



**Department of Mathematics and Statistics**

**COLLOQUIUM**

**Tuesday, October 18<sup>th</sup>, 2015**

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

Dr. Abba B. Gumel  
Arizona State University

*Mathematics of Climate Change and Vector-borne Diseases*

**Abstract:** Recent studies have established the direct impact climate variables, particularly temperature and rainfall, have on the incidence of vector-borne diseases (VBDs). The talk focuses on the design and use of climate-driven mathematical models to gain qualitative insight into the role of climate change on the transmission dynamics of VBDs, with emphasis on malaria. The epidemiological implications of climate change on existing global malaria map will be discussed.

Dr. Gumel is a Professor of Mathematics and C. Castillo-Chavez Professor of Mathematical Biology in the School of Mathematical and Statistical Sciences, Arizona State University.

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

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

This Thursday John Neuberger will talk about  $O(h^2)$  finite difference schemes for arbitrary regions in  $\mathbb{R}^2$ , related to a student project with Andrew Morris.

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