

# CQSE-NCTS-CASTS-CTP

## Joint Seminar

「May 14, 2021 (Friday)」

- Time : 14:30~15:30
- Place : Rm833, New Physics Building
- Speaker: **Prof. Shih-wei Liao** 廖世偉  
NTU CSIE, IoC Center, & SOC, NTU  
臺大資工系、物聯網中心及系統晶片中心
- Title : Mapping Computational Biomedicine and Finance Problems onto Quantum Computing: Lessons in Feature-Selection vs. TSP approach

▲ The seminar is also open to non-NTU members; hence all participants must wear a mask. (Following Fall and Winter Precautionary Measures)

\*\*Sponsored by Center for Quantum Science and Engineering (CQSE), National Center for Theoretical Sciences (NCTS)-Physics Division- Themetical Group TG1.1, Center for Advanced Study in Theoretical Sciences (CASTS), and Center for Theoretical Sciences (CTP), NTU

# Joint CQSE-NCTS-CASTS-CTP Seminar

2021  
May 14, Friday

TIME May 14, 2021, 2:30~3:30pm  
TITLE Mapping Computational Biomedicine and Finance Problems onto Quantum Computing: Lessons in Feature-Selection vs. TSP approach  
SPEAKER Prof. Shih-wei Liao  
Dept. of Computer Science and Information Engineering, IoT Center, & System-on-Chip Center (SOC), National Taiwan University  
PLACE Rm833, CCMS & New Physics Building, NTU

## Abstract:

Our problem statement is: How to use quantum computers to speed up various problems in the biomedicine and finance domain.

## Biography Brief:



Shih-wei Liao completed his B.S. degree in Computer Science and Information Engineering from National Taiwan University, and his M.S. and Ph.D. degree in Electrical Engineering from Stanford University. While at Intel, he has conducted research in developing new program analyses and programming environments to exploit advanced microarchitectures. Prior to Intel, he worked for 8 years on the Stanford SUIF compiler project (part of National Compiler Infrastructure) which delivered the highest SPEC FP number at the time (1998). His thesis work is an interactive interprocedural parallelizer called the SUIF Explorer. The Explorer encompasses advanced visualization tools, dynamic execution analyses, and deep program analyses including an array reduction parallelizer and an array liveness analysis that enables data decomposition and contraction. He worked in the Silicon Valley (Stanford, Google, and Intel) for more than 20 years, culminating at receiving the Google's Highest Award – the Founder's Award.

He is currently an Associate Professor in the department of Computer Science and Information Engineering, NTU, the chairperson of APAC Blockchain Development Association and the convener of Taiwan Blockchain Alliance, Industry Liaison. His research interest includes Blockchain and Big data, Fintech (Internet Finance), Android virtual machines and compilers.

## - N O T I C E -

- ▲ Please swipe NTU card / ID card when entering CCMS-Phys. Building.
- ▲ Both faculty members and participants are required to wear sanitary masks all the time.
- ▲ All participants and event workers should stay at designated areas and minimize contact at short distances.
- ▲ We collect personal info during covid-19 only for contact tracing purposes.

