

RESEARCH ASSISTANTSHIP POSITION AVAILABLE

DR. SHAMS TANVIR

NEW TRANSPORTATION PROFESSOR

The Department of Civil and Environmental Engineering's Sustainable Mobility Lab (SuMoLab) is currently accepting applications for a graduate assistantship in the area of connected and automated vehicle (CAV) technology. The SuMoLab is led by Dr. Shams Tanvir who will be joining the Civil and Environmental Engineering Department in the fall. The successful candidate will play an instrumental role in: designing and simulating new CAV applications for both passenger and freight vehicles; developing and implementing integrated vehicle dynamics and powertrain control strategies as well as intelligent energy management systems for advanced vehicles (e.g., plug-in hybrid electric vehicles); creating perception models of the driving environment through fusion of data from on-board sensors and V2X communications; and contributing to SuMoLab's effort to expand the suite of CAV applications and to move them towards a greater level of automation.



Required Qualifications:

- Bachelor's degree in Civil Engineering, Automotive Engineering, Computer Engineering, Computer Science, Electrical Engineering, Mechanical Engineering, Systems Engineering or relevant fields
- Intermediate programming skills in C/C++, C#, Matlab/Simulink, Python, and/or SQL
- Excellent written and verbal communication skills, along with the ability to work effectively and cooperatively in a team as well as independently
- Ability to multitask with strong time management skills

Desired Qualifications:

- Experience with traffic microsimulation software
- Research experience in connected and automated vehicle technology
- Knowledge in optimization, machine learning, distributed and real-time systems, and/or cyber-physical and embedded systems
- Experience with CAN Bus programming and automotive sensors (e.g., radar, LiDAR)
- Experience with hardware setup and software implementation in automotive applications

Interested students should send their curriculum vitae and a cover letter to Dr. Shams Tanvir (shams.buet@gmail.com) with the subject "CAV Research Position". In the cover letter, please provide a statement of research interests and experience.