Colloquium

Guram Bezhanishvili

New Mexico State University

Friday, April 20, 2012 at 3 pm in Bell Hall 143

Around Gelfand duality

The celebrated Gelfand duality establishes that the category **KHaus** of compact Hausdorff spaces is dually equivalent to the category **C*Alg** of real (commutative) C*-algebras. In this talk I'll discuss the history and modern account of Gelfand duality. The approach I will present will be algebraic/categorical (rather than analytic) in nature. I will show that **C*Alg** forms a subcategory of the category **bal** of bounded Archimedean ell-algebras, and give several algebraic and categorical characterizations of **C*Alg** within **bal**. Among other things, we will see that there is an adjunction between the categories **bal** and **KHaus** that restricts naturally to Gelfand duality between **C*Alg** and **KHaus**.

Joint work with P. J. Morandi and B. Olberding.