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University Hospitals
Neurological Institute

Neural Prosthesis Seminar

"Building Replacement Circuits For The Brain"

that incorporates prosthetics and optogenetics with a look toward the future, and touching on DBS as an example of current day systems that are providing therapeutic benefit.

Wednesday, October 10, 2012 • 7:15 AM

E501 SOM Robbins Building

Case Western Reserve University

Jaimie Henderson, MD

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Director, Stereotactic and Functional Neurosurgery
Associate Professor, Department of Neurosurgery, Stanford University

Abstract:

Advancements in engineering and neuroscience have converged to produce systems which can read out brain signals with high fidelity, allowing patients with paralysis to control computer cursors, robotic limbs, and other assistive devices. Similarly, the new field of optogenetics holds great promise for writing information back into the nervous system. Coupling these "read-out" and "write-in" systems to effectively produce replacement circuits for lost nervous system function is the next challenge in the field of neural prosthetics and neuromodulation. Current research in neural prosthetics, optogenetics, and deep brain stimulation will be discussed in the context of building clinically viable systems for restoring neural function.

For more information, please contact Cheryl Dudek at (216) 707-6490.

Lecture available for viewing at www.FEScenter.org/Seminar

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