

# Case Western Reserve University School of Engineering

Cleveland, OH

## 2011-2012 Strategic Faculty Hiring Campaign ~15 Faculty (~1/2 in Biomedical Areas)



### Recruiting Focus Areas:

Brain Interfacing and signal analysis (Neural Engineering): brain interfacing, recording, signal analysis to understand and mitigate neurological disorders; could involve devices, instrumentation, algorithms, etc., to facilitate development and translation to patient brain recording, analysis and technologies to mitigate neurologic disorders, via interaction with strong neural engineering faculty cluster, institutional Neurologic Institute, Translational Neuroscience Center, among others like existing VA, NIH centers.

#### Biomedical Imaging (one position):

*Quantitative Image Analysis:* convert images to physiologically relevant measures of health, disease, pathology; interface to strong imaging program overall

Or, *Optical Imaging:* develop new imaging technologies and processes using optical/laser and related methods for minimally invasive assessments

Biomolecular Engineering: focuses on the molecular length scale; seeks to convert molecular-level knowledge of biological phenomena into potentially useful biochemical and chemical products ('materials') and processes that are derived from living cells or their components.

Multi-scale Biomedical Systems & Computational Biology: integrates research in biology, engineering, and computation to address complex problems in biological systems; links engineers, computer scientists, biologists, and physicians in a multidisciplinary approach to the systematic analysis of complex biological phenomena.

Translational Biomaterials for Patient Care: beyond development of biomaterials, recruits will focus on translating discoveries to actual patient care via synergies with existing faculty and world class neural, cancer and stem cell centers

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