বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়
ডাইরেক্টরেট অব কন্টিনিউইং এডুকেশন (ডিসিই)

Directorate of Continuing Education (DCE)
Bangladesh University of Engineering & Technology
Dhaka 1000, Bangladesh

07 August 2022

Workshop on Low-Carbon Energy Systems and Net-zero De-carbonization for Climate Change Adaptation and Mitigation

Dear students,

It's our pleasure to share you D.C.E, BUET is going to organize a work shop on the above mentioned topics as per following schedule.

Date: 16 August 2022
Time: 5.30 pm to 8.30 pm
Venue: Lecture Room-2, Directorate of Continuing Education (DCE)
Institute Building, BUET (Near BUET Gymnasium and Dr. M. A. Rashid Hall)

This work shop will be conducted by **Dr. Nitish Ranjan Sarker**, a BUET Alumni and currently serving as Strategic Lead/Postdoctoral Fellow @ Centre for Global Engineering, University of Toronto, Canada. A short bio of Dr. Sarkar is attached herewith.

In the context of **contemporary global climate change related to carbon emissions**, we think the subject matter of this workshop is a very timely and **urgent topic** on which BUET students/researchers and honorable faculty members should focus as Bangladesh is one of the **most vulnerable countries subject to global climate change**.

The proposed workshop will be helpful for students (**3rd/4th year UG and Masters level**)/researchers as well as faculties of BUET to have a better understanding of current state of contemporary research on this very important topic. Dr. Sarkar will demonstrate a **MIT-designed open-source climate scenario simulation tool** in this workshop from which you may start focusing on climatic research and sustainability. Participants are encouraged **to bring laptop if possible**.

Please visit our website **https://dce.buet.ac.bd** for more information.

Wish you good luck. Best wishes::

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Prof. Md. Nasim Hasan
Director
Directorate of Continuing Education (DCE)
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https://dce.buet.ac.bd

CC: All Hall, Department and Institute Notice Boards for mass circulation

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High GHG-emitting fossil fuel-based energy technologies have significant impacts on climate change. So, policies and strategies for transitioning from fossil fuel to renewables/ low-carbon systems are getting traction. However, social and economic adaptation to renewables are not easy and prompted major international debates over 'what' can we do and 'how'!

Are you part of that discussion yet?

Workshop on Tuesday, 16 August 2022, 5:30–8:30 PM
[Location]

Low-Carbon Energy Systems and Net-zero Decarbonization for Climate Change Adaptation and Mitigation

Dr. Nitish Ranjan Sarker | Strategic Lead/Postdoctoral Fellow, Centre for Global Engineering, University of Toronto, Canada

Dr. Sarker is an alumnus of Bangladesh University of Engineering and Technology (BUET '06) and finished his Ph.D. and M.Sc. in Mechanical Engineering from the University of Toronto (U of T) and the University of Alberta in Canada, respectively. Currently, he is the *Strategic Lead* at the Centre for Global Engineering at the University of Toronto. Besides, he is also supporting water and energy research at the Mechanical and Industrial Engineering Department of U of T as a Postdoctoral Fellow. As a cross-disciplinary engineer/researcher, Nitish focuses on technological and systemic innovation of drinking water and clean-energy technologies (broadly relevant to climate resiliency and UN sustainable development goals) and their appropriate customization based on target communities' needs and constraints. Additionally, Nitish sits on the executive committee of the International Water Association Young Waters Professional in Canada (as a program director) and manages Pan-Canadian events to dissipate the social, economic, and technological aspects of Canadian water research. As a recognition of his exceptional leadership and research on water and energy accessibility in low and middle-income countries, Nitish was vested with many prestigious sustainability accolades, including the 2022 Mortenson Global Engineering Award.

Agenda

Extensive anthropogenic emissions of greenhouse gasses (GHG) are heating the Earth's atmosphere (already 1 °C above the pre-industrial level and set to warm up another 1.5 °C over the next two decades) and significantly impacting the natural systems around the world. The global energy systems comprise buildings, industry, power, transport, and processing sectors, and about 80% of those run using high carbon-emitting fossil fuel-based technologies. Transitioning from fossil fuel to renewable and low-carbon alternatives is the only way toward a sustainable future. However, the social and economic adaptation to those approaches is not easy! In this interactive workshop, we will explore 'WHY that is the case' by utilizing an MIT-designed open-source climate scenario simulation tool. We will briefly discuss Bangladesh's phenomenal solar success in the early 2000s and current breakthrough technologies as a case study. Besides, we will talk about state-of-the-art low-carbon energy systems and how those are relevant (and can be made feasible) to Bangladesh's long-term decarbonization roadmap.