

# BioSignal Processing Activities in MSU's Department of Electrical & Computer Engineering

*John R. (Jack) Deller, Jr.<sup>†</sup> and Robert D. Nowak<sup>‡</sup>*

Michigan State University  
Department of Electrical Engineering / 2120 EB

**Abstract.** The purpose of this presentation is to introduce MSU's "Computational Biology" research community to an array of biomedical signal and image processing research activities ongoing in the ECE Department. These projects include both basic research and applications in multi-dimensional signal processing for medical and biological imaging, and one-dimensional signal processing for speech- and hearing-related research. Applications of this work include positron and single-photon emission tomography (PET & SPECT) and functional magnetic resonance imaging (fMRI), augmentative communications systems, recognition of dysarthric speech, vocal pathology diagnostics, and alerting signal detection devices for deaf persons. A proposal for joint research-curriculum development in telemedicine for biosignal processing will also be described. These problems are highly-interdisciplinary, and collaborations with MSU and external groups will be cited.

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<sup>†</sup>deller@egr.msu.edu / 3-8840. *Jack Deller holds the Ph.D. in Biomedical Engineering from the University of Michigan.*

<sup>‡</sup>nowak@egr.msu.edu / 5-5235. *Robert Nowak holds the Ph.D. in Electrical Engineering from the University of Wisconsin and is the recipient of a "Genius of Invention" award from GE Medical Systems.*