THE UNIVERSITY OF HONG KONG

DEPARTMENT OF MECHANICAL ENGINEERING

SEMINAR

Online

Title: **3D Printing of Membrane-based Fluidic System**

Speaker: **Miss YU Yafeng (PhD candidate)**
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Date: **27 April, 2021 (Tuesday)**

Time: **11:00 a.m.**

Zoom Link: **1) Link to join the meeting:**

https://hku.zoom.com.cn/j/95558245160?pwd=UHhkc2FnS1psODhlRXh5U3krQVRTQT09

2) Meeting ID: 955 5824 5160

3) Password: 114915

Abstract:
Complex and highly branched tubular systems are ubiquitous in biological systems. Inspired from nature, the flowing system with membranes have always been attracting researchers to build the biomimetic model for various studies. However, it is complicated and time-consuming to produce membrane-containing flow systems, increasing the threshold for the devices' fabrication and their further application. In this talk, we will introduce a one-step liquid-in-liquid 3D printing method of membrane surrounded channels fixed on a solid substrate. Only a few minutes or hours are needed for building the membrane surrounded chamber. We will also present the application potential of the printed channels in organ-on-chip technology and ion exchange reactor. This time-saving and simple printing method greatly lowers the threshold of fabricating membrane-combined devices, which may significantly promote the development and efficient production of membrane-related equipment in various areas and trigger a new round of innovations of membrane-containing devices' design.

ALL INTERESTED ARE WELCOME

For further information, please contact Prof. A. Shum at 3917 7904.

Research areas: Advanced Materials and Thermofluids