

Location Selection and Investment Sequencing for Transit Priority

Ilgin Guler, PhD

Associate Professor of Civil and Environmental Engineering
Pennsylvania State University

Friday, February 3, 2023 • 11:00 am–12:00 pm (US Arizona)

Hybrid Attendance Options:

In-person: College Avenue Commons (CAVC) • Room 333 ([map](#))

Register for Virtual Attendance: <https://bit.ly/3Dhro6d>



About the Talk

Many urban areas rely on bus transit to provide mobility to people. Transit priority strategies can be used to improve bus operations. However, implementing transit priority applications can often increase the delay of non-transit modes. Hence, the system-wide benefits or impacts of transit priority applications (TPA) are typically unknown. Moreover, the impacts and benefits of TPAs can change the mode and route choice of network users. This relationship between the effects of TPAs on traffic and behavior of the network users makes accurate evaluation of TPA locations challenging. In this talk, a bi-level location optimization algorithm that can evaluate and optimally select locations of TPA applications will be presented. Further, the accuracy of the optimization process is also addressed by testing different metaheuristic methods to identify an optimization method that can account for the interdependencies between TPA locations.

About the Speaker

S. Ilgin Guler is an Associate Professor in the Department of Civil and Environmental Engineering at the Pennsylvania State University. Her research interests include multi-modal urban traffic operations and control, intelligent transportation systems, connected and autonomous vehicles and infrastructure management. She received dual B.S. degrees from Bogazici University, Istanbul, Turkey in Civil Engineering and Industrial Engineering and Operations Research. She received her M.S. and Ph.D. degrees from the University of California, Berkeley in Civil and Environmental Engineering. After completing her Ph.D., she served as a post-doctoral scholar in the Institute of Transport Systems and Planning at ETH Zurich, Switzerland. Dr. Guler has over 10 years of research, teaching and industry experience on traffic operations.

This seminar will be presented in-person and webcast live to a worldwide audience using Zoom.

To register for the webinar, please visit: <https://bit.ly/3Dhro6d>

Recordings of all sem(web)inars may be accessed by semester at <https://tomnet-utc.engineering.asu.edu/seminars/>.

For any assistance, please contact Irfan Batur at ibat@asu.edu