



Center for Medical Device and Instrumentation

Co-directors

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The mission of the **Center for Medical Device and Instrumentation (CMDI)** is to achieve interdisciplinary innovation to design personalized, intelligent biodevices, especially microdevices. These engineered microdevices will revolutionize current medical protocols and play a central role in bringing about a decentralized paradigm shift for the benefits of patients and the nation as a whole.

The CMDI will perform key fundamental research to enable new technology and to translate these basic discoveries into tangible, innovative designs with the close participation of industrial partners. The main innovation of our approach is to develop novel control strategies with smart, dynamically interfaced on-body biosensors and actuators that can control drug release, electrical stimulation and other therapeutic outputs by means of a combination of intelligent feedback and global wireless interconnectivity. These systems will be matched to specific physiological and metabolic sensors embedded in networks of newly designed biodevices for the intelligent management of chronic diseases.