

1056-P1-276

**Michael Huber\*** ([huber@muhlenberg.edu](mailto:huber@muhlenberg.edu)), Dep't of Mathematics and Computer Science, Muhlenberg College, 2400 Chew Street, Allentown, PA 18104. *Modeling Radon in Pennsylvania*. Preliminary report.

Radon is a serious issue in Lehigh County, Pennsylvania, where Muhlenberg College is located. Long-term exposure to radon can lead to lung cancer. The Environmental Protection Agency (EPA) has established guidelines and safe levels for residents in each county of the state. In my "Mathematical Modeling" elective, I have used actual data from the EPA (hundreds of data points per zip code listing) to engage students in developing models to study and predict radon levels in the Allentown area and in their own hometowns. I will discuss how I connected with state officials and local mitigation systems experts, how to access EPA data, and some of the linear regression models constructed by students. Students were required to discuss reliability of the data, confidence of the models, possible trends, and predictions for new locations. (Received August 24, 2009)