Speaker: Aurelie Thiele, Lehigh University
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Optimal facility in-network selection for healthcare payers under reference pricing

Abstract: Healthcare payers are exploring cost-containing policies to steer patients, through qualified information and financial incentives, towards providers offering the best value proposition. With Reference Pricing (RP), a payer or insurer determines a maximum amount paid for a procedure, and patients who select a provider charging more pay the difference. In a Tiered Network (TN), providers are stratified according to a set of criteria (such as quality, cost and sometimes location) and patients pay a different out-of-pocket price depending on the tier of their chosen provider. Motivated by a recent CalPERS program, we design two original MIP optimization models for payers that combine both RP and TN, filling the gap of quantitative research on these novel payment policies. Carefully designed constraints provide the decision maker with levers for a trade-off between cost reduction and patients' satisfaction. Numerical experiments provide valuable insights in that respect, displaying also how the tiers are scattered on a cost/quality plane. We argue that this system has strong potential in terms of costs reduction for public or private payers, quality increase for patients and visibility for high-value providers. (Joint work with Victoire Denoyel and Laurent Alfandari of ESSEC Business School.)

Bio: Aurelie Thiele is a Visiting Associate Professor at the Sloan School of Management for the 2014-15 academic year and an Associate Professor in the Department of Industrial and Systems Engineering at Lehigh University, where she also serves as co-director of the Master’s in Analytical Finance Program. She is a Certified Healthcare Financial Professional (CHFP) and holds a MS and PhD from MIT and a “diplome d’ingenieur” from the Ecole des Mines de Paris in France. Her research is on decision-making under high uncertainty with applications to healthcare finance. The recipient of an IBM Faculty Award, a Lehigh Faculty Innovation Grant, a P.C. Rossin Assistant Professorship and multiple NSF grants, she currently serves on the organizing committees of the 2015 INFORMS Analytics conference (Huntington Beach, CA) and the 2015 INFORMS Annual Meeting (Philadelphia, PA).