

Marketing Research Seminar Series | Department of Marketing | WU Vienna

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November 9th, 2017 | 14:30 – 16.30 | TC.5.18

***Targeting and Retargeting Promotions and Machine Learning:
Mobile Big Data Analytics***

Abstract: There is a surge of academic and industry interests in big data analytics and machine learning. However, for any prudent insights from big data, it is necessary to establish the causal impact. Thus, this seminar talk is to map out a methodological framework with three steps for such purpose. First, randomized field experiments and hierarchical Bayesian estimations are conducted to identify causal effects of important and interesting treatment variables such as mobile targeting and retargeting. Second, causal random forest, structural hidden markov model, and dynamic trajectory modeling can be leveraged to detect heterogeneity in the causal effects. Third, game theory equilibrium can be utilized for competitive targeting with optimal prices, while dynamic programming, optimization learning and artificial intelligence algorithms are used to individualize advertising and promotion offers to each customer for maximized returns.