

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

Seminar Announcement

***The Quest for Content: How User Generated Links  
Can Facilitate Online Exploration***

by

***Professor Gal Oestreicher-Singer  
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**Date: Thursday, 1 December 2011**

**Time: 2:30 – 4:00 pm**

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

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**Abstract:** Online content and products are often presented as a product network, where nodes are product pages linked by hyperlinks (e.g., books on Amazon.com). These links are often generated by collaborative filtering algorithms and are based on aggregated data. Recently, websites have begun to offer social networks and user-generated links alongside the product network, creating a dual network structure. We investigate the role of this dual network structure and propose a way in which user-generated links can facilitate content exploration.

Focusing on YouTube.com as an example of an online content site, we analyze the site's dual network and show that user pages have unique structural properties (e.g. high betweenness centrality) and act as content brokers in the dual network. Next, we create a synthetic dual network and show that random rewiring of the product network cannot replicate the brokering effect of the user-generated links of the real-world dual network. We present five internet studies in which consumers browse a YouTube-based website and are exposed to different conditions of recommendations. Our first two studies show the effect of different structures on the efficiency of the exploration process (time to desirable outcome) and its effectiveness (average product rating and overall satisfaction). We extend those studies to include dynamic structures, in which the underlying site structure changes as a function of time and in response to participants' satisfaction. Our findings suggest that using a dynamic mechanism leads to an increase in consumers' ratings of the products as well as to higher overall satisfaction.

Joint work with Shachar Reichman (MIT) and Jacob Goldenberg (Hebrew & Columbia University)

**Bio sketch:** Gal Oestreicher-Singer is Assistant Professor at Tel Aviv University's Recanati Graduate School of Business Administration. Her research studies the effects of visible networks on electronic markets and the economics of digital rights management. Her prior research has won the 2008 ACM SIGMIS Best Dissertation Award, an EU Marie Curie Early Career Award, an INFORMS CIST Best Paper Award, an ICIS Best Overall Paper award, a MSI-WIMI User Generated Content Research Competition Award, and the Google-WPP Marketing Award. She received her Ph.D. from NYU in 2008, and holds degrees in law and electrical engineering from the Hebrew University in Jerusalem and Tel Aviv University.

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