



Biology Seminar

By: Dr. Ido Davidesco

New York University | Research Assistant Professor, Department of Teaching and Learning &

Department of Psychology

<https://steinhardt.nyu.edu/people/ido-davidesco>

Brain-to-Brain Synchrony in Biology Classrooms



Wednesday, January 15, 2020 | 12:00pm
HCK 132 Refreshments at 11:45am

With the introduction of active learning, STEM undergraduate classrooms are becoming more social environments. However, the dynamics between students and its impact on student learning are

vastly underexplored. My research utilizes portable and wearable brain technologies, such as portable electroencephalography (EEG), to investigate how students interact with one another in biology classrooms. In my talk, I will discuss how these emerging technologies, in conjunction with other methods used in discipline-based education research, can help answer questions about the cognitive and social factors that come into play *during* the learning process. I will describe three EEG studies that my colleagues and I conducted in real and simulated classrooms. These studies revealed that students exhibit similar brain activity patterns (a phenomenon called “brain-to-brain synchrony”). Furthermore, the extent of brain synchrony between students reflected how engaged students are, how close they feel to one another, and how much information they retain. I will also discuss how portable brain technologies can be used to facilitate classroom-based research experiences where students measure and analyze their own brain activity.

