Information Technology and Market Structure

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The Information Technology and Market Structure mini-track appears for the first time at HICSS-30. The rapid development of electronic markets for products and services such as flowers, airline tickets, computer equipment, home mortgages, and financial securities has stimulated research and practitioner interest in the design and structuring of on-line markets. Many challenging questions in economics and information systems are developing as a result of the profound changes that IT can have on market institutions, the mechanisms for trading, and the competitive positioning of market participants.

In a number of prominent examples, screen-based markets have led to substantial improvements in the operations of markets. Market technology can

- play the role of intermediary, bringing buyers and sellers together directly
- enable innovations in price discovery to be applied — e.g., "Dutch" auction price-setting mechanisms
- enhance price dissemination and enable more potential participants to remain informed
- expand markets' size and reach

The mini-track session will feature three presentations. The first, by Robert A. Schwartz, is "Technology's Impact on the Equity Markets" (presentation only). The talk will examine the impact of IT on markets from the perspective of the financial economics and market microstructure fields. IT has led to many new alternatives to the traditional stock exchanges for facilitating trading. IT also introduces new controversies into the financial markets, and raises challenging questions for regulators and market providers (e.g., stock exchanges, market data vendors, and proprietary trading systems (PTSs)).

The second presentation is "New Entrants and the Role of Information Technology: A Case Study of the Tele-Flower Auction in the Netherlands" by Eric van Heck, Eric van Damme, Jack Kleijnen, and Piet Ribbers from Tilburg University in the Netherlands. The authors' paper examines the entry of a new screen-based rival to the traditional Dutch flower auction houses. Changes in market characteristics and the impact on buyers and growers are described in detail, and several principles about inter-market competition emerge.

The final paper is "Combining Quote-Driven and Order-Driven Trading Systems in Next-Generation Stock Markets: An Experimental Investigation" by Robert A. Schwartz and Bruce W. Weber. The authors use a computerized market simulation to capture data on subject-traders' decision-making under alternative sets of market conditions. The market studied is a dealer market, to which is added a limit order facility (a change that is expected in the Nasdaq and the London SEAQ markets). The introduction of a limit order facility is shown to benefit investors and disintermediate some trading activities.

The following topics in IT and Market Structure will continue to be of interest:

- The effectiveness of new markets and the productivity of traders, intermediaries, and organizations participating in the markets
- Market structure alternatives and the appropriate mechanisms and rules for organizing trading
- Information endowments, transparency, and profitability — how does private information affect trading strategies and the profitability of the these players?