

T_cSUH Bi-Weekly Seminar

Texas Center for Superconductivity at the University of Houston

Dr. Wolfgang Donner

Department of Physics and T_cSUH
at the University of Houston



“Neutron Reflectivity from NbTi/Nb Multilayers”

Friday, August 4, 2006

Room 102, University of Houston Science Center

12:00 noon – 1:00 p.m.

Abstract

Thin film multilayers of superconducting materials display unusually high pinning forces compared to their bulk counterparts. One such system is NbTi/Nb multilayers: here it was found that the critical current density of such multilayers sensitively depends on the multilayer periodicity. It has been speculated that the vortex lattice in those multilayers would “match” the multilayer period under an applied external field of sufficient magnitude.

The talk presents results on the growth, x-ray and neutron characterization of NbTi/Nb multilayers in an effort to test the hypothesis of vortex lattice “matching.”

Bio

Wolfgang Donner received his doctoral degree in Natural Sciences from the University of Bochum (Germany) in 1994. He worked on the growth, ordering and phase behavior of metallic films at the University of Wuppertal and at the Max-Planck Institute for Metals Research in Stuttgart (Germany). He was responsible for diffraction instruments at the Hamburg Synchrotron Laboratory and the research reactor at the Institute Laue Langevin in Grenoble (France). He received the Feodor Lynen Fellowship of the Alexander von Humboldt Foundation in 2000 and had been appointed as an Assistant Professor of Physics at the University of Houston in 2002.

Persons with disabilities who require special accommodations in attending this lecture should call (713) 743-8210 as soon as possible.



TEXAS CENTER FOR
SUPERCONDUCTIVITY