2025 Fall Statistics Seminar Series

Dr. Dennis K. J. Lin

Distinguished Professor
Department of Statistics, Purdue University

ASA, IMS, ASQ, and RSS Fellows; ISI Elected Member

ASA Deming Lecturer Award (2020)
ASQ Shewhart Medal (2015); Hunter Award (2014); Shewell Award (2010)
Distinguished Alumni Award, National Tsing Hua University, Taiwan (2022)

Friday, September 26, 2025, **11:15 am − 12:05 pm**
Long Hall, Room 216

AI, BI & SI–Artificial, Biological and Statistical Intelligences

Abstract

Artificial Intelligence (AI) is clearly one of the hottest subjects these days. Basically, AI employs a huge number of inputs (training data), super-efficient computer power/memory, and smart algorithms to perform its intelligence. In contrast, Biological Intelligence (BI) is a natural intelligence that requires very little or even no input. This talk will first discuss the fundamental issue of input (training data) for AI. After all, not-so-informative inputs (even if they are huge) will result in a not-so-intelligent AI. Specifically, three issues will be discussed: (1) input bias, (2) data right vs. right data, and (3) sample vs. population. Finally, the importance of Statistical Intelligence (SI) will be introduced. SI is somehow in between AI and BI. It employs important sample data, solid theoretically proven statistical inference/models, and natural intelligence. In my view, AI will become more and more powerful in many senses, but it will never replace BI. After all, it is said that "The truth is stranger than fiction, because fiction must make sense." The ultimate goal of this study is to find out "how can humans use AI, BI, and SI together to do things better."

About the Speaker

Dr. Dennis K. J. Lin is a Distinguished Professor of Statistics at Purdue University. He served as the Department Head during 2020-2022. Prior to this current job, he was a University Distinguished Professor of Supply Chain Management and Statistics at Penn State, where he worked for 25 years. His research interests are data quality, industrial statistics, statistical inference, and data science. He has published nearly 300 SCI/SSCI papers in a wide variety of journals. He currently serves or has served as an associate editor for more than 10 professional journals and was a co-editor for Applied Stochastic Models for Business and Industry. Dr. Lin is an elected fellow of ASA, IMS, ASQ, & RSS, an elected member of ISI, and a lifetime member of ICSA. He is an honorary chair professor for various universities, including Fudan University, and National Taiwan Normal University and a Chang-Jiang Scholar at Renmin University of China. His recent awards include, the Youden Address (ASQ, 2010), the Shewell Award (ASQ, 2010), the Don Owen Award (ASA, 2011), the Loutit Address (SSC, 2011), the Hunter Award (ASQ, 2014), the Shewhart Medal (ASQ, 2015), and the SPES Award (ASA, 2016). He won the Deming Lecturer Award at 2020 JSM. His most recent award is "The 2022 Distinguished Alumni Award" (National Tsing Hua University, Taiwan).