

The Hong Kong University of Science and Technology
Department of Information Systems, Business Statistics and
Operations Management

Seminar Announcement

***Impact of Information Feedback in Continuous Combinatorial
Auctions: An Experimental Study of Economic Performance***

by

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Date: 24 June 2009 (Wednesday)

Time: 2:30 - 4:00 pm

Venue: Room 4379, ISOM Conference Room (Lift 17/18)

~~~~~ All interested are welcome ~~~~~

## **Abstract**

Advancements in information technology offer opportunities for designing and deploying innovative market mechanisms that can improve the allocation and procurement processes of businesses. For example, combinatorial auctions - in which bidders can bid on combinations of goods - have been shown to increase the economic efficiency of a trade when goods have complementarities. However, the lack of real-time decision support tools for bidders has prevented this mechanism from reaching its full potential. With the objective of facilitating bidder participation in combinatorial auctions, this study, using recent research in real-time bidder support metrics, discusses several novel feedback schemes that can aid bidders in formulating combinatorial bids in real-time. The feedback schemes allow us to conduct continuous combinatorial auctions, where bidders can submit bids at any time. Using laboratory experiments, we compare the economic performance of the continuous mechanism under three progressively advanced levels of feedback. Our findings indicate that, with the provision of appropriate feedback, it is possible to conduct efficient continuous combinatorial auctions. We also discuss in detail how the nature of feedback affects the distribution of the economic surplus among the bidders and the auctioneer. This study advances the ongoing research on combinatorial auctions by advancing the potential for implementing continuous auctions that provide exact prices of bundles to bidders. For practitioners, the study provides insights on how the nature of feedback can influence the economic outcome of a complex trading mechanism.

## **Biography**

Alok Gupta is a Professor and Chair of Information and Decision Sciences at the Carlson School of Management, University of Minnesota. His research has been published in leading journals in information systems, economics, and computer science such as *ISR*, *CACM*, *JMIS*, *Journal of Economic Dynamics and Control*, *Computational Economics*, *Decision Support Systems*, and *IEEE Internet Computing*. Professor Gupta was awarded the prestigious NSF CAREER Award for his research on dynamic pricing mechanisms on the internet. From 1999-2001, he served as co-director of Treibick Electronic Commerce Initiative (TECI), an endowed research initiative at Dept. of OPIM, University of Connecticut. He is also an affiliate of the Center for Research in Electronic Commerce (CREC) at the University of Texas at Austin.