

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **ŚRODĘ**

10 października br., o godz. 10:00

w sali 203 (bud. 1) odbędzie się seminarium, na którym

Prof. Terence B. Doyle

School of Physics, University of KwaZulu-Natal, South Africa
iThemba LABS, Faure, Western Cape, South Africa

wygłosi referat na temat:

„Intrinsic and extrinsic properties of type II superconductors derived from magnetization measurements”

Of fundamental theoretical and technological interest in type II superconductors are (i) the “bulk” intrinsic equilibrium behaviour, $B^{eq}(H)$ [or $M^{eq}(H)$], i.e. the “constitutive relation”, and (ii) the (inter-dependent) extrinsic properties, which include various surface effects and vortex lattice pinning, phases and dynamics. The experimental measurement of bulk intrinsic and extrinsic parameters in the high- T_c systems is problematical on account of the small size and natural platelet habit of single crystals, a high anisotropy, and a rich vortex lattice phase behaviour and fluctuation effects resulting from characteristic energies which are not small relative to $k_B T$ at moderate temperatures. An approach, based, inter alia, on a rigorous treatment of the quasi-static magnetic behaviour in specimens of arbitrary shape and on the Ginzburg-Landau theory (modified), for the determination of pertinent intrinsic and extrinsic parameters from magnetization measurements, in both single-band and two-band (MgB_2) systems, will be outlined together with applications to various systems (including some done in collaboration with the group from the Institute of Physics PAS) and related phenomena.

Serdecznie zapraszamy

Roman Puźniak
Henryk Szymczak
Andrzej Wiśniewski