## Mathematics and Statistics Club A Talk by Dr. Christian Avart: From the Pigeon Hole Principle to Ramsey Theory

If 9 pigeons are sitting in 8 pigeon holes, there must be one hole with more than one pigeon inside. This obvious statement, often referred to by mathematicians as the Pigeon Hole Principle, turns out to have surprisingly clever applications. For example, this principle implies that right now, there are two people living in Atlanta who have the exact same number of hairs on their scalp. In this talk, we will prove this statement and explore several other simple, intriguing, and even beautiful mathematical facts that were derived from this principle. This will lead us to the statement of an elegant and fundamental theorem of mathematics called Ramsey Theorem. The talk will be self-contained and accessible to anyone curious about the subject.

Monday, Oct. 5<sup>th</sup>
1-2 pm
796 College of
Education

Free Pizza

