

Dr. Amy Tan Giin Yu

School of Civil and Environmental Engineering
Ph.D. (Civil Engineering) / Class of 2016

In recognition of her achievements as an academic and in the field of environmental microbiology, the School of Civil and Environmental Engineering (CEE), Nanyang Technological University, is proud to present Dr. Amy Tan Giin Yu with the CEE Young Alumni Award.

Dr. Tan is an Assistant Professor in the Department of Architecture and Civil Engineering at The City University of Hong Kong (CityU), which she joined in 2022. Previously, she held academic and research positions at The University of Hong Kong (Research Assistant Professor, 2019-2022), The Hong Kong Polytechnic University (Research Fellow, 2018-2019; Post-doctoral Fellow, 2015-2017), and NTU (Research Assistant, 2009-2015).

She is deeply passionate about the subject of environmental microbiology, working at the interface of biology, engineering and quantum information science to harness the knowledge and power of microbes to address global challenges such as carbon reduction, waste pollution, energy scarcity, human health and safety, and built environment renewal.

Dr. Tan's team focuses on biological phenomena such as electron transfer/tunnelling/hopping and gene regulation, and the coupled use of non-classical modelling and meta-omics techniques to surpass classical biochemical limitations for sustainable waste and wastewater management.

Some of her current research topics include electron transfer between microbe and conductive materials for enhanced bioenergy production; nutrients stress regulation of bioplastic production; and microbial electron oxygen reduction reaction for recalcitrant waste bioremediation.

Last year, Dr. Tan represented CityU as a member of its delegation attending THE Campus Live UK&IE 2023, which brought together over 400 higher education leaders. She participated in the roundtable discussion on "Women in STEM, focusing on advanced materials and AI with their applications in Smart City together with student training".

To date, Dr. Tan has published 30 refereed papers in international SCI journals, 22 conference papers and presentations, and three book chapters. Currently, she is also an editor for publications including *Discover Engineering (Springer Nature)* and *Frontiers in Microbiology (specialty section of Microbiotechnology)*. She is also a member of the International Water Association.

Dr. Tan has received several awards including the Environmental Paper Award (2nd Runner Up) in 2019 and the Outstanding Paper Award for Young Engineers/Researchers in 2016 from The Hong Kong Institution of Engineers, as well as the Outstanding Mentor Award for the Youth Science Conference in 2012 from The Ministry of Education, Singapore.

She holds a PhD in Civil and Environmental Engineering and a Bachelor's degree in Biological Sciences with Minor in Psychology from NTU. During her undergraduate studies, Dr. Tan was a recipient of the Columbia Scholarship Award.