

# How are Dams changing Our Rivers in Developing Regions?



Dr. Faisal Hossain  
Professional Hydrologist

## Mission

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The overarching mission of Faisal Hossain is to make access to information on water a 'fundamental right for all nations and all humans' and apply earth science discoveries with engineering technology to reduce social inequity in availability of food, water and energy around the world. He has published over 170 peer-reviewed journal articles, authored an undergraduate textbook, edited four books and contributed nine book chapters. His capacity building and education initiatives involving satellite remote sensing, numerical weather prediction and physical land surface modeling have resulted in several independently-owned satellite management system for Governments of several Asian nations for improved water, food and energy security. He has served as Editor for *Journal of Hydrometeorology* (2015–2020) and chair for ASCE Task Committee on "Water Infrastructure, Weather and Climate" (2015–2018). He currently serves as Applications lead for Science Team of Surface Water Ocean Topography (SWOT) Mission that is scheduled for launch in 2022. Faisal Hossain launched the nation's first Student STEM Film Contest for engineering majors at University of Washington in 2017 that now occurs bi-annually (most recent in 2019–2020 with more than 160 film submissions from overseas institutions). His first ever docu-fiction movie titled "Joler Par" (Rising Tide) contested unsuccessfully at film festivals in 2014. However, his most recent films that have been screened at film circuits, such as "Bay of Hope" (2015) and "Cotton Fields from the Ivory Tower" (2017), give him hope for a full-time film-making career one day. He is currently working on his 6th big-budget animation production called "The Silent Route" on social justice and raising awareness on violence against women in war zones. Faisal Hossain is also the author/editor of the two volume series illustrated Children's Book titled "The Secret Lives of Scientists, Engineers and Doctors" (2020). This children's book was the fruit of his STEM leadership and outreach to the National Academies during 2018–2020 in a program called "NEW VOICES" that selected 18 of the nation's leading mid-career scientists, engineers and doctors. In 2022 Faisal Hossain published his third Children's Book titled "Robots and Other Amazing Gadgets Invented 800 Years Ago" as part of an on-going effort to excite the young generation to explore outdoors how the natural world works using basic laws of physics.

## Bio

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Faisal Hossain received his Ph.D. from The University of Connecticut in 2004, his M.S (1999) and B.S (1996) from The National University of Singapore and Indian Institute of Technology, Varanasi, respectively. His research interests are hydrologic remote sensing, sustainable water resources engineering, transboundary water resources management and engineering education. He is the recipient of awards such as NASA New Investigator Award (2008), American Society of Engineering Education (ASEE) Outstanding Research Award (2009), US Fulbright Faculty Award (2012), G.O.L.D. (Graduate Of the Last Decade) award from University of Connecticut (2012), American Geophysical Union (AGU) Charles Falkenberg Award (2012), American Meteorological Society Editor's Award (2015), ASCE Walter Huber Award (2015), ASCE Outstanding Achievement Award for Task Committee Leadership (2018) and American Geophysical Union International Award (2020). In 2022, he was elected a Fellow of the American Meteorological Society and a Fellow of American Society of Civil Engineers (EWRI).

## Date/Time:

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Feb. 14th, 2023



MEB 235



1:30 – 2:20 pm