



# Participant Profile

for the  
**Turkish-German Strategy Workshop 2006**  
**TÜBİTAK Marmara Research Center,**  
**Istanbul- Gebze Turkey**  
**13 – 15 December 2006**



International Bureau (IB)  
of the Federal Ministry of  
Education and Research  
(BMBF)

## 1. Contact details and personal information

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<b>Address:</b>	ITU-Fizik Maslak/Istanbul	<b>Organisation type<sup>2</sup>:</b>	University
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<sup>1</sup> **Role/function** e.g. working group leader, managing director, postdoc, PhD etc.

<sup>2</sup> **Organisation type** e.g. university, research institution, small and medium enterprise (SME), industry etc.

<b>Working Group:</b>	<input checked="" type="checkbox"/> 1 Material Technologies <input type="checkbox"/> 2 Biotechnology, Genomics and Food <input type="checkbox"/> 3 Energy <input type="checkbox"/> 4 Information and Communication Technologies <input type="checkbox"/> 5 Environmental Protection, Climate Change and Sustainable Development
<b>Areas of activity:</b>	<input checked="" type="checkbox"/> research <input type="checkbox"/> technology development <input type="checkbox"/> demonstration <input type="checkbox"/> training <input type="checkbox"/> dissemination <input type="checkbox"/> other:
<b>Keywords characterising your area of research:</b>	<b>Please choose the appropriate key words (max. 5) from the following list:</b> <a href="http://www.cordis.lu/fp6/keywords">http://www.cordis.lu/fp6/keywords</a> Condensed Matter Physics
<b>Expertise, technologies and infrastructures available in your institution:</b>	<b>Research activities / expertise:</b> Transport and magnetic properties on magnetic materials ( transition metal alloys, rare-earth-transition metal compounds) <b>Methods:</b> Electrical resistivity, Magnetization, Ferromagnetic Resonance (FMR) and Spin-Wave Resonance (SWR). <b>Key technologies:</b> nano-magnetism, magnetic sensor <b>Infrastructures:</b> Various lab. facilities of Istanbul Technical University <b>Key publications:</b> -Öner Y, Kamer O and Joseph H.Ross Jr Effect of exchange bias on the electrical resistivity of Pd doped NiMn films: Two channel-Kondo System, J J APPL PHYS (in press), 2007 -Öner Y. Electrical resistivity of amorphous Cr74Fe26 J APPL PHYS,99 ( 2006) 08J306. -Öner Y, Kamer O, Alveroglu E, Acet M and Krenke T. Superconductivity in Pd2YbPb Heusler alloy, Journal of Alloys and Compounds (in press), 2006. - Öner Y, Anomalous Hall effect in amorphous Ni74Mn24Pt2 film Phys. Rev B, 71(13), Art No: 134425, Apr 2005.



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## 2. Past and present research collaborations

Are you familiar  
with the European  
Framework  
Programme?

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> with Framework Programme 5 <input type="checkbox"/> with Framework Programme 6 <input type="checkbox"/> with Framework Programme 7	

EU-projects you are  
involved in:

Past projects

Programme title / contract number / title / acronym / your function  
(coordinator / partner / contractor)

-

Present projects

-

Other international  
collaborations:

-

Name(s) and  
contact details of  
potential partners:

If you would like to suggest the participation of particular partners from the partner country based on existing contacts or collaboration experience, you are welcome to indicate their names and contact details below:  
Prof.Dr.Mehmet Aceti Duisburg-Essen University, Germany

## 3. Presentation at the Workshop

I will give a presentation at the workshop (approx. 10 min.) to present my institution, my expertise, and my collaboration interests. The contents of my presentations is summarised below (max. 1 page).

The subject of magnetism has fascinated scientists for years, and has led to the discovery of thousands of compounds with a great variety of magnetic ordering temperatures, spin structure (ferromagnetism, antiferromagnetism, helical and modulated spin order), itinerant magnetism, magnetic anisotropy and hysteresis loops. The richest variety of magnetic phenomena are displayed by compounds containing two magnetic elements, a rare earth (R) and a 3d transition element (T), in either metallic or insulating form (the compounds may contain additional elements (X) such as oxygen). Such compounds display phenomena ranging superconductivity, valence instabilities, to intense magnetism.

We propose a collaborative study of new rare-earth intermetallic exhibiting valence fluctuation and related behaviour, using the facilities available at Istanbul Technical University. The work may reveal the conditions under which the charges and magnetic moments of the rare earth and transition element lose their stability. The condition for strong interactions and the nature of the valence and magnetic phase transition will contribute to our general understanding of magnetic order phenomena, and may contribute to the search for **new magnetic materials of technological importance**.

The techniques to be used in these studies include, vibrating sample magnetometry, resistivity, magnetoresistance, Hall effect, and ESR measurements (we will use the facilities of Technology Ins. of Gebze for ESR).

**I agree with the publication of my data on the Workshop website!**

PLEASE FILL IN THIS FORM **UNTIL 22 SEPT. 2006** AND RETURN IT TO:

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