# Lingnan University 嶺南大學 香港 Hong Kong

*Seminar*

**ECON** DEPARTMENT OF ECONOMICS

# "Information Design in Simultaneous All-pay Auction Contests"
### *(in English)*

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**Date:** 5 September 2019 (Thursday)
**Time:** 10:30 a.m. – 12:00 noon
**Venue:** WYL314, 3/F, Dorothy Y. L. Wong Building

**Abstract:** We study the information design problem of the contest organizer in a simultaneous 2-player 2-type all-pay auction contest environment, where players have limited information about own/others types or valuations of the prize. The contest organizer can send a public message to the contestants about the type distribution to persuade them to exert higher effort. We allow the players' ex-ante symmetric type distributions to be correlated, and the information disclosure policy to take the stochastic approach of Bayesian persuasion, which is a generalization of the traditional information disclosure policy. The optimal design, the structure of which depends on the degree of the correlation of players' types, is completely characterized and shown to achieve higher effort than the type-dependent information disclosure policy. Given players' types are private information, if there is a strong positive correlation, the optimal design consists of two posteriors with one representing a perfect positive correlation and the other representing a positive correlation identified by a cutoff condition; if there is a weak positive correlation or negative correlation between types, the optimal design consists of two posteriors with one such that both players being high types is impossible and the other representing a positive correlation identified by the cutoff condition. We also consider the case in which only the designer knows players' types and the case in which the type information is asymmetric between the two players. Welfare comparisons are conducted across different informational setups. Our work is the first study on full characterization of information design for games with two-sided asymmetric information and infinite action space.

**Biography:** Jie Zheng is Associate Professor in the Department of Economics and Executive Associate Director of the Tsinghua Economic Science and Policy Experimental Laboratory (ESPEL), School of Economics and Management, Tsinghua University. He is an Associate Editor for Journal of Economic Behavior and Organization and an Associate Editor for Research in Economics. Prof. Zheng received his Ph.D. in Economics from Washington University in St. Louis in 2011. His current research topics include rational bubbles, self-control, social preferences, reference-dependence, optimization in transportation systems and various topics on strategic interactions, experimental design and mechanism design. His research papers have been published in or accepted by journals including Nature Communications, American Economic Review (Papers and Proceedings), Games and Economic Behavior, Management Science, Experimental Economics, and Journal of Economic Behavior and Organization. In 2016-2018, Prof. Zheng received "Young Scholar's Innovations Award on Information Economics in China" from China Information Economics Society.

# All Are Welcome

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