WEBEIS 2018 Presentation Abstracts

1. Sagit Bar-Gill (Sloan School of Management, MIT)

Title: The Impact of Social vs. NonSocial Referring Channels on Online News Consumption

Abstract: The digitization of news markets has created a key role for online referring channels. This research combines field and lab experiments, and analysis of large scale clickstream data, to study the effects of social versus non-- social referral sources on news consumption in a referred news website visit. We propose that referring channels generate a new type of priming effect, denoted the referrer effect, as unique features of the referrer affect user behavior in a subsequent news visit. We find that social media referrals promote focused reading articles, shorter durations, yet higher reading completion rates – visits with fewer compared to nonsocial referrals. Furthermore, social referrals decrease news sharing propensity, due to lower perceived novelty to peers of content discovered via social media. The results provide insights applicable to news outlets' social media strategies, and speak to ongoing debates regarding biases arising from social media's growing importance as an avenue for news consumption.

2. Rodrigo Belo (Rotterdam School of Management, Erasmus University)

Title: Referral Programs for Platform Growth: Evidence from a Randomized Field Experiment

Abstract: In this paper we use data from a randomized field experiment in an exclusive online dating site to study the effect of user get-user referral program on platform growth. We find that stricter policies, i.e., policies that require users to invite more friends so that they can continue using the service for free, are more effective not only at contributing to platform growth in terms of the total number of users, but also at fostering paid memberships. We also find that this effect is persistent across network of users. However, these benefits appear to come at the cost of reduced level of user engagement on the platform, potentially decreasing its value. Our findings demonstrate that referral program works as a double-edged sword. We discuss the mechanisms that may be at play and implications for business.

3. Marios Kokkodis (Carroll School of Management, Boston College)

Title: Purchase Verification in Review-Based Reputation Platforms: Does it Really Matter?

Abstract: Online ecommerce platforms struggle to identify and validate authentic reviews. One of the mechanisms that such platforms deploy utilizes a so-called "verified purchase" badge, in which the ecommerce platform confirms that the user writing the review actually purchased the product from the platform. Despite the widespread use of these verified purchase badges (e.g., Amazon.com, Expedia.com, etc.), little research has actually examined their effect on the reviewing ecosystem. In this work, we draw on Assimilation-Contrast Theory to hypothesize that (1) verified reviews are all else equal more positive than non-verified ones, and that (2) non-verified reviews are of higher linguistic quality than the verified ones. In addition, because the verified purchase badge discourages positive fake

reviews, its introduction has an overall negative impact on the product ratings, particularly on lower quality products. We use a unique natural experiment setup, along with a set of 4.3 million Amazon.com reviews and a series of robustness checks to verify our set of hypotheses. Taken together, our results suggest somewhat paradoxically, that the most significant effect of verified purchase badges are not on the verified reviews themselves, but on the quality and type of the non-verified reviews.

4. Tingting Nian (Paul Merage School of Business, UC Irvine)

Title: Can (S)he Code? Gender Bias in an Open Source Software Community

Abstract: It is well-documented that women are underrepresented across all STEM fields and particularly in computing. Amongst the many factors that impact women's lack of participation in computer science-related fields, previous research identifies the negative stereotype about women's abilities is one of the leading reason. In order to scientifically examine the issue of gender bias in online open source software communities, our study investigates whether and to what extent there exists a gender bias in the programming question-and-answer site, Stack Overflow. We employ a difference-in-differences approach to estimate the effects of gender bias by comparing the average monthly votes before and after users revealed their gender as female, a signal communicated through a female-sounding name or a female-looking picture. Our results reveal a net discrimination of 0.4 votes per month against female participants, statistically significant at the one percent level. We also found evidence suggestive of the statistical discrimination at work. On the contrast, as users reveal their gender as male, they receive an increase of votes following the gender-revealing change.

5. Tianshu Shun (Marshall School of Business, USC)

Title: Monetizing Sharing Traffic via Incentive Design: Evidence from A Randomized Field Experiment

Abstract: Despite the large volume of social shares on online platforms, there is an absence of research systematically investigating how firms can monetize such sharing traffic. In this study, we examine whether and how firms can engage social sharers and monetize sharing traffic by designing shareable and non-shareable incentives. We conduct a large-scale randomized field experiment to test the effectiveness of different incentive designs in converting social sharing senders and recipients into buyers. We find that incentive designs have significant impact on both senders' and recipients' purchases, but in different ways. Specifically, providing senders with one non-shareable promo code significantly increases their purchase likelihood. In contrast, the senders who receive one shareable code are less likely to make purchase themselves, but are much more likely to make further referrals, leading to increase in recipients' purchase likelihood. We further explore the role of the sharing motives underlying the senders' sharing behavior – self-regarding motive, other-regarding motive, or group-regarding motive. We find evidence that the impacts of these different incentive designs depend on the underlying sharing motives as indicated by the senders' past behaviors. Our study provides practical implications on monetizing sharing traffic and sheds light on the theoretical underpinnings of social sharing.

6. Karthik Kannan (Krannert School of Management, Purdue University)

Title: Generalized Second Price Auction with Market Frictions: A Computational-Experimental Investigation of Auction's Efficiency and Bidding Behavior

Abstract: Generalized Second Price Auction (GSP) is the most preferred mechanism for sponsored search auctions because of its theoretical properties that derive higher revenue and efficient allocation. However, previous studies do not consider the role played by market frictions on the auction outcomes. We specifically study the effect of these frictions on the auction's efficiency and the bidding behavior. We resort to a two-fold strategy of conducting a human subject experiment, and further validating these results using 'digital twin' computational agents, modeled using a reinforcement learning algorithm. We find that the lower valued players, who do not win the auction, substantially overbid, contrary to the theoretical prediction. Moreover, we find that the presence of market frictions moderates this phenomenon and results in higher efficiency. These results have implications for policy makers and auction platform managers in designing incentives for more efficient auctions.

7. Yili (Kevin) Hong (W. P. Carey School of Business, Arizona State University)

Title: On Home Bias in Online Employment: Evidence from a Quasi-Natural Experiment

Abstract: We study the nature of home bias in online employment, wherein the employers prefer workers hailing from the same home countries. Using a unique large-scale dataset from a major online labor market containing employers' consideration sets of workers and their ultimate selection of workers, we first estimate employers' home bias in their online employment decisions. Moreover, we find that employers from countries with high traditional values, lower diversity, and smaller platform user base (or size of country population), tend to have a stronger home bias. Further, we disentangle two types of home bias, i.e., statistical and taste-based home bias, using a quasi-natural experiment wherein the platform introduces a monitoring system to facilitate employers to easily observe workers' effort in time-based projects. After matching comparable fixed-price projects as a control group using coarsened exact matching, our difference-in-differences estimations indicate that the home bias in online employment is primarily driven by statistical discrimination.

8. Linli Xu (Carlson School of Business, University of Minnesota)

Title: There's No Free Lunch: The Effect of Advertising on Word-of-Mouth

Abstract: Advertising is often purchased with the expectation that the ads will generate additional social impressions that will justify the high price of advertising. Yet academic research on the effect of advertising on WOM is scarce and shows mixed results. We examine the relationship between monthly Internet and TV advertising expenditures and the total (offline and online) word of mouth (WOM) for 538 U.S. national brands across 16 categories over 6.5 years. We find that the average implied advertising elasticity on total WOM is small: 0.016 for TV, and 0.010 for Internet. Combining elements from matching and difference-in-differences, we further use a synthetic control approach to estimate the average treatment effect of being a Super Bowl advertiser. In this setup, brands that advertised

during the Super Bowl are treated units while those that did not are control units. We find that being a Super Bowl advertiser increases monthly total WOM by 16% in the month of and 22% in the week after the Super Bowl. The effects last for one month. Furthermore, the online social media posts respond even more than total WOM including an average increase of 68% on the day of the Super Bowl, but the effect lasts for only three days.

9. Laura Brandimarte (Eller College of Management, University of Arizona)

Title: Are Infrastructural Solutions to the Analog Keyhole Problem Worth the Cost?

Abstract: The analog keyhole problem consists in displayed information being potentially intercepted and interpreted by a new, increasingly capable and increasingly prevalent class of perceptually-capable devices. A simple response to this problem is to modify one's behavior to avoid perceptually-capable devices - for example, to avoid coming into view of a smart sign that uses a camera to perform face recognition, or to speak differently (or not at all) around a smart speaker that can understand some of your speech. To convince users not to make use of such avoidance behaviors, systems making use of perceptually-capable devices may provide a privacy infrastructure to enforce users' individual permissions. The trade-off for the cost of adding a privacy infrastructure to a perceptually-capable system is partly a matter of the extent to which the infrastructure's presence displaces privacy-seeking behaviors that reduce the system's value, such as not engaging naturally with the system, damaging it, or avoiding its use altogether. In this paper we present a study addressing whether users trust infrastructural approaches to privacy protection for perceptually-capable devices. We created a smart sign system that recognizes faces, and adapted to it a privacy infrastructure that we designed for general use in experimental studies of privacy with perceptually-capable devices. We measure trust with avoidance behavior in walking trajectories relative to the region visible to the smart sign's camera, comparing groups who are given varying amounts of control with privacy permissions, including none at all.