

NYU Stern School of Business
Department of Information, Operations & Management Sciences
IOMS Colloquium Series

TOPIC: How to elicit information when it is not possible to verify the answer

SPEAKER: David C. Parkes (Harvard University)

DATE: Wednesday, December 2, 2015

TIME: 12:30 PM – 1:45PM (Lunch served at 12:15 pm)

PLACE: KMC 4-60

ABSTRACT

A common challenge across domains ranging from marketing, digital experimentation, crowd-sourcing, participatory sensing, to peer grading in MOOCs is to elicit responses to information tasks. In these domains, forming an informative response is often costly, and there is no ground truth against which to score reports because information is subjective and local. The classical "peer-prediction method" proposes to make payments to agents based on how well their reports improves predictiveness about reports of others. But existing designs are not well suited to practice--- there are additional, uninformative equilibria with higher expected payment than truthful reporting (e.g., reporting "1" all the time!). In this work, we leverage reports across multiple tasks to design mechanisms that make truthful reports maximize expected payment, with uninformed strategies achieving strictly less expected payment than truthful reports, and generalize results in Dasgupta-Ghosh (2013) from binary to multiple signals. In an analysis of peer-grading data from a large MOOC platform, we investigate how well student reports fit our model, and evaluate how the proposed mechanisms could perform in practice.

BIO:

David C. Parkes is Harvard College Professor, George F. Colony Professor of Computer Science, and Area Dean for Computer Science in the John A. Paulson School of Engineering and Applied Sciences at Harvard University, where he leads research at the interface between economics and computer science, with a focus on electronic commerce, artificial intelligence and machine learning, and where he founded the EconCS research group. He is a AAAI Fellow and a recipient of the NSF Career Award, the Alfred P. Sloan Fellowship and the Thouron Scholarship. Parkes received his Ph.D. in Computer and Information Science from the University of Pennsylvania in 2001, and an M. Eng. (First class) in Engineering and Computing Science from the University of Oxford in 1995. Parkes has served as chair of the ACM Special Interest Group on Electronic Commerce (2011-15) as well EC'07, AAMAS'07, EC'10, WINE'13 and HCOMP'14. Parkes serves as an editor of Games and Economic Behavior and on many other editorial boards (JAAMAS, JAIR, TEAC, J. Computing). A technical advisor to Nanigans and Nift, Parkes also serves on several international scientific advisory boards, including the

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