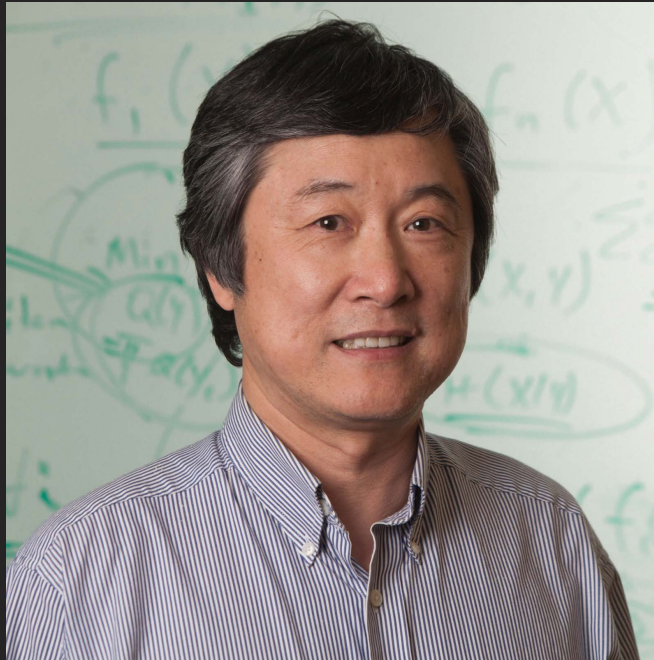


UCSB COMPUTER SCIENCE DEPARTMENT PRESENTS DISTINGUISHED LECTURE

LI DENG

FROM SPEECH AI TO FINANCE AI AND BACK



LI DENG

CHIEF AI OFFICER, CITADEL

ABSTRACT

A brief review will be provided first on how deep learning has disrupted speech recognition and language processing industries since 2009. Then connections will be drawn between the techniques (deep learning or otherwise) for modeling speech and language and those for financial markets. Similarities and differences of these two fields will be explored. In particular, three unique technical challenges to financial investment are addressed: extremely low signal-to-noise ratio, extremely strong nonstationarity (with adversarial nature), and heterogeneous big data. Finally, how the potential solutions to these challenges can come back to benefit and further advance speech recognition and language processing technology will be discussed.

BIOGRAPHY

Li Deng joined Citadel, one of the most successful investment firms in the world, as its Chief AI officer in May 2017. Previously, he was Chief Scientist of AI and partner research manager at Microsoft. He has also been an Affiliate Professor at University of Washington, Seattle (since 2000). He is a fellow of the IEEE, the Acoustical Society of America, and the ISCA. He was more recently elected to be a Fellow of the National Academy of Engineering of Canada, and a member of the Academy of Sciences of Washington State. In recognition of the pioneering work on disrupting speech recognition industry using large-scale deep learning, he received the 2015 IEEE SPS Technical Achievement Award "for Outstanding Contributions to Automatic Speech Recognition and Deep Learning." More recently, he received the 2019 IEEE SPS Industry Leader Award "for leadership in pioneering research and development on large-scale deep learning that disrupted worldwide speech recognition industry and for leadership in natural language processing and finance engineering." He also received numerous best paper and patent awards for contributions to artificial intelligence, machine learning, information retrieval, multimedia signal processing, speech processing, and human language technology. He is an author or coauthor of six technical books on deep learning, speech processing, discriminative machine learning, and natural-language processing. He was an elected member of the Board of Governors of the IEEE Signal Processing Society, and was Editors-in-Chief of IEEE Signal Processing Magazine and of IEEE/ACM Transactions on Audio, Speech, and Language Processing (2008-2014), for which he received the IEEE SPS Meritorious Service Award. He can be contacted via l.deng@ieee.org.

EVENT INFO

Wednesday, March 11, 2020

Corwin Pavilion

Talk @3:30PM

Reception@4:30PM
