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La Salle Sustainability Lectures

Optimization of Negative Emissions Technology Portfolios Using Process Integration Techniques

Register at:

https://bit.ly/DLSU-IALU_Jan2023

February 22, 2023 (Wednesday), 8:00 AM-9:00 AM Philippine Time



Speakers



Asst. Prof. Maria Victoria Migo-Sumagang
University of the Philippines Los Baños
PhD Candidate, De La Salle University



About the Webinar

Negative Emissions Technologies (NETs) are now required to address the residual emissions from fossil fuels. NETs extract carbon dioxide away from the atmosphere for storage deep underground, in biomass, in the ocean, or in the built environment. Examples of land-based NETs include bioenergy with carbon capture and storage, afforestation/reforestation, soil carbon sequestration, biochar, enhanced weathering, wetland restoration, and direct air carbon capture and storage. The implementation of NET portfolios on a large scale is crucial for sustainability and risk reduction, but it must take into account the resources required, time constraints, potential synergistic interactions between NETs, and uncertainties associated with these technologies. Hence, systematic NETs planning using Process Integration (PI) has emerged as an important research topic. PI techniques can be applied for the optimal planning of the large-scale implementation and integration of NETs. This webinar discusses different studies in optimizing NET portfolios using Process Integration while considering the challenges mentioned.

About the Speaker

Asst. Prof. Maria Victoria Migo-Sumagang

Maria Victoria Migo-Sumagang is an Assistant Professor at the University of the Philippines Los Baños (UPLB) and a Ph.D. candidate at De La Salle University (DLSU). She obtained her BS in Chemical Engineering (*magna cum laude*) and MS in Chemical Engineering (Academic Achievement Awardee) from UPLB. She is currently under the Engineering Research for Development and Technology Ph.D. scholarship program at DLSU. She is a registered Associate ASEAN Engineer and an associate member of the National Research Council of the Philippines. She was the recipient of the 2021 College of Engineering and Agro-Industrial Technology Outstanding Junior Faculty Award from UPLB. Her current research involves the application of process integration to negative emissions technologies (NET) portfolios for a systems-level outlook on these technologies. She has published peer-reviewed journals on this topic and co-authored a correspondence article in Nature Computational Science about computing optimal NET portfolios. She was awarded multiple best posters and best presentations for her research on NET portfolios.

