

專 題 演 講

講 者：鄧惟中 教授 (台灣科技大學資工系)

題 目：How Galois Field Helps Solving N-Queen Puzzle?

大 綱：

The n-queens puzzle is a classical combinatorial problem to place n chess queens on an $n \times n$ chessboard in such a way that no two queens threaten each other. Many mathematicians contributed to answer questions like "Is there a closed form solution to find all the solutions for the n-queens problem?" And in the computer era, n-queen problem also serves as a perfect example case for demonstrating depth-first tree traversal. In this talk, I would like to discuss an attempt to quickly find few solutions of n-queen problem with very large n leveraging Galois fields. This approach has the potential to speed up the existing minimum-conflict based method.

簡歷：

Wei-Chung Teng holds the position of professor in the Department of Computer Science and Information Engineering at the National Taiwan University of Science and Technology, a role he has occupied since 2003. He obtained his B.S. and M.S. degrees from National Chiao Tung University in Taiwan and later attained his Doctor of Engineering degree from the University of Tokyo in 2001.

In addition to his academic pursuits, Prof. Teng served as a commissioner in the National Communications Commission from 2018 to 2022. His contributions during this tenure were particularly focused on matters such as the 5G frequency band auction and the relaxation of regulations related to 5G private networks.

His research interests encompass a wide spectrum, including network communication protocols and cybersecurity. Much of his work is dedicated to enhancing the security of time synchronization protocols and improving the precision and performance of clock skew measurement across networks.