This webinar will discuss research on developing real-time algorithms to reduce traffic congestion and improve routing efficiency by offering personalized incentives to drivers. The research exploits the wide accessibility of smart communication devices and develops a real-time look-ahead incentive mechanism using individuals' routing and aggregate traffic information, verified by real data.

Incentives and alternative routes should be chosen smartly in order to maximize the probability of acceptance by the driver and to avoid the creation of new congestion in other areas of the network.

Meisam Razaviyayn is an assistant professor of Industrial and Systems Engineering with courtesy appointments at the Electrical and Engineering Department and the Computer Science Department at USC. His research interests include the design and analysis of large-scale optimization algorithms arising in modern data science era.

Ali Ghafelebashi is a third-year Ph.D. student at USC. He obtained his B.S. in Industrial Engineering from the Amirkabir University of Technology in 2018. He was granted the FOE (Faculty of Engineering) prize for the 1st GPA at the Department of Industrial Engineering for three-year sequence. Ali’s research interests lay in optimization and transportation.

METRANS' mission is to Solve Transportation Problems of large metropolitan regions through interdisciplinary research, education and outreach.