Discrete Mathematics Seminar

Time:	Friday, 27 January 2012, 12:30–1:30 PM
Location:	238 Derrick Hall
Title:	On the Relative Character Degree Simplicial Complex of Solvable Groups and Abelian Normal Subgroups
Speaker:	Sara Jensen, University of Wisconsin-Madison

Abstract:

In this talk, we introduce the relative character degree simplicial complex of a finite group G and a normal subgroup $N \subseteq G$. We will discuss the history and development of this simplicial complex, and we will focus on relative simplicial complexes which happen to be graphs. In the case that G is a solvable group, N is an abelian normal subgroup of G, and $N \subseteq G'$, we will show that the fundamental group of this relative character degree simplicial complex is either trivial or $\mathbb{Z}$. Although some group theory will be assumed, knowledge of the results of character theory and knowledge of algebraic topology should not be necessary.

Bio:

Sara Jensen was a recipient of a Texas State Summer 2011 Predoctoral Fellowship and was visiting Texas State during June and July 2011 under this program. She is a doctoral student at the University of Wisconsin-Madison and is currently writing her dissertations under the supervision of Professor I. Martin Isaacs. Her work is in the field of finite group and representation theory, and has already one joint paper published in the Journal of Algebra.