

Meeting: 1003, Atlanta, Georgia, MAA CP T1, MAA Session on Mathematics Experiences in Business, Industry, and Government

1003-T1-1156 **Tracy A Bibelnieks*** (bibelnie@augsborg.edu), Augsburg College, 2211 Riverside Ave, CB#276, Minneapolis, MN 55454. *Optimizing the Retail Experience: A New Frontier for Applied Mathematics.*

With the advent of new technologies for the manufacture of goods, the emphasis on cost effective production as a primary means to achieve profitability is being challenge with a new and upcoming # 1 focus: improve customer experience. Here the focus is on developing innovative marketing strategies that improve customer satisfaction, increase customer retention and in-store customer services that, in turn, increase profitability. It is clear that winning marketing strategies are those that are tailored to fit the individual characteristics of consumers. In response, retail firms now seriously leverage mathematical analysis of historical purchase and transaction for their customers as a means to drive individualized printed and e-version marketing, optimize allocation of marketing dollars, choose store locations, optimize store layouts, and design effective e-retail practices. The result is a new application of mathematics to what retail industries term campaign management. This talk will present specific examples of the use of linear programming to problems from direct mail and retail industries to illustrate the innovative nature of the approach as well as demonstrate why this is a practical and cutting-edge business intelligence technology/application. (Received October 04, 2004)