

Department of Biomedical Engineering

Research Student Seminar Series

(Supervised by Prof. Kannie W. Y. Chan)

Rushing-Hopping Mode for Nondestructive Intracellular Electrophysiological Recordings

Ms. Se Weon PARK & Mr. Huabing LIU
Ph.D. candidate

Date:	May 29, 2024
Time:	3:00pm-3:40pm
Zoom:	https://cityu.zoom.us/j/97672532342

Part I: CEST imaging of ApoE K/O mouse brain during atherosclerosis development

Abstract

Atherosclerosis is developed when plaques composed of cholesterol, fat or cells are build up inside the artery, followed by immune-inflammatory process. It is a chronic development that vulnerable plaque might ultimately lead to myocardial infarction or stroke. Therefore, early detection and intervention of atherosclerosis are essential. The mechanism of early stages of atherosclerosis is well established, which could lead to molecular changes during plaque development, especially those related to atherosclerosis. Here, we have applied CEST-MRI onto the Apolipoprotein E (ApoE) deficient mouse brain to observe the brain during atherosclerosis development at a molecular level.

Part II: Periodically Rotated Spiral Sampling and Multi-Offset Transformer Reconstruction for CEST MRI

Abstract

Atherosclerosis is developed when plaques composed of cholesterol, fat or cells are build up inside the artery, followed by immune-inflammatory process. It is a chronic development that vulnerable plaque might ultimately lead to myocardial infarction or stroke. Therefore, early detection and intervention of atherosclerosis are essential. The mechanism of early stages of atherosclerosis is well established, which could lead to molecular changes during plaque development, especially those related to atherosclerosis. Here, we have applied CEST-MRI onto the Apolipoprotein E (ApoE) deficient mouse brain to observe the brain during atherosclerosis development at a molecular level.

Biography

Se Weon PARK is now pursuing a Ph.D. degree in Prof. Kannie W.Y CHAN's group with the Department of Biomedical Engineering, City University of Hong Kong. Her research interests include CEST imaging, brain tumor, atherosclerosis and brain mechanism with pathologies.

Huabing LIU is now pursuing Ph.D. degree in Prof. Kannie W.Y. CHAN's group in the Department of Biomedical Engineering. His research interests include CEST imaging, medical image analysis, machine learning and deep learning.

All are Welcome!