NATIONAL UNIVERSITY OF SINGAPORE  
School of Computing  
PH.D DEFENCE - PUBLIC SEMINAR  

Title: Creating Value on Large Online Social Network Sites (SNS): The Case for Users, Providers and Advertisers  

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Abstract:  
Social media and, in particular, online social network sites (SNS) have emerged as some of the most popular venues on the Internet. With the rapid growth of SNS, a wide range of stakeholders from individual users to the platform owners, digital marketers and policy makers have become interested in understanding how user engagement on these platforms generate value for them. While there has been a growing stream of scholarly work in the area of value creation in organizational settings, this dissertation contributes towards developing (i) an understanding of what constitutes "value" on large and online social networks, and (ii) how users engage with each other, as well as with the platform to create such value for the different stakeholders. In this dissertation, I have taken a computational social science approach to studying three instances of such value creation on the SNS, aimed at (i) external brands and advertisers, (ii) the SNS users and (iii) the SNS provider respectively. In my first study, I analyzed the act of joining a brand-sponsored fan-page on a large SNS and presented evidence that the offline purchasing behavior of users after joining the fan page is associated with specific types of user motivations (e.g. self-presentation) for participating on the SNS. Further, I offered text-mining based methods to identify user groups based on these motivations, and econometric models to study the offline purchase behavior of these groups. In my second study, I investigated how network effects (e.g. homophilous friendship formation, peer-influence etc.) impact users? content generation behavior on the SNS, by jointly estimating the evolution of the users? network structure and content posting behavior, using a structural model. In my third and final study, I exploited the introduction of new privacy controls by a major SNS as a quasi-experimental context to study the impact of this intervention on users' content production behavior. While past studies have highlighted the importance of studying privacy-related interventions in online contexts, this is among the first empirical attempts at quantifying its effects on user behavior, in the presence of potential network confounds.  

Through my dissertation research, I have attempted to not only raise and address important
questions about how users create value on SNS for various stakeholders, but also emphasized how computational methods can complement more traditional social science approaches in trying to answer these questions. For example, the first study in my dissertation employs a combination of text mining techniques and reduced-form econometric models. The second uses a stochastic structural model, while the third applies this structural model in a real world quasi-experimental setting to make stronger claims on causality.