

Mini-Track Introduction: Society, Information, Technology and Economics

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This mini-track is founded on information economics and competitive strategy thinking. Its current emphasis is on leading problems with IT, social networks, information, mechanism design, and other issues that are important in society.

We will begin with papers that use analytical models from Economics. Shunyang Lee, Liangfei Qiu and Andrew Whinston explore “The Perils of Online Manipulation,” and online platform abuse. They examine the reliability of social sentiments for movie reviews. Thomas Weber considers “The Question of Ownership in a Sharing Economy.” He models durable goods sharing in a dynamic ownership economy. Sharing decisions are made based on the realized needs of agents in the economy, who purchase first and later decide about sharing. He compares performance for sharing versus no sharing after purchase. Liangqiu Fei, Huaxia Rui and Andrew Whinston model what happens “When Cellular Capacity Meets Wi-Fi Hotspots: A Smart Auction System for Mobile Data Off-Loading.” They analyze how to serve surging mobile data traffic based on social networking and video streaming. The surge of social networking and video streaming on the go has led to the explosion of mobile data traffic. They propose a procurement mechanism with contingent contracts for cellular service providers to leverage the advantages of cellular and Wi-Fi resources and assess it with modeling and simulation.

The second session has empirical papers. Reza Mousavi and Bin Gu assess “The Impact of Twitter Adoption on Decision-Making in Politics.” They use panel data for members in the 111th U.S. House of Representatives. They estimated the impact of joining Twitter for decision-making in politics. Soyoung Yoo and Ingo Han’s paper, “The Role of Environmental Information Disclosure Systems and Their Impacts on Firm Performance.” They study how managerial activities aimed at improving sustainability by mitigating the release of toxic chemicals, while considering the impacts on manufacturing and cost performance, and the market value of firms. Finally, Indika Dissanayake, Jie Zhang and Bin Gu evaluate “Virtual Team Performance in Crowdsourcing Contests” from a social networking perspective. The contests they study involve self-organized virtual teams that compete for money. They assess how team’s social network structure of a virtual team impacts its performance, using measures of the social and intellectual capital of the members.

The third session shifts to experiments and management science. Mathew Hashim and Jesse Bockstedt contributed “Overcoming Free-Riding in Information Goods: Sanctions or Rewards?” They ran a lab experiment to assess how rewards and sanctions affect free-riding behavior by individuals and groups in a public goods game. Sanctioning the worst free-rider causes that agent to diminish its free-riding, with little impact on others. Rewarding the best contributor leads to more free-riding overall. The next paper, “Improving Internet Security Through Mandatory Information Disclosure,” is by Qian Tang and Andrew Whinston. They propose a mandatory disclosure mechanism with rankings based on available Internet data. Their experimental analysis is done using a public website with an experiment on whether spam negatively impacts the mechanism’s performance. Last, Zhiling Guo, Rob Kauffman, Mei Lin and Dan Ma present a new “Mechanism Design for Near Real-Time Retail Payment and Settlement Systems.” They explore how a hybrid design involving deferred net settlement and real-time gross settlement can reduce participants’ liquidity needs in a payment system. They blend management science, simulation and experiments to assess conditions that influence the mechanism’s performance.

Two issues papers wrap up the mini-track by discussing oil price shocks and online privacy. Stefan Feuereigel, Sebastian Heltzmann and Dirk Neumann pose the question: “Do Investors Read Too Much into News?” They explore how news sentiments in social media may cause price adjustments in the oil market. They use an IV regression and a VAR model, and the role of news on terrorist attacks, to assess the impact of sentiments. The final paper is a comparative international study, by Eric Clemons and Josh Wilson, who look at “Students’ and Parents’ Attitudes towards Online Privacy.” They found that parents in eight different countries expressed concerns that young people on the Internet are exposed to too much data mining. They were not aware of how different online contexts inappropriate data mining play a role though. They further report that students’ aversion to data mining in the U.S., seems only to arise as a result of very negative personal experiences, embarrassment and shock.

We nominated two papers this year for the Best Paper Award. They are by: Fei, Rui and Whinston on cellular traffic management; and Mousavi and Bu on the impacts of Twitter on political decision-making.