

The Spring 2008 Condensed Matter Seminar Series presents:

**Prof. Joseph Slawny**

Virginia Tech Physics Department

***Self-dual Spin Systems, Zeros of  
Partition Function, and Error  
Correcting Codes***

**Abstract:**

An infinite class of self-dual spin  $1/2$  systems and binary error corrected codes (ECC) will be discussed. (One system of this class - Baxter-Wu triangular model - is known to be solvable.) Conjectures about distribution of zeros of partition functions of finite volume systems of this class, and of ECC, will be formulated. Numerical and rigorous results supporting the conjectures will be presented.

**Monday, Feb. 4**

**4:00 P.M.**

**304 Robeson**

*Departmental tea will be served at 3:30 P.M.*