FACULTY MENTOR

Patrick Mercier

PROJECT TITLE

Power Converters for Electronic Textiles

PROJECT DESCRIPTION

Future garments will soon become "smart" and integrate sensors and actuators within fabrics. There are many challenges that must be addressed to achieve this vision. One such challenge is related to power management: an array of small and/or flexible batteries may be distributed throughout the garment and must distribute power to a number of different loads. This must be accomplished with minimal coordination between nodes to minimize the number of wires needed in the network. Additionally, this should be accomplished with very small power converters. This project will investigate distributed control loops and small converter design.

This project will be in person.

INTERNS NEEDED

- 2

PREREQUISITES

- Experience in DC-DC converters and/or control theory.

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PROJECT TITLE
Wearable Sensor Development

PROJECT DESCRIPTION
Development of discrete prototypes for wearable sensors, including analog front-ends, Bluetooth modules, and more.

This project will be in person.

INTERNS NEEDED
- 2

PREREQUISITES
- Experience with PCB design and/or firmware coding for embedded systems.