

# Department of Physics and Astronomy Colloquium Series

**Tuesday, October 28, 2025, 2:30pm in PSE 317**

**Speaker:** David Hogg

**Institution:** New York University

**Title:** What is machine learning good for (and bad for) in the physical sciences?

**Abstract:**

Machine learning has become indispensable in many physics domains. I focus on three use cases: supervised regression to label unlabeled data; emulation of (or surrogate for) expensive simulations; and unsupervised modeling or prediction of nuisances. I will argue that the first two might bring significant harm, and the last one is of great scientific value. My examples will come from astrophysics but the points are general.