

DO&IT Seminar Series

Speaker: Alok Gupta
Curtis L. Carlson Schoolwide Chair in Information Management
Department Chair, Information and Decision Sciences
Carlson School of Management, Univ. of Minnesota

Date: Friday, April 24, 2009

Time: 2-3:30 pm

Location: VMH 1335

Title: A Data-Driven Exploration of Bidder Behavior in Continuous Combinatorial Auctions

Abstract:

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 computational complexity of determining winners coupled with the cognitive complexity of formulating combinatorial bids has prevented this mechanism from reaching the online marketplace. Drawing from recent research in continuous combinatorial auctions, this study uses a data-driven approach to explore bidder behavior in such auctions using three experimental treatments that differ in the type of information feedback provided to participants. This study is the first to examine bidder strategies in complex combinatorial bidding environments. To do so, we collect not only the bids placed by bidders but also the clicks generated by the bidders as they explore different bundling options. Using cluster analysis, we find three stable bidder strategies across the three treatments. The different bidding strategies along with the nature of feedback have significant economic implications in terms of the surplus retained by the bidders themselves as well as the total revenue generated for the sellers. We believe that the enumeration of the strategies along with the analysis of their financial implications will help practitioners design better combinatorial auction environments.

Bio:

Alok Gupta is Curtis L. Carlson Schoolwide Chair in Information Management and department chairman of Information and Decision Sciences (IDSc) department at Carlson School of Management. He received his Ph.D. in Management Science and Information Systems from The University of Texas at Austin in 1996. He was an assistant professor from 1997-2001 at the

University of Connecticut and an Associate Professor from 2001-2005 at the Carlson School of Management. His areas of specialization include process management, data communication, electronic commerce, design and evaluation of electronic mechanisms and processes, mathematical modeling of information systems, large-scale systems simulation, and economics of information systems. His research has been published in various top ranked information systems, economics, and computer science journals such as Management Science, ISR, MIS Quarterly, INFORMS JOC, CACM, JMIS, Decision Sciences, Journal of Economic Dynamics and Control, Computational Economics, Decision Support Systems, IEEE Internet Computing, International Journal of Flexible Manufacturing Systems, EJOR and IJEC. He was rated among top 20 researchers in IS researchers in the world based on his publication activity in multiple studies published in 2006. He was a recipient of prestigious NSF CAREER award for his research in Online Auctions. He has consulted and performed research for several fortune 500 firms including GE capital, GE Supply and Northwest Airlines. 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. During 2000-2001, he served on the executive board of edgeLab – a joint educational environment created by University of Connecticut and GE. He is also an affiliate of Center for Research in Electronic Commerce (CREC) at University of Texas at Austin. He served as the academic director of Carlson Consulting Enterprise, at Carlson School of Management from 2004-2006. He serves on the editorial boards of several academic journals such as Management Science, ISR, JMIS, and DSS. He also holds the position of publisher of MIS Quarterly, the top rated journal in the field of MIS.