



# Osama Mohammed

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ADVISOR/MENTOR: Dr. Kianfar  
SPONSOR/GRANT: Parks Graduate Assistantship  
PROGRAM START: Spring 2016

## BIOGRAPHY

Osama joined the doctoral program at Parks College of Engineering, Aviation and Technology at Saint Louis University in Spring 2016. He is pursuing his Ph.D. in civil engineering, and anticipates graduating in Spring 2020.

He has worked as a consulting Traffic and Transportation Engineer abroad for more than 15 years. During that period, he held several engineering and management positions, working with several international consultant companies.

Osama's professional experiences include transportation planning and traffic engineering. His previous assignments include handling the traffic components of master plans and major traffic projects, development and maintenance of large-scale transport models, analysis and evaluation of different transport schemes, and preparation of Traffic Impact Studies (TIS).

## RESEARCH

Osama's research interests include traffic operations, travel time reliability, trip generation and parking demand, travel demand modeling, traffic modeling and simulation, and transportation safety.

As for his doctoral dissertation, Osama is currently working on developing a decision support system for proactive traffic management using big data analytics models.

The proposed system is built upon Machine Learning techniques and predicts traffic conditions based on historical and prevailing roadway data. The model, the first of its kind in the nation, fuses multiple historical and real-time data sources to assist traffic management center operators to implement traffic control strategies that improve travel time reliability and reduce likelihood of secondary crashes. These data sources include traffic sensors data, weather data, roadway incident and crash data.



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