# 學　術　演　講

講　題：Efficient generation of random bits with a biased coin

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時　間：2022年5月16日（星期一），10:30–12:00

地　點：採線上視訊辦理

## Abstract

In his seminal work, von Neumann (1951) raised the question of simulating a fair coin with a biased one. The simple but inefficient procedure proposed by him was later shown by Peres (1992) to attain the entropy bound asymptotically if properly iterated. We investigate the second-order efficiency of Peres' procedure when the number of (biased) coin tosses is large. Building on the work of Zhao and Bruck (2012) and Pae (2020), we also discuss the streaming version of Peres' procedure and its generalization when the biased coin is replaced by a loaded die. (This talk is based on joint work with Zhaoging Lim.)

※ 英文演講