

# An Optimization Framework for Causal Inference Using Observational Data



**講者：**Dr. Sheldon Howard Jacobson

University of Illinois Urbana-Champaign

**時間：**2025/6/9(一) 15:00~16:30 (14:50入場)

**地點：**工程四館108室 + 線上同步進行

**主持人：**王蒞君終身講座教授

國立陽明交大電機學院院長

IEEE Taipei Section理事長



## About Speaker :

Sheldon H. Jacobson is a Founder Professor of Computer Science at the University of Illinois at Urbana-Champaign, where he also directs the Simulation and Optimization Laboratory and founded the Bed Time Research Institute. He holds appointments across multiple departments, including Industrial and Enterprise Systems Engineering, Electrical and Computer Engineering, Mathematics, Statistics, and the College of Medicine. He earned his B.Sc. and M.Sc. in Mathematics from McGill University and his Ph.D. in Operations Research from Cornell University.

Professor Jacobson's seminal research applies operations research and optimization-based artificial intelligence to critical societal problems. He pioneered aviation security analytics, demonstrating how probabilistic models, optimization, and AI can enhance security systems. His work on multi-level passenger screening was a precursor to risk-based security, influencing the design of TSA Precheck®.

His contributions extend to pediatric vaccine formulary design, utilizing operations research for immunization, and bridging the link between obesity, transportation, and fuel consumption to inform non-medical obesity interventions. He also developed computational redistricting methods, using optimization-based AI to combat gerrymandering.

Recognized with numerous accolades, Professor Jacobson received a Guggenheim Fellowship (2003) and the INFORMS Impact Prize (2018). He is an elected Fellow of the American Association for the Advancement of Science (AAAS), the Institute for Operations Research and the Management Sciences (INFORMS), and the Institute of Industrial and Systems Engineers (IISE).

**Organizer:**

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**Contact Information:**

**Tel:** (03)5712121#54484/ 54014

**E-mail :** yayihuang@nycu.edu.tw/

peggy3631@nycu.edu.tw



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