



**DEPARTMENT OF MECHANICAL ENGINEERING
AND
MEDICAL ENGINEERING PROGRAMME**

SEMINAR

Online

Title: 3D Printing of Gene-activated Matrices for Gastrointestinal Tissue Regeneration

Speaker: Miss Chen Xiaodie (PhD candidate)
Department of Mechanical Engineering
The University of Hong Kong
Hong Kong

Date: 23 April, 2021 (Friday)

Time: 11:30 a.m.

Zoom Link: 1) Link to join the meeting:

<https://hku.zoom.us/j/93886554246?pwd=ZGxVZTlPSndYcFhwMzBud0phMmsrZz09>

2) Meeting ID: 938 8655 4246

3) Password: 791950

Abstract:

Tissue engineering is a multidisciplinary subject and its different approaches provide viable means to solve difficult problems in repairing diseased or traumatized human body tissues. The primary function of gastrointestinal tract is to digest food to provide energy for the human body. Therefore, gastrointestinal diseases such as inflammatory bowel, short bowel syndrome, colorectal cancer and colon cancer seriously affect people's quality of life or cause human deaths. The conventional tissue engineering methods, including using growth factor-encapsulated and cell-laden scaffolds, have limitations for regenerating the gastrointestinal tissue. Gene therapy introduces foreign genes into host cells to cure diseases, which deals with the root cause. Gene-activated matrices can serve as gene therapeutics carriers to enhance transfection efficiency and allow cell proliferation to repair tissue defects. This seminar will provide a review of the significant advances of 3D printing of gene-activated matrices for tissue engineering, explore 3D printing of gene-activated matrices for gastrointestinal tissue regeneration, identify issues that require detailed and systematic studies and introduce our initial work.

ALL INTERESTED ARE WELCOME

For further information, please contact Prof. M. Wang at 3917 7903.

Research areas: Advanced Materials and Biomedical Engineering