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## Towards a sustainable transport system

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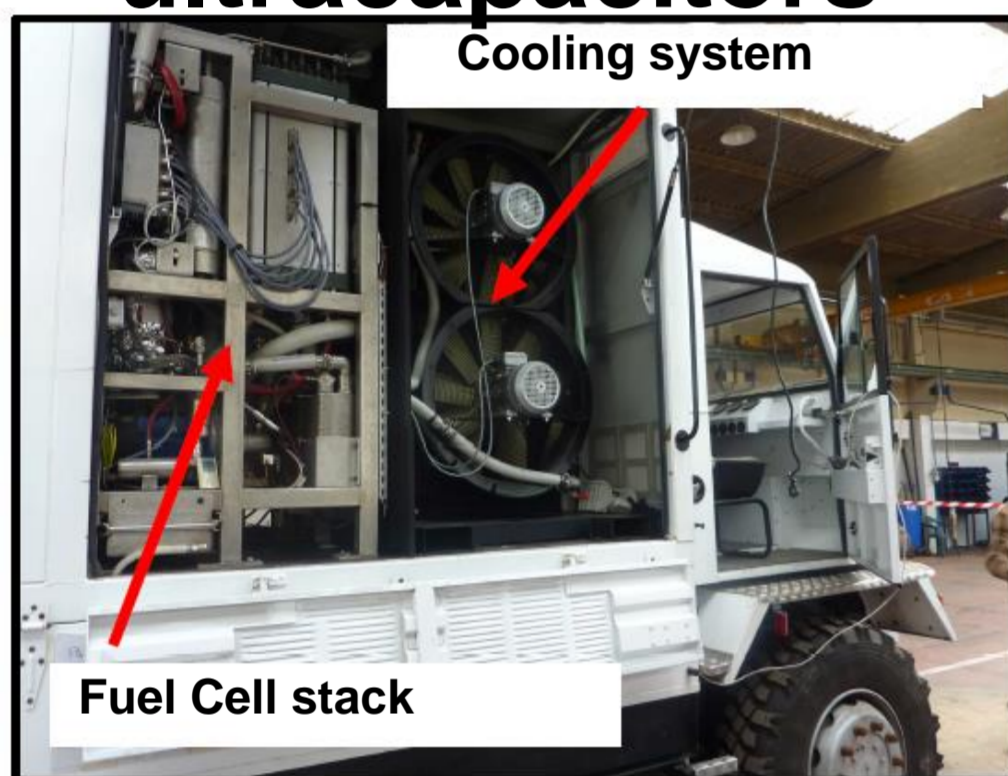
### Towards a sustainable transport system

Engineering, Energy systems, Sustainable Technology

#### Motivation

Our current transportation system is not sustainable nor ecologic. Several efforts have to be made to reduce its energy consumption and its environmental impact. In this perspective, my research focuses on reducing oil dependency, energy consumption and pollution emissions in road and railway vehicles.

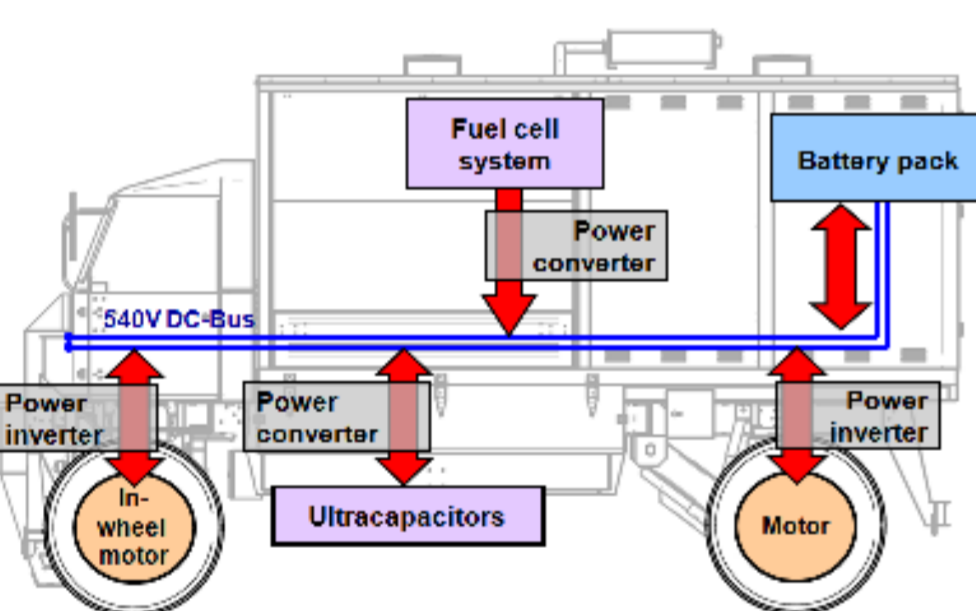
#### Fuel cells and ultracapacitors



#### Hybrid electric vehicles



#### My research



#### Energy management

#### Train optimal control

#### HEVs and FCVs

In Hybrid Electric Vehicles (HEVs) the braking energy can be recovered and a high efficiency can be reached.

Fuel cell vehicles (FCV) can run on hydrogen and only emit water.

#### Why ecodriving?

Because it is possible to reduce energy consumption and pollution emissions by changing our driving behaviors and habits.

#### What researchers are focusing on?

Hybrid electrical and fuel cell vehicles  
Optimal control  
Smart grids  
Clean sources  
Security  
Prognostic and health management

#### What can WE do?

- ✓ We can use public transport
- ✓ We can go by bicycle
- ✓ We can share a ride (*covoiturage*)
- ✓ We can reduce the use of our vehicles
- ✓ We can become Eco-drivers
- ✓ We can buy local!