

## COLLOQUIUM

3:30 P.M.

JANUARY 29, 2008

ACADEMIC FORUM 103

*Reducts of Countably Categorical Graphs*

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## ABSTRACT

Model theory is the branch of logic studying mathematical structures by considering first-order sentences which are true of those structures and the sets which are definable in those structures by first-order formulas. Model theory, algebra and graph theory are often closely related.

Let  $M$  be a countably categorical structure, homogeneous for a finite relational language. A reduct of  $M$  corresponds, up to bi-interpretability, to a closed subgroup of  $\text{Sym}(M)$  containing  $\text{Aut}(M)$ . In this talk, I will describe classifications of reducts given by Higman, Thomas and Bennett. I will also present my own results classifying reducts of the random bipartite graph and the random bipartite graph having more than two cross types.

**3:00 p.m.**  
refreshments served

**3:30 p.m.**  
talk begins