



**UAA College of Engineering**  
UNIVERSITY of ALASKA ANCHORAGE



UAA Professional Development Seminar Series

## **Applications of Lidar on Traffic Engineering**

Presented by Dr. Vinod Vasudevan,  
Associate Professor UAA

Lidar has been used extensively in the areas of mapping and surveying. In transportation, lidar is one of the primary sensors for autonomous vehicles. Since lidar collects high-density point clouds at high frequency, they offer huge potential to capture details that otherwise would not have been possible. However, lidar data are not easy to work with. For example, since LiDAR captures point clusters and does not provide unique ids for objects, one must develop various analysis techniques to detect and track static and dynamic objects around it. This presentation provides an overview of lidar, its data, challenges associated with analyzing the data, and ways to extract useful information from a traffic engineering perspective.

Dr. Vinod Vasudevan is an Associate Professor of Civil Engineering at the University of Alaska, Anchorage (UAA). Prior to joining UAA in 2018, he served as a faculty of Civil Engineering at the Indian Institute of Technology Kanpur (IITK) for over 8 years, and as an Associate Research Engineer and Program Manager at the University Transportation Center (UTC) at the University of Nevada, Las Vegas (UNLV) for over 6 years. He has over 18 years of research experience in the areas traffic safety, algorithms for LiDAR data, naturalistic driving studies, transportation economics, transportation system planning, Geographic Information Systems (GIS) applications, traffic operations, and highway financing. Dr. Vasudevan earned his master's and doctoral degrees from SUNLV. As a faculty of Civil Engineering, he has led 18 courses, including 9 undergraduate courses and has guided over 25 graduate students, including 2 Ph.D. students. He has published over 60 peer-reviewed articles, of which, 23 are journal articles. Dr. Vasudevan has led over 20 research projects worth over \$2 million either as a PI or as a co-PI. Dr. Vasudevan has been active professionally. He was elected as the President of ITE Nevada Chapter in 2009. Currently he serves a member of various technical committees at the TRB. Dr. Vasudevan is a registered professional engineer in the state of Nevada.

**Friday, September 18, 2020**

**11:45 am-12:45 pm**

Online Via [YouTube Live](#)