

Mechatronics Vehicles System Lab

<http://resonance.uwaterloo.ca/>

Location

DC 1704

Management

Director:

- Amir Khajepour (a.khajepour@uwaterloo.ca; x36159)

Users

- Research team
 - Post-Docs
 - Graduates (mechanical engineering)
- Industrial Partners:
 - MapleSoft
 - General Motors
 - Cooper Standard Automotive
 - Industrial Tooling Solutions
 - Automation Tooling Systems
 - Liten Automotive Groups
 - Magna International
 - L-3 Communications
 - Canadian Space Agency

Research

- Development of hybrid powertrains (electric and air hybrid engines)
- Component sizing and power management design through concurrent optimization
- Vehicle modeling through real time simulation and hardware-in-the-loop
- Active and adaptive suspension systems
- Vehicle stability

Selected Projects

- Green Powertrains
- Advanced Suspension
- Vehicle Stability Control
- Modeling and HIL
- Planetary Rovers

Equipment

- Flexible and Reconfigurable Hybrid Electric Test Platform
- Full Electric Vehicle with In-Wheel Motor
- Vibration Test Equipment

Supporting Partners

- NSERC
- Auto21
- Ontario Centers of Excellence
- Canada Research Chair
- Automotive Partnership Canada
- Industrial Contracts

Access Rights

Please contact Prof. Amir Khajepour for more details