UNIVERSITY OF MINNESOTA

Twin Cities Campus

Ph.D. Positions in Hydrology, Water Quality Modeling, Remote Sensing and Climate Change

University of Minnesota Twin Cities

Work Environment: The Hydrologic Sciences and Remote Sensing (HydSens) group, led by Ardeshir Ebtehaj, is part of the Civil, Environmental, and Geo-Engineering Department and the Saint Anthony Falls Laboratory at the University of Minnesota Twin-Cities. The team works on several research areas related to hydrologic and water quality modeling, climate change, remote sensing of water and environment, and weather and hydrologic water cycle predictions. For more information, please visit our website at https://www.hydsens.com/.

Project and Position: Ardeshir Ebtehaj (PI) in collaboration with Professors Miki Hondzo, Judy Yang, Leif Olmanson, and Vipin Kumar is looking for qualified PhD candidates in the following fields. (i) Hyperspectral remote sensing of algal bloom under laboratory and field conditions. (ii) Hydrologic and water quality modeling of lakes and river systems under super-resolution climate change scenarios.

Required Skills and Prerequisites: Background in Hydrology, Earth Science, Computer Science, Physics, and Applied Mathematics. Strong quantitative, verbal, and communication skills and the ability to work independently and collaboratively are required. Experience in programming and analyzing data in MATLAB, Python, or a similar technical programming language is needed. Past experiences or interest in learning about hydrologic and water quality modeling, applied remote sensing, Bayesian and frequentist statistics, linear and non-linear optimization, machine learning, and neural networks are advantageous.

Applicants should send the following materials to the PI at ebtehaj@umn.edu: curriculum vitae and contact information of at least two references. International Ph.D. applicants need to have the result of their TOEFL test ready for this position. All applicants are highly encouraged to send the results of standardized tests that measure the general mental ability of individuals (e.g., General Record Examination). The starting date is Fall 2024.

--
Ardeshir Ebtehaj
Associate Professor
Associate Editor, AMS Journal of Hydrometeorology

Saint Anthony Falls Laboratory
Department of Civil, Environmental, and Geo-Engineering
University of Minnesota Twin Cities

e-mail: ebtehaj@umn.edu
Website: http://umn.edu/home/ebtehaj