

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **ŚRODĘ**

5 listopada 2008 r., o godz. 10:00

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

Dr Stephan Rioual

Universite de Bretagne, Francja

wyłosi referat na temat:

„Temperature dependence of magnetization reversal and dynamics of NiFe/FeMn bilayers”

The exchange bias phenomenon which arises from the coupling between a ferromagnetic (F) and an antiferromagnetic (AF) layers is known to manifest itself by a shift of the hysteresis loop of the ferromagnet towards the lowest fields. This shift termed exchange field H_{EB} can be observed after cooling or growing the bilayer F/AF under a static magnetic field. Although it was discovered almost half a century by Meiklejohn and Bean [1] in partially oxidized Co particles, it is still the subject of great interest for both technological and fundamental points of view. In particular, the dynamic properties of such systems have become increasingly important as operating speeds of information storage devices have progressed into high frequency regime. Despite the large numbers of works devoted to this topic, some issues are still not clear. In particular, the fact that different techniques including FMR and DC magnetometry may yield to different values of the exchange anisotropies remains unclear. Such problem has been recently discussed by considering numerical simulations [2] based on the Domain Wall Formation model. These authors highlighted the role of the AF grains at the interface and their magnetic stabilities. Our aim in the present study is to investigate the temperature dependence of the observed anisotropies in a $Ni_{80}Fe_{20} / Fe_{50}Mn_{50}$ bilayer by FMR and DC magnetometry. Results will be interpreted within the framework of the DWF model.

[1] W.H. Meiklejohn and C.P. Bean, Phys. Rev. 102,1413 (1956)

[2] J. Geshev et al., Phys. Rev. B 75, 214402 (2007)

Serdecznie zapraszamy

Roman Puźniak

Henryk Szymczak

Andrzej Wiśniewski