MATHEMATICS SEMINAR

SPEAKER: **Dr. Sophia Raczkowski**
CSUB, Bakersfield

DATE: **Wednesday, Oct. 8**

TIME/PLACE: **2:10 p.m. ~ SCI-125**

TITLE: Counting dense pseudocompact subgroups of a compact group

Abstract: A topological space is said to be *pseudocompact* if (and only if) every continuous real –valued function is bounded. In this talk we explain why it is important to count the dense pseudocompact subgroups of a given compact abelian group. We will show that each nonmetric compact abelian group K has the maximum number, that is, $2^{|K|}$- many dense pseudocompact subgroups. We will use this fact to prove that each infinite abstract abelian group admits the maximum possible number of totally bounded topological group topologies in each of which the only convergent sequences are the trivial ones.