



Machine learning in Neuroimaging: Applications to Clinical Neuroscience and Neurooncology



Christos Davatzikos, PhD

Wallace T. Miller Sr., Professor of Radiology
University of Pennsylvania School of Medicine

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Case Western Reserve University

Abstract

Machine learning has deeply penetrated the neuroimaging field in the past 15 years, by providing a means to construct imaging signatures of normal and pathologic brain states on an individual person basis. In this talk, I will discuss examples from our laboratory's work on imaging signatures of brain aging and early stages of neurodegenerative diseases, brain development and neuropsychiatric disorders, as well as brain cancer precision diagnostics and estimation of molecular characteristics. I will discuss some challenges, such as disease heterogeneity, integration of data from multiple sites, and derivation of interpretable statistical maps from certain machine learning tools, and will present some of our work in these directions.

Seminar Co-host



Department of Biomedical Engineering

For more information contact Cheryl Dudek | (216) 231-3257 | cdudek@FEScenter.org

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