1147-11-632 **Zachary L Scherr*** (zls002@bucknell.edu), 1 Dent Dr., Bucknell University, Computer Science, Lewisburg, PA 17837, and **Ted Chinburg**, **Nadia Heninger** and **Brett Hemenway Falk**. *Capacity theory and Coppersmith's algorithm for integral points.*

In 1996, Coppersmith described polynomial time algorithms for finding (i) small solutions to one variable polynomial congruences, and (ii) small integral solutions to polynomial equations in two variables. In this talk we will see how capacity theory can be used to quantify how far one can extend Coppermith's method of treating problem (ii). This has applications to finding an unknown divisor d of a given large integer N given a sufficiently close approximation to d. (Received January 27, 2019)