

Case All-Star Symposium
“Moving After Paralysis”
Advances in Restoring Neural Function through Science and Engineering
October 4, 2004
Intercontinental Hotel 2:15 – 4:15 pm

Symposium Presentations:

William Heetderks, M.D., Ph.D., Moderator
Challenges for Restoring Neural Function

John P. Donoghue, Ph.D.
The Brain Control Interface

Dominique Durand, Ph.D.
Interfacing to the Nervous System

Robert Miller, Ph.D.
Cell Based Repair Strategies in the Brain and Spinal Cord

P. Hunter Peckham, Ph.D.
Restoration of Movement

Jerrold L. Vitek, M.D., Ph.D.
Deep Brain Stimulation – Now and the Future

Symposium Speakers:

John P. Donoghue, Ph.D.

Dr. Donoghue is the Henry Merritt Wriston Professor and Chairman of the Department of Neuroscience at Brown University. He serves as Executive Director of the Brain Science Program at Brown and is a co-founder of Cyberkinetics, Inc. He received his Ph.D. in Neuroscience from Brown. Dr. Donoghue has performed over 20 years of research on brain computer interfaces and his laboratory is internationally recognized as a leader in this field.

Dominique Durand, Ph.D.

Dr. Durand is currently a professor of Biomedical Engineering and Neurosciences at Case Western Reserve University. He received his M.S. degree in Biomedical Engineering from Case and his Ph.D. degree in Electrical Engineering from the Institute of Biomedical Engineering, University of Toronto. Dr. Durand’s research combines

computational neuroscience, engineering and electrophysiology to solve problems in the central and peripheral nervous systems.

William Heetderks, M.D., Ph.D.

Dr. William J. Heetderks is the Associate Director for Extramural Scientific Programs at the National Institute of Biomedical Imaging and Bioengineering (NIBIB). Prior to joining NIBIB, Dr. Heetderks was the Program Director of the Repair and Plasticity Cluster at the National Institute on Neurological Disorders and Stroke. He was trained in electrical and bio engineering and received his Ph.D. from the University of Michigan, and his M.D. from the University of Miami. Dr. Heetderks' research interests include neural repair, plasticity in neural systems, neural prostheses and motor systems.

Robert Miller, Ph.D.

Dr. Miller is a professor in the Department of Neurosciences at the Case School of Medicine at Case Western Reserve University. He earned his Ph.D. at the University College of London in 1981. His specialty lies in understanding the cellular and molecular mechanisms that regulate glial cell determination in the developing vertebrate central nervous system, as well as in translational research.

P. Hunter Peckham, Ph.D.

Dr. Peckham is a professor of Biomedical Engineering and Orthopaedics at Case and Director of the Center of Excellence in Functional Electrical Stimulation (FES), a consortium involving the Cleveland Veterans' Administration Medical Center, Case, and Cleveland's MetroHealth Medical Center. Dr. Peckham received his M.S. and Ph.D. degrees in biomedical engineering from Case. His research lies primarily in rehabilitation engineering and neuroprostheses, focusing on functional restoration of the paralyzed upper extremity in individuals with spinal cord injury.

Jerrold L. Vitek, M.D.,Ph.D.

Dr. Vitek recently joined the Cleveland Clinic Foundation as Co-Chairman of the Center for Neurological Restoration. Previously, he was the director of the Program for Functional and Stereotaxic Neurology and a professor of neurology at the Emory University School of Medicine. He received his M.D. and Ph.D. from the University of Minnesota and did his neurology residency at The Johns Hopkins Hospital. Dr. Vitek's research interests are in the structure and function of the basal ganglia and motor thalamus, motor functions of the basal ganglia, the pathophysiology of movement disorders, and functional neurosurgery for the treatment of movement disorders and neurological diseases.