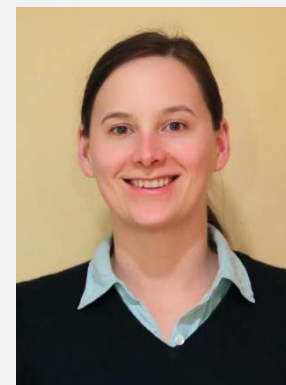


Moments in Materials Presentation: **Can Data Science Change Nanoscience?**

Speaker: Aileen Nielsen

When: Thursday, July 10th 2014, 4:30 p.m.

Where: NWC, 7th floor meeting room, RM 703



There is more data in physics and chemistry than has been analyzed or even can be analyzed, and the amount of data is increasing at increasing rates. It's time to get out of the lab and onto our computers. In this talk, three novel applications to materials research of well-established data mining techniques will be discussed. Your next paper might just be in your old data.

Selected references:

Origins of hole traps in hydrogenated nanocrystalline and amorphous silicon revealed through machine learning. Mueller et al. *Phys. Rev. B* 89, 115202 (2014).

Deep data analysis of conductive phenomena on complex oxide interfaces: physics from data mining. Strelcov et al. *ACS Nano* 8(6) 6449-6457 (2014).

Combinatorial screening for new materials in unconstrained composition space with machine learning. Meredig et al. *Phys. Rev. B* 89, 094104 (2014).

