

Industrial and Systems Engineering Seminar

Managing Service Systems in the Presence of Social Networks

Wednesday, February 11

3:15 PM – Refreshments before the Seminar

3:30 PM – Graduate Seminar

Mechanical Engineering Room 4125 A & B



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We study the optimal service differentiation policy for service organizations with the presence of social networks. In our framework, customers' beliefs of the service quality evolve over time according to their own experiences and the reported experiences from their friends in the network. We characterize the conditions under which such belief system converges and the corresponding optimal service differentiation policy. Our main results can be summarized as follows. First, contrary to the existing literature, we show that, when customers directly report their experiences, the importance of a customer only depends on his economic value and his friends' economic values. In other words, the optimal policy only needs first-order friendship. Second, we demonstrate that the value of knowing social network structures critically depends on the correlation between customers' economic and social values. The social network value is higher if the correlation is lower. Third, we use a novel data set with more than 15,000 customers to show empirically that for many service providers, specifically those targeting mid and high end customers there are negative correlations between the social values and economic values of their customers. WE also provide an intuitive explanation, with empirical justifications, of the differences between firms' correlations.

Bio: Gad Allon is a Professor of managerial economics, decision science, and operations management at the Kellogg School of Management at Northwestern University. He received his PhD in Management Science from Columbia Business School in New York and holds a Bachelor and a Master degree from the Israeli Institute of Technology. His research interest include operations management in general, and service operations and operations strategy in particular. Professor Allon has been studying models of information sharing among firms and customers both in service and retail settings, as well as competition models in the service industry.