



The Spring 2007 Condensed Matter Seminar series presents:

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*Determining Spin Polarization of
Ferromagnets Using Superconducting
Spectroscopy*

Abstract:

The tremendous interest in using the spin degree of freedom in electronic devices has led to an extensive endeavor to investigate the intrinsic spin polarization of various magnetic materials. The spin polarization has been shown to be a critical factor in the performance of many spin based devices and it has been predicted that materials of high polarization are of utmost importance. The use of superconducting spectroscopy in a planar junction configuration allows for a direct electrical measurement of spin polarization which has direct technological relevance. Planar junction superconducting spectroscopy has been successfully applied to various materials including the dilute magnetic semiconductor GaMnAs, the concentrated magnetic semiconductor EuS, and had also been used to study the dependence of measured spin polarization on the effect of barrier thickness in tunnel junction based devices.

Wed., February 7

4:00 P.M.

304 Robeson