

國立中央大學數學系

專題演講

主講人：盧家鋒教授（國立陽明大學生物醫學影像暨放射科學系）

題目：Machine Learning in Radiology

機器學習於醫學影像之發展

演講茶會：2019年05月02日(星期四) 3:30 p.m. ~ 4:00 p.m.

茶會地點：中央大學鴻經館M306

演講時間：2019年05月02日(星期四) 4:00 p.m. ~ 5:00 p.m.

地點：中央大學鴻經館M107

Abstract：

In this talk, we will review the current development and applications of artificial intelligence, specifically the machine-learning approach, in radiology. Machine-learning techniques have shown promising benefits in the image acquisition, lesion detection, differential diagnosis, tumor grading, and outcome prediction. In the field of cancer imaging, growing evidence further reveals the feasibility of using image phenotypes to probe the underlying genotypes and predict the clinical outcomes using machine learning. We will start by introducing the common categories of machine learning, including traditional approaches and deep learning, and elucidating their usages for the different clinical purposes. The application of machine learning combined with radiomics, a high-throughput feature extraction method, to predict the molecular subtypes of lesion and patient survivals based on multimodal MRI will be introduced. Finally, perspectives of current limitations and future developments of machine learning in radiology will be proposed and discussed to facilitate the machine-learning based precision medicine.

贊助單位：

1. 國家理論科學研究中心 2. 國立中央大學數學系 3. 國立中央大學數學與理論物理中心

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