

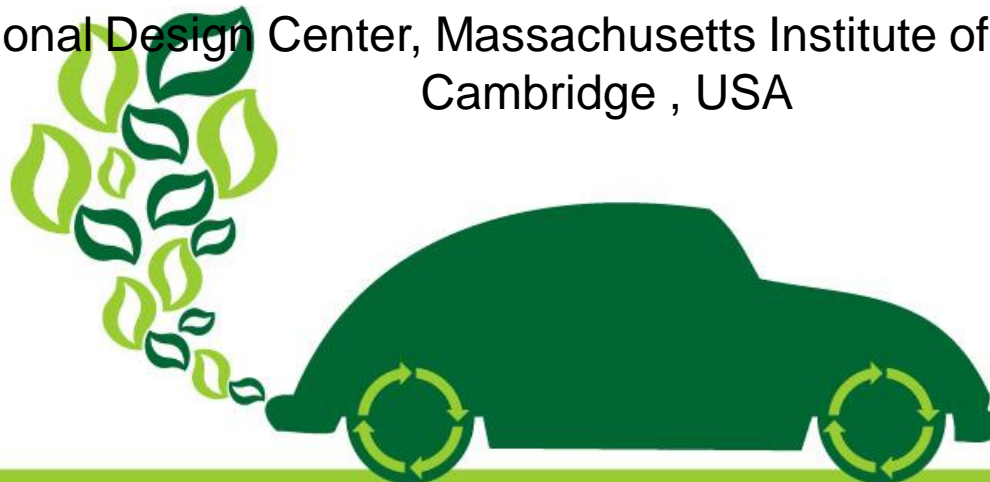
# Research and Development Activities on Electric Vehicle at Kathmandu University

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# Working areas on electric mobility at Kathmandu University

## I. Two wheeler

- Concept of an electric bicycle
- Electric scooters and bikes

## I. Four wheeler

- Design optimization of an electric powertrain system
- Vehicle conversion (electrification)



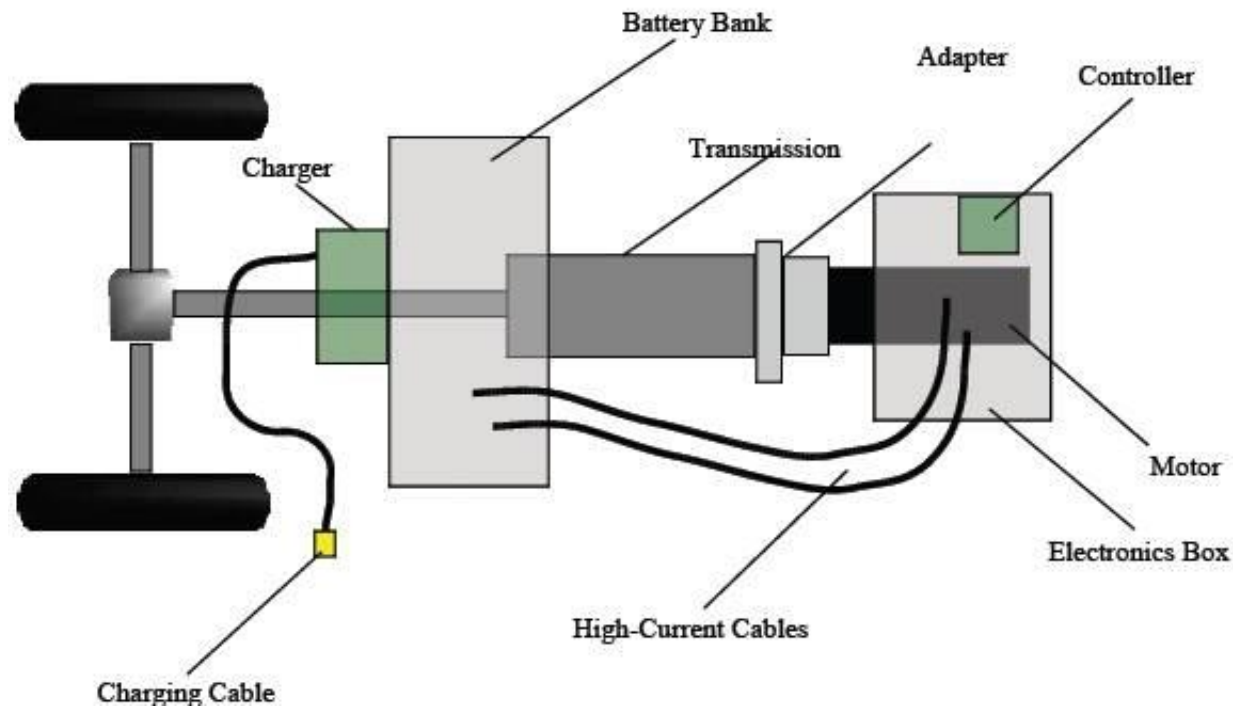
# Design Optimization of Electric Powertrain System

- Research activities regarding consideration of topography and vehicle performance to optimize powertrain system.
- Concept development of Nepalese drive cycles.
- Powertrain modularity for different drive cycles.



# Vehicle Conversion

- Concept of electrifying old convention vehicles.



Source: Vehicle conversion wiki



# Vehicle Conversion

- Currently working on petrol car and diesel bus for electrification
- Working with Shree Eco Visionary and Saajha Yatayat as an academic research partner for vehicle electrification.



# International Collaboration

- KU is currently working with IDC, MIT on design optimization, vehicle conversion and future electric bike.
- The joint team is planning to work on off road vehicles with electric drive system.
- Dr. Shailendra Kumar Jha, Assistant Prof at Electrical and Electronics Department is visiting MIT from July 7.

- *These research activities are being supported by US State Department and MIT international Science and Technology Initiatives ( MISTI )*



# EV lab, MIT



# EV lab, MIT





# Participation in an International competition.



We developed gasoline powered car for Eco Shell Marathon, 2019, and now we are working on electric powered car for Shell Eco Marathon 2020



# Future Activities

- To develop Electric Vehicle lab within this year.
- To work on future mobility design and development
- To collaborate with other international institutes as well in electric mobility.



# Thank You

