Department of Environmental & Sustainable Engineering (ESE)
College of Engineering and Applied Sciences (CEAS)

International Research Experiences for Students (IRES)

IRES Track I: U.S.-Bangladesh collaboration to improve air quality: Application of low-cost sensor technologies and satellite remote sensing

Overview
➢ NSF-funded summer research opportunity for the U.S. undergraduate and graduate students.
➢ A cohort of 8 students (5 undergraduate and 3 graduate students) visit Bangladesh to gain international research experience in emerging air quality issues in the megacity of Dhaka.

Key features
o **Broaden the international research experience**
o **Enhance professional development in an international environment**
o **Enhance competencies in intercultural communication, self-confidence, and leadership**

Financial support
Stipend: $3,500 for undergraduates and $4,200 for graduate students
Travel: support for international and local travels
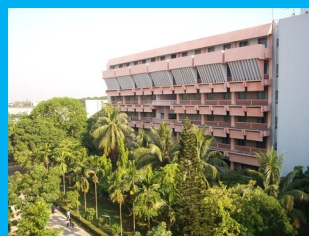Subsistence: Housing and meals provided

Eligibility
- U.S.-citizen or permanent residents and must have full COVID-19 vaccination record
- GPA of 2.7 for undergraduate and 3.0 for graduate applicants
- Must commit to visit Bangladesh for 7 weeks in summer 2023 (June 12–July 28) and 1-week post-trip follow-up at UAlbany
- Available to attend Spring 2023 (virtual) for pre-departure preparation-research meetings bi-weekly (1.5 hr) and language instructions (1 hr /week)
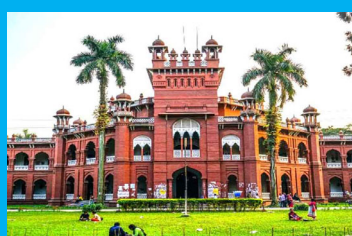- Available for follow-up research activity (virtual) in Fall 2023

Students who are members of underrepresented groups are encouraged to apply.

Preference will be given to students major in Environmental Engineering or a related discipline (e.g., Atmospheric and Environmental Sciences, Chemistry, and Engineering in general).

IRES sites

Bangladesh University of Engineering and Technology (BUET)

University of Dhaka

Mentors

Dr. Md. Aynul Bari, Principal Investigator
Assistant Professor, University at Albany
https://www.albany.edu/environmental-sustainable-engineering/faculty/md-aynul-bari

Dr. Provat Kumar Saha
Assistant Professor, Bangladesh University of Engineering and Technology (BUET)
https://ce.buet.ac.bd/profile-of-provat-kumar-saha

Dr. Abdus Salam
Professor, University of Dhaka
https://www.du.ac.bd/faculty/faculty_details/CHM/112

Dr. Stephen Luby
Professor, Stanford University
https://woods.stanford.edu/people/stephen-luby

Examples of research topics
o **Air pollution mapping in Dhaka City**
o **Air pollution exposure in public transportation**
o **Mapping brick kiln pollution**
o **Low-cost approach for evaluating brick kiln level emissions**
o **Residential indoor air quality**
o **Waste burning impacts on air quality**
o **Satellite remote sensing to estimate surface $PM_{2.5}$**

How to Apply
- Applications open in November 1 (Deadline: January **1, 2023**)
- Please reach out to Dr. Bari (ires-air@albany.edu) with following application materials:
  1. Copy of unofficial transcripts
  2. Resume
  3. Statement of purpose (describe how this IRES program will help achieve your short- and long-term goals)
  4. One reference (if shortlisted, we will contact for reference letter)