

# Neural Prosthesis Seminar

## Vive La Difference: Managing Structural and Functional Diversity in DBS for Movement Disorders

Friday, December 8 • 8:30 am

Wolstein Research Building, Room 1413  
Case Western Reserve University



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### Abstract

Our brains are like faces — we each have one but no two are quite the same. The same holds true for individuals with Parkinson disease and tremor, as well as for candidates for other neuromodulation and neuroprosthetic therapies. Commonalities and generalizations guide therapeutic development and scientific inquiry. At the same time, our success in managing diversity determines the quality of care that we deliver to our patients. At the University of Michigan, we have taken a multidisciplinary approach to patient selection and an atlas-independent image-analytical and electrophysiological modeling approach to outcome evaluation. We believe that this collaborative, neuroengineering approach to DBS will allow us to individually optimize therapy benefits and deepen understanding of the neural mechanisms underlying successful DBS.

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