

Design and Evaluation of a Bioelectric Guide Wire

- Design, create and evaluate a guide wire for bioelectric navigation. Integrate the new interventional device into the BLN suite.
- **What Students Will Do:**
 - Design and manufacture 3-electrode prototype
 - Simulate performance using COMSOL
 - Evaluate guide wire ex vivo
 - Participate in CAMP CISII meetings
- **Deliverables:**
 - Design:
 - Project plan and detailed description of state of art
 - Simulation (COMSOL) of 3-electrode guide wire
 - CAD design of guide wire
 - Implementation
 - Guide wire prototype
 - Additional current sources for added electrodes
 - Evaluation: Experiments ex vivo
 - Reports and presentations
- **Size group:** 1-3
- **Skills:** CAD, electronics, programming (C++), signal processing
- **Mentors:** Bernhard Fuerst, Noah Cowan, Nassir Navab;
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