



CSU PHYSICS COLLOQUIUM

Enabling High Energy Physics through Modern Computing

**Speaker: Andrew Norman,
Fermi National Accelerator Laboratory**

**Colorado State University
4:00 PM Monday, October 2, 2017
Refreshments at 3:45 PM**

Location: 120 Engineering (Hammond Auditorium)

Abstract

From the early days of Charles Babbage's differences engine and Ada Lovelace's first program for computing Bernoulli numbers, modern computers have transformed the ways in which we do science. Today computing is an essential tool for high energy physics which is embedded into every stage of a modern experiment.

We will explore this intersection between the machine and the science and what it means for the future of physics.

Bio

Andrew Norman is a physicist from Fermi National Accelerator Laboratory's Scientific Computing Division. His primary research focuses on the underlying structure of the neutrino sector and the asymmetry between matter and anti-matter. His work has focused on the ways in which modern computing can enable new analysis techniques throughout high energy and nuclear physics and open up new avenues of discovery.

He is one of the original architects of the data acquisition and triggering systems for the NOvA long baseline neutrino oscillation experiment and the head of its data acquisition team. Andrew is the computing coordinator for the DUNE experiment, the Assistant Head of Science Workflows and Operations for the Scientific Computing Division, the former head of the Fermilab data management team, and an expert in data acquisition, storage and analysis at the petascale.