THE VALUE OF AUTONOMOUS VEHICLE-AIDED LAST-MILE DELIVERY

When: Tuesday, Feb. 26th, 11am-12pm **Where:** Main 228

Abstract: The act of parking is estimated to cost Americans $72.7 billion per year in time, fuel and emissions. On average, a driver spends nine minutes per search for a parking spot which accumulates to approximately 17 hours a year of lost time. Research has shown that delivery drivers often engage in illegal behavior such as double parking to avoid the lost time. With e-commerce and the associated deliveries likely to exacerbate the problem, companies are seeking solutions. One option is to pair delivery drivers with autonomous vehicles because the autonomous vehicle can remain in continuous use while the delivery person delivers packages. In this talk, we demonstrate how to exploit special properties of this Capacitated Autonomous Vehicle Assisted Delivery Problem on a grid to help quantify the value of autonomous assisted delivery. We also discuss the analogous, and not yet unexplored in the literature, parking version of the problem, demonstrating the differences in solution structure and challenges in solving the problem.

Speaker: Barrett W. Thomas
Barrett Thomas is a professor at the Tippie College of Business, University of Iowa. His research focuses on finite horizon stochastic dynamic programming, heuristic search, logistics and vehicle routing