The Singapore Bioimaging Consortium (SBIC)
presents a seminar on

"Quantitative Susceptibility Mapping: Overview and Applications"

Speaker: **Dr Xiang Feng**
MR Scientific Specialist
Siemens Healthineers
China
Host : **Dr Lee Kuan Jin/Dr Sendhil Velan**
Date : **Thursday, 24 January 2019**
Time : **2.00pm – 3.00pm**
Venue : **SBIC Seminar Room**
11 Biopolis Way
Level 2, Helios Building, Singapore 138667
(Please enter via Level 1)

Abstract

Quantitative susceptibility mapping (QSM), as a successor of Susceptibility Weighted Imaging (SWI), is a relatively new MRI technique that aims to extract the tissue magnetic susceptibility from the MRI phase images by solving the field-to-susceptibility inverse problem. Since its recent introduction, QSM has so far been primarily applied in research settings, as the sophisticated and computationally expensive processing algorithms are not yet commercially available directly on the MRI scanners. In this talk, following a brief introduction to the basic physical principles of magnetic susceptibility, a general review of QSM reconstruction algorithms will be given. Afterwards, we will talk about pre-clinical and clinical applications of QSM, including intracranial hemorrhages, tumor and various neurodegenerative diseases, such as multiple sclerosis, Parkinson's disease, Huntington's disease and Alzheimer's disease. It is anticipated that QSM will provide novel insights into normal brain aging and improve, in particular, the understanding of neurodegenerative diseases.

About the Speaker

Dr Xiang Feng obtained his bachelor and master degrees in Biomedical Engineering from Huazhong University of Science and Technology, Wuhan and Shenzhen Institutes of Advanced Technologies, Chinese Academy of Sciences, Shenzhen, China. In 2018 he got his PhD (Dr. rer. nat.) in Biophysics, with a thesis titled "Development and Evaluation of a Novel Framework for Improved Subcortical Gray Matter Segmentation Using Quantitative Magnetic Susceptibility and R2* Mapping", from the Friedrich Schiller University Jena, Germany, under the supervision of Prof. Juergen R. Reichenbach. He is currently working as a MR scientific specialist in Siemens Healthineers China. Dr Feng's current work focuses on the use of different quantitative MRI techniques in neuro study.

--- Admission is free and all are welcome ---