

## Faculty of Engineering

### Summer Research Program 2023-2024

Project Title: Magnetic Doping of Topological Insulator Thin Films

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#### Objective

The main objective of this project is to study the magnetic and electronic properties of magnetically doped SnTe thin films.

#### Project Details

Topological insulators (TIs) are a unique class of materials that are promising for low energy electronics. More specifically, magnetically doped TIs offer the potential to realize robust, dissipationless currents and spin currents, which can enable the next generation of ultra-low energy electronic devices. This project focusses on magnetic doping (Mn, Fe, Eu) of SnTe thin films. The magnetic and electronic properties of these materials will be probed using low temperature, high magnetic field magnetotransport measurements.

#### Prerequisites

N/A