NORTHERN ARIZONA UNIVERSITY

Department of Mathematics and Statistics

COLLOQUIUM

Tuesday, February 3rd, 2015

4:00 – 5:00 pm, Adel Mathematics Bldg., Room 164
(refreshments served at 3:45)

Dr. Terence Blows

Department of Mathematics and Statistics
NAU

Sampling strategies for low carriage-rate pathogen detection

Abstract: The second part of Hilbert's Sixteenth Problem is concerned with counting periodic solutions in two-dimensional autonomous systems of differential equations with polynomial right hand sides. I will talk about one aspect of this problem.

The talk will be in three parts. I will begin in simple terms, starting with material from MAT 239 and then speaking to some topics of MAT 665 to arrive at a statement of the Hilbert Problem. This should be accessible to everyone including graduate students. I will then talk about the center/focus problem and the algorithms used to study the simplest case. (I have spoken on this many times, but not recently. My apologies go to the old-timers.) Finally I will talk about the problem in a more general setting and will present a new result.

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

Applied Math Seminar (AMS) meets Thursdays, 12:45 – 1:45 pm, AMB 164.

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