

The FMRI and ITE Student Chapter at FAU Presents:

Optimization of School Bus Operations

Lecture Presentation By:

ALI HAGHANI, Ph.D. University of Maryland – College Park



Abstract: Transporting elementary, middle, and high school students on a daily basis presents a large and complex problem. Some school districts use existing software systems to develop their bus routes. Others still develop these routes manually. In such problems, improving operational efficiency even a little could result in great advantages. Each school bus costs school districts somewhere between \$60,000 and \$100,000. So, scheduling the buses more efficiently will result in significant monetary savings. Over the past few years, we have been working with several school districts in Maryland and elsewhere to analyze their transportation system and recommend ways to improve it. We have developed several mathematical models to optimize school bus operations. In this presentation, we will describe some of these models and the results of their applications in real-world operation.

Presenter Bio: Ali Haghani holds a B.Sc. degree in civil engineering from Pahlavi (Shiraz) University in Iran and a Master's and a PhD degree in civil engineering with concentration in transportation from Northwestern University. He was the Department Chairman from August, 2003 through December, 2013 and the Director of Center for Integrated Transportation Systems Management (CITSM) at the University of Maryland from February, 2010 to June, 2013. Dr. Haghani has over thirty years of experience in research and education as well as vast experience in managing research programs and administrative expertise. He has managed numerous research contracts totaling over \$30 million and has completed many research projects for several sponsors including Maryland State Highway Administration, Maryland Mass Transit Administration, and Federal Highway Administration. Dr. Haghani is an expert in Intelligent Transportation Systems, freight transportation and logistics, emergency response, dynamic fleet management, real time network optimization, mass transit operations, and traffic data collection, analysis and evaluation. Dr. Haghani has served as the chairman of the TRB Committee on Transportation Network Modeling. He is a member of the Institute of Transportation Engineers, and the Institute for Operations Research and the Management Sciences. Dr. Haghani has also served as a member of the Editorial Advisory Board of *Transportation Research* and is currently Associate Editor of the *Journal of Intelligent Transportation Systems*.

Date: February 15, 2019

Time: 11:00 AM

Place: Building #4 (Instructional Services),

Room 101 Transportation Lab

