.D. in coastal geochemistry I moved to the national science policy arena, and ultimately to program leadership in higher education. Along the way I have managed interdisciplinary projects and established partnerships—skills that are central to CUAHSI's collaborative goals. In my most recent role I work to create strategic messaging to capture a diverse suite of activities directed to specific audiences, and can leverage my experience to assist with CUAHSI's mission objectives.

What experiences do you bring: Nonprofits are challenged to set a clear mission-driven course for the future while executing on a wide range of fundamental organizational practices. I've had the privilege to engage with nonprofits and academic institutions at a wide range of levels that can be beneficial for CUAHSI, including serving as a Senior Program Officer at the National Academies, work with the National Sea Grant Network through Delaware Sea Grant, project management on significant NSF awards, leadership of a self-supporting unit within the University of Delaware, and most recently in serving as the Director of Marketing and Communications for Stroud Water Research Center. Through the creation and stewardship of partnerships I initiated fundamental change to sustain programs including shared faculty across institutions, collaborations between the University of Delaware and state agencies, and new, sustained engagement in urban and senior communities. Experience in national scientific discourse and facilitating consensus as a Program Officer at the National Academies is another facet of my experience to bring to bear on the important work of CUAHSI. I enjoy bringing a business mindset (MBA, 2020) to academic and research programs to assist subject matter experts in achieving the goals they bring to their work.

How would you contribute to CUAHSI's goals: The 2023-2028 Strategic Plan provides an ambitious series of initiatives for CUAHSI. A ranking of the initiatives posed in the Strategic Plan based on the immediacy of need will help focus work of the staff and volunteers to ensure successful outcomes. That is easier said than done because of the interdependence of the initiatives, but success on a few using aggressive timelines for planning, implementation, measurement of impact, and data-based adaptation strengthens the team and intensifies the power of the communications to CUAHSI audiences.

To be successful, small teams must be strategic when deploying their assets, especially their staff. Volunteers are also critical to nonprofits. To be effective it is important to understand the motivations of those volunteers and ensure organizational practices are aligned to meet volunteer expectations. Focusing on the most immediate needs and ensuring those are met can empower the organization to execute on additional initiatives.

The Board's role is important in encouraging the team to focus on the goals as stated, provide additional perspectives on interpretation of goals and means to achieve them, and contribute to deploying the tactics as needed. I believe I can offer valuable perspectives to goals 1, 3, and 4 while learning more about the technical resources and unique value propositions CUAHSI can offer in water science.

Diego Riveros-Iregui

Affiliation and Role: University of North Carolina at Chapel Hill. Professor.



Brief Description of Affiliation/Experience: I am a watershed scientist with extensive national and international experience, working on fundamental and applied research at the interface of watershed hydrology, freshwater ecology, environmental chemistry, and natural resource management. Over the past 10 years, I have developed a research program in ecohydrology, forest and soil processes, and landscape biophysical responses to environmental change with a focus on novel field observations and analyses. From 2020-2022 I chaired the American Geophysical Union's Ecohydrology Technical Committee, and since 2020 I serve on the National Advisory Committee for the NSF-funded Critical Zone Collaborative Network (CZNet).

What experiences do you bring: Recently I served as the interim co-director of the UNC Center for Galapagos Studies, the only university research center in the Galápagos Archipelago, Ecuador. This international center is supported by 15 full-time staff and the collaboration of 30+ affiliated faculty, plus dozens of graduate and undergraduate students. In this role, I led research development, strategic planning, consortium building, fundraising, faculty and student engagement, and study abroad programs. I also led efforts to establish inter-institutional agreements between UNC-Chapel Hill and local institutions in North Carolina, including the Museum of Life and Science, the NC Museum of Natural Resources, and SAS Institute Inc. One of my accomplishments is a new inter-institutional agreement between UNC and SAS to analyze data and observations in novel ways through artificial intelligence and machine learning, and to enhance the research portfolio of UNC scientists working in Ecuador.

How would you contribute to CUAHSI's goals: I am excited for the opportunity to help CUAHSI achieve the goals set out in its most recent Strategic Plan, and I am confident that my experiences will benefit the Board of Directors in multiple ways. In particular, I can contribute toward initiatives 1 and 2. I have a record of intentionally targeting and recruiting students from groups underrepresented in STEM, working with 20+ students in just the last five years. I can also contribute toward initiatives 3, 6, and 7. My recent work has allowed me to build relationships and trust within diverse teams that included talented students, full-time staff, and university alumni. I have learned that all these individuals come to our institutions of higher learning because they trust us, and because they believe they can fulfill a

personal goal and achieve growth in ways that are rewarding to them. I firmly believe that I can make a difference to help people and institutions achieve their goals.