Smart Cities: Data and Decision science for parking management

Robert Hampshire, University of Michigan Transportation Research Institute

Parking management has been a vexing problem for cities since the invention of the automobile. Among the concerns are traffic congestion, air pollution, and greenhouse gas emissions caused by drivers searching for available parking—an activity colloquially known as cruising. Recently, there has been a wave of interest in effective curb parking management, particularly through performance-based pricing, has arisen in cities as diverse as Seoul, Mexico City, New York, Seattle, Los Angeles, and Budapest. The movement is exemplified by San Francisco, which introduced variable priced parking to improve space availability and reduce cruising. I will present some empirical observations, stochastic models, simulation models, statistical methods and pricing optimization results for the management of parking. This work has inspired the deployment of several parking management programs around the work.