

THE MATHEMATICS DEPARTMENT PRESENTS

A MATHEMATICS COLLOQUIUM

THURSDAY, November 5, 2009

BOND HALL 401

4:00 pm

Title: Factorization and Orthogonality

Speaker: Geoff Diestel, University of Portland

Abstract:

Much is known about factoring operators mapping into Lebesgue spaces. Unfortunately, the results are spread out over time and some are not known by many of the experts in the field. A brief summary of some results will be followed by a new observation which leads to a general orthogonality principle. This principle can be used to simplify many estimates arising in Harmonic analysis. In particular, many problems involve showing that the sum of uniformly bounded operators $T_j : X \rightarrow L_p$ is a bounded operator provided the operators T_j satisfy a general orthogonality condition. For many examples, this problem can be reduced to fairly simple maximal function estimates.

Refreshments will precede the talk at 3:30pm in Bond Hall 300, courtesy of Árpád Bényi.