



SEC Lectures: Introduction to electromobility

Repetition of Part 2: Electrical machines, drives and charging

Swedish Electromobility Centre and Bombardier are happy welcome you to our repetition of the "Introduction to Electromobility - Part 2" lecture held on the 8 May 2020.

Introduction to Electrical machines, drives, and charging gives the participants an overview of the key components of an electric drivetrain. Being the ultimate goal, the conversion of the electrical energy stored in the battery into mechanical forces on the wheels, we will describe all the necessary power conversions and associated hardware that make this possible.

The day will be divided in four blocks:

1. Electrical Machines: working principle, types of machines, control
2. Power Electronics: semiconductor technology, converter topologies, applications
3. Drivetrain optimization: translating vehicle performance into drivetrain specifications, design trade-offs
4. Charging infrastructure: charging strategies, charging equipment and vehicle implications



When: 2 February 2021, 10:00-15:30

Where: Teams (*link will be sent on 1 February*)

Last day of registration: 1 February 2021, before 12:00.

AGENDA

Time	Activity	By
10.00-11:00	Electrical machines	Francisco J. Márquez-Fernández, LTH
11.00-12:00	Power electronics basics	Gabriel Domingues, BorgWarner
12.00-13:00	Lunch	
13.00-13:30	Powertrain sizing	Gabriel Domingues, BorgWarner
14.30-15:00	Charging	Francisco J. Márquez-Fernández, LTH
15.00-15:30	Q&A	