

University of Notre Dame Department of Mathematics

## QFT READING SEMINAR

**Arlo Caine**

University of Notre Dame

*Will give a lecture entitled:*

### **The Gluing Formula for the Zeta Determinant of the Hemholtz operator II**

*On*

Tuesday, April 19, 2011

*At*

12:15 PM

*In*

258 Hurley Hall

#### ***Abstract***

Essential to Pickrell's construction is the Gluing formula for Zeta Determinants of Elliptic Pseudodifferential operators due to Burghelea, Friedlander, and Kappeler. This relates the determinant of a operator on a closed manifold to the determinants of the same operator with boundary conditions on the two components of the manifold obtained by cutting along an embedded hypersurface. In this talk, I will explain why this holds in the context relevant for  $P(\phi)_2$  theories and deduce the relevant version of the formula to be applied in Pickrell's construction.