



### **Thermal management in electric vehicle battery packs**

The objective of this undergraduate research project is to model and design the cooling and heating loops of an electric vehicle battery pack using Simscape. Simscape is a MATLAB-based and object-oriented language ideal for doing physical modeling in the Simulink environment. The student will work in close collaboration with a multidisciplinary team that is designing and building a prototype of the battery pack. The student will develop the Simscape model, select the components of the cooling and heating loops (pump, heater, chiller, coolant, etc.), and validate the simulations. Ideally, the student should have a solid background in thermal fluid systems and good programming skills in MATLAB/Simulink.

**Category:**

MEC, EngSci

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