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# Building a Smart Circular Economy

*Driven by Youth Leadership, Innovation & Entrepreneurship*

By **Dr Lerwen LIU**

**Date:** **Friday, 10 May, 2019**
**Time:** **10.00 am to 12.00 pm**
**Venue:** **E4 #04-02, Faculty of Engineering, National University of Singapore**

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by 6th May 2019 or when all seats taken.

## Abstract

The world is evolving towards circular economy. The banning of China importing plastic and other wastes in recent years has disrupted waste management in both the developed and developing world. Other developing world including India, Thailand, Malaysia and others has tightened waste management policy and targeting at the ban of import in the next few years. Governments worldwide are in process building national circular economy strategy where waste is treated as resource, production processes require less energy and materials, product design would make recycling cost effective, and consumption would be more responsible.

However, transforming from today's oil & gas economy is challenging due to the mindset of profit driven production and irresponsible consumption. The industry supply chain and ecosystem needs to be rebuilt or replaced. The purpose of entrepreneurship needs to be changed towards sustainability of planet and people.

It is critical for education institution such as university to take a leadership in nurturing the next generation of policy and business leaders as well as entrepreneurs to build a new economy coupled with digital transformation

The transformation towards the circular economy requires the growth of a) sustainable food/agriculture, b) sustainable energy production vs oil & gas and c) green materials and d) smart and green product design.

Globally the youth is leading the climate change action. The 29 years old US senator AOC is leading the Green New Deal putting climate change as a national priority. School students worldwide, inspired by a 16 years Greta Thunberg, are protesting on the street urging global governments to take action for combating climate change.

A team of student leaders (together with its Dr Lerwen LIU) from the King Mongkut's University of Technology Thonburi (KMUTT) in Bangkok, would like to share its STEAM Platform for creating youth leadership in driving the transformation of smart circular economy. Visit www.steamplatform.org for details.

## Speaker Biography
## Lerwen Liu

*Founding Director of STEAM*
*Senior Advisor, KMUTT, Bangkok*

**Dr Lerwen Liu** is a senior advisor at KMUTT, and the founding director of STEAM platform, KMUTT. She specializes in business development (including strategic marketing, partnerships, fund raising, stakeholder management and more) with technical expertise in fields of nanomaterials, additive manufacturing, solar cells, IoT, nanosatellites and other emerging technologies with applications in functional/green materials and manufacturing, space, agribusiness, environment and health care. Dr. Liu is a strong advocate of sustainability through innovation & entrepreneurship education and training focusing in Asian region.

**Mr. Arslan Siddique** is a project manager and chief technology analyst at STEAM platform, KMUTT. He recently completed master degree majoring in Biotechnology. He was affiliated with the Excellent Center of Waste Utilization (ECoWaste), and he has multidisciplinary research experience in microbial-surface interaction, Biogas, Nano-biotechnology, Electrochemistry and microfluidics technology. Currently, he leads STEAM, training young students on technology value-chain mapping, market research, competitive/comparative analysis etc., and instructs technology startups potentially contributing towards Bio, Circular, Green (BCG) economy.

**Ms. Panitsara Nakseemok** is a program manager at STEAM platform, KMUTT. She has acquired knowledge in advanced materials and manufacturing as well as smart sensors. She is also talented in design and trained in entrepreneurship program at King Mongut's University of Technology Thonburi (KMUTT). Panitsara initiated, during her undergraduate studies, the first research project where she succeeded in developing innovative materials based on graphene-TiO2 composite for treating water pollution. Her work was published in international journals and her technology was also tested in waste water treatment system at her home town public health center.

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*****Seats are limited. Please register early. All are welcome and admission is free*****

# Location Map