1096-11-1484 **Kenneth Brown** and **Scott M. Dunn*** (scottmdunn@gmail.com), University of South Carolina, Department of Mathematics, 1523 Greene St., Columbia, SC 29208, and **Joshua Harrington**.

Arithmetic Progressions in the Polygonal Numbers.

In this talk, we investigate arithmetic progressions in the polygonal numbers with a fixed number of sides. We first show that four-term arithmetic progressions cannot exist. We then describe explicitly how to find all three-term arithmetic progressions. Finally, we show that not only are there infinitely many three-term arithmetic progressions, but that there are infinitely many three-term arithmetic progressions starting with an arbitrary polygonal number. Special attention is paid to the case of squares and triangular numbers. (Received September 15, 2013)