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Center for Neurological Restoration

Neural Prosthesis Seminar

Neural Population Principles of Learning

Friday, January 19 • 8:30 am

Wolstein Research Building, Room 1413
Case Western Reserve University

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Abstract

How does the brain change when we learn? Those changes must lead to the emergence of new patterns of activity in the population of neurons that control the newly-learned behavior. By using a Brain-Computer Interface (BCI) paradigm, we can observe changes in neural population activity that lead directly to new behavioral capacities. We find that a simple network principle governs whether novel BCI mappings will be learned quickly or more slowly. We can then examine the neural activity patterns that are expressed following learning. We find that different principles of network reorganization underlie fast and slow BCI learning.

For more information, please contact Cheryl Dudek
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Live stream video link for each lecture at www.FEScenter.org/Seminar

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