



Dear IGS Delhi Chapter Members,

Inauguration of Student Chapter at IIT Delhi and Invited Expert Lecture.

Date & Venue: 08 Dec. 2023, IIT Delhi (From 10. 00 AM Onwards)

Hope this email finds you in best of health and spirit.

The IGS Delhi Chapter is delighted to announce the establishment of a new student chapter at IIT Delhi. This will be third student Chapter under IGS Delhi Chapter which will be inaugurated on 08 Dec 2023. An official ceremony for the **formation of the student chapter** will be held at IIT Delhi, along with invited **expert lecture** by **Professor Arindam Gan Chowdhury** from FIU, Miami, USA. Details regarding the venue and time are provided below. This initiative aims to enrich knowledge and keep members updated of emerging technologies and trends in the Geotechnical field.

Program schedule:

Formation of IGS student chapter, IIT Delhi.

Timings: 10:00 am - 10:30 pm

Guest lecture on 'Advancements in Coastal Resilience Research and Education'.

Timings: 10:30 am - 11:30 pm

Date & Day: 8th December 2023 | Friday

Venue: Committee Room, Civil Engineering Department, Block IV, First Floor, IIT Delhi, Delhi

Mode: Offline

Guest lecture: Advancements in Coastal Resilience Research and Education

Abstract: The United States is experiencing increasing economic, social, and infrastructure development in its coastal areas over recent decades, with 40% of the Nation's population now calling those areas home. As a result, the Nation is increasingly exposed to natural hazard events, particularly hurricanes along its Atlantic and Gulf coasts. To mitigate damage from hurricane related high wind and wind-driven-rain, a state-of-the-art large-scale wind tunnel experimental facility, the Wall of Wind (WOW) was developed at Florida International University (FIU), Miami, USA. This facility can generate up to Category 5 hurricane wind speeds of 157 mph (70 m/s) and has been majorly used for large- and full-scale study of the buildings and components, bridges, traffic signals and transmission lines. The WOW is designated as an "Experimental Facility" under the Natural Hazards Engineering Research Infrastructure (NHERI) program of National Science Foundation (NSF), USA. This talk will describe the capabilities of the twelve-fan WOW, case studies on the effects of wind and wind driven rain on buildings and infrastructure systems, and applications of Particle Image Velocimetry (PIV) for Fluid Structure Interaction (FSI) research. Education and

outreach efforts at the WOW will be highlighted. Opportunities for faculty research collaboration and recruitment of graduate students will be discussed. The talk will also cover the design effort for a new facility: National Full-Scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE). The NICHE facility will enable the wind and coastal engineering research community to address high-priority scientific questions arising from the impact of increasing storm risks on civil infrastructure, particularly from the combination of extreme winds, storm surge, and wave action, through high-fidelity investigations of the three dimensions of the problem space: wind hazards (including non-stationary events), coastal hazards (waves and storm surge), and the built environment (e.g., from structures to community scale).

About the Speaker:



Dr. Arindam Gan Chowdhury

**Co-Director, Laboratory for Wind Engineering Research
Professor, Department of Civil and Environmental Engineering, Florida International University**

Dr. Arindam Gan Chowdhury is a Professor at Florida International University's (FIU's) Department of Civil and Environmental Engineering and Co-Director of the Laboratory for Wind Engineering Research at FIU's International Hurricane Research Centre. Dr. Chowdhury is conducting groundbreaking research at the Wall of Wind (WOW) facility at FIU. The National Science Foundation (NSF) selected the WOW as one of the nation's major Experimental Facilities (EFs) under the Natural Hazards Engineering Research Infrastructure (NHERI). This award puts WOW on the map as one of only eight NHERI EFs in the United States designated for hazard mitigation research, and one of only two for wind hazard research. Dr. Chowdhury is the Director and Principal Investigator for the NHERI WOW EF. The American Society of Civil Engineers (ASCE) selected the NHERI WOW EF as the winner of the 2018 Charles Pankow Award for Innovation. Under Dr. Chowdhury's direction, the WOW research team has had a significant impact in mitigating hurricane damage by enhancing building codes, validating (and patenting) innovative mitigation technologies, and developing new materials. Dr. Chowdhury is the recipient of a Faculty Early Career Development Program (CAREER) Award from the NSF and a Research to Application Award from the Florida Sea Grant Program. FIU honoured Dr. Chowdhury by naming him a Top Scholar, granting him a Service and Recognition award, and lauding him with the President's Council Worlds Ahead Faculty Award, which is the university's highest recognition for faculty members. Dr. Chowdhury obtained his PhD from Iowa State University, M.Tech from IITB, and BCE from Jadavpur University.