

# Department of Mathematics

## *Fall 2017 Colloquium Series*



### **Three-term Arithmetic Progressions**

Hans Parshall,  
The Ohio State University  
**Thursday, October 12, 2017**  
**BSS 204, 4:00 pm**

A classic theorem of Roth asserts that large sets of integers must contain three-term arithmetic progressions. We now know a fair number of distinct proofs of this qualitative statement, using diverse techniques from Fourier analysis, graph theory, and dynamical systems. After clarifying what we mean by a large set of integers, we will survey some highlights, recent progress, and unresolved quantitative issues. This talk should be accessible to an undergraduate mathematical audience.

Hans Parshall is a Zassenhaus Assistant Professor of Mathematics at The Ohio State University and an HSU alumnus.

For a complete abstract, go to <http://www.humboldt.edu/math/news-and-events/math-colloquium>

***We cordially invite you to the Pre-Colloquium Tea on the third floor of the BSS  
building at 3:30 pm on Thursday.***