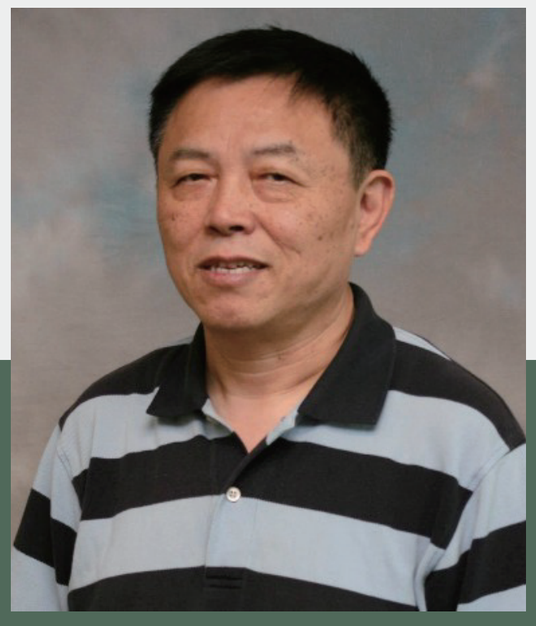
香 港 大 學
THE UNIVERSITY OF HONG KONG

Institute of Mathematical Research
Department of Mathematics

Frontiers of Mathematics Lecture
New Solution of the Golovin-Krause Conjecture

Abstract

In the study of adaptive optimization, adaptive submodularity plays an important role. Just as in the nonadaptive case, it is closely related to the performance of the greedy algorithm. In 2011, Golovin and Krause discovered that the influence maximization in a social network with myopic feedback model is not adaptive submodular. Despite this, they conjectured that the greedy algorithm still has a good performance; this conjecture was proved in 2019 by Peng and Chen. In this lecture I shall present a newly published solution, which relies heavily on a surprising connection between adaptivity and nonadaptivity on social influence maximization.



Professor Ding-zhu Du
University of Texas at Dallas

Biography

Ding-Zhu Du received his Master's degree in 1982 from the Chinese Academy of Sciences and Ph.D. in 1985 from the University of California at Santa Barbara. His research areas include optimization theory and mathematical foundation of computer science. As a researcher in mathematics and theoretical computer science, he has held positions with MSRI (Berkeley), MIT, Chinese Academy of Sciences, Princeton University, University of Minnesota, and NSF of USA; he is now a professor at the University of Texas at Dallas. He has spent leaves of absence at various institutions, such as Korea University, City University of Hong Kong, and Xi'an Jiaotong University. He has published over 260 journal papers and 10 books and has served on editorial boards of 15 international journals. He was granted the Natural Science Prize (First Class) of the Chinese Academy of Sciences in 1992, the National Natural Science Prize (Second Class) of China in 1993, and the CSTS award of INFORMS in 1998.

Date :
May 31, 2024 (Friday)

Time :
5:00 – 6:00pm
(Tea Reception starts at 4:30 pm)

Venue :
Lecture Theatre C, LG1/F,
Chow Yei Ching Building,
The University of Hong Kong

Enquiries:
Tel: 2859 2250
Email: enquiry@maths.hku.hk