



The University of Chicago  
Department of Statistics  
Master's Seminar

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**“On the Pricing of Synthetic Collateralized  
Debt Obligation with Factor Copulas”**

**WEDNESDAY, November 16, 2005 at 4:00 PM  
110 Eckhart Hall, 5734 S. University Avenue**

**ABSTRACT**

In this paper we present a factor approach combined with copula functions to price tranches of synthetic Collateralized Debt Obligation (CDO) having totally inhomogeneous collateral. While a synthetic CDO is a portfolio of defaultable obligors, the copulas are functions which link univariate distributions together to build a multivariate distribution function. The attractiveness of copulas lies in their flexibility to simulate or fit dependant variables and their ability to provide scale invariant measures of association between random variables. When pricing a synthetic CDO, the copula function will be used in conjunction with the factor approach to model the obligor risk neutral joint default probabilities.