NORTHERN ARIZONA UNIVERSITY

Department of Mathematics and Statistics

COLLOQUIUM
Tuesday, September 22nd, 2015
4:00 – 5:00 pm, Adel Mathematics Bldg., Room 164
(refreshments at 3:45)

Mike Falk
NAU

A geometer's view of frames: definitions and open problems.

Abstract: This summer I attended a "cross-cultural" workshop called Frames and Combinatorial and Algebraic Geometry, where I learned what a frame is, and thought and talked about some of the many open problems that the "frames people" would really like to solve. Frames in Hilbert spaces are generalizations of orthonormal bases, and play a role in applied mathematics - I understand that the theory grew out of Fourier series and wavelet theory, and has something to do with compressed sensing. In this talk I will report on the little bit that I learned about frames, and state some of the many open problems about (especially finite) frames with special properties. These problems are very accessible, and may be of interest to people across a wide spectrum of mathematical, computational, and statistical fields - pun intended.

Algebra Combinatorics Geometry and Topology (ACGT) Seminar meets every Tuesday, 12:45 – 1:45 pm, AMB 164.

Applied Math Seminar (AMS) will meet occasionally on Thursdays, 12:45 – 1:45 pm, AMB 164, as announced.

Friday Afternoon Undergraduate Mathematics Seminar (FAMUS) meets Fridays, 3pm, AMB 164.