

## Short description

Project acronym: **MULTIMAT**

Project ID (6 digits): **505226**

Project Participant: **Institute of Physics, Academy of Sciences of the Czech Republic**

YOU			YOUR STAY IN THE NETWORK				
Name, first name	Nationality	Previous place of work/education	Start date	Duration (months)	Category ESR/ER	Place	Country
<b>IGNACOVA Silvia</b>	<b>Slovak</b>	<b>Aoyama, Lovosice</b>	<b>25/10/2004</b>	<b>36</b>	<b>ESR</b>	<b>IoP ASCR, Prague</b>	<b>Czech Republic</b>

## EDUCATION

- Since 03/2005 **Czech Technical University in Prague**  
Faculty of Nuclear Sciences and Physical engineering  
PhD student in specialization: Physical engineering  
Dissertation thesis theme: "Single Crystal Investigations of Martensitic Phases in Shape Memory Alloys"
- 09/1998 – 06/2004 **Technical University of Košice, Faculty of Metallurgy**  
Specialization: Materials Science

## EMPLOYMENT

- Since 10/2004 **Institute of Physics, Academy of Sciences of the Czech Republic**  
Position: PhD student and ESR
- 07/2004 – 10/2004 **Aoyama Ltd., Lovosice**

## TRAINING

My continuous training is devoted to investigation of martensitic phases – reorientation processes, deformation processes by different techniques (Institute of Physics). During my training stays and studies I completed training devoted to SEM and TEM techniques (EMAT, University of Antwerp), magnetic properties studies - VSM, magnetic susceptibility (Helsinki University of Technology).

## INTERACTION

I appreciate cooperation with other ESR's (Erell, Benson), ER's (Barbora, Nils), and perfect workshops. Especially interests of Bara and Nils have the same base as me – new CoNiAl alloy. I am responsible for preparation of samples to get transforming material (heat treatment – transformation temperatures, microstructural studies, deformation/transformation studies etc.

## INTERNATIONAL CONFERENCES

EUROMAT congress, Prague, Czech Republic: 5 – 9 September 2005

ESRF – Colloquium, Grenoble, France: 21 – 25 June 2006

ESOMAT conference, Bochum, Germany: 10 – 15 September 2006

MULTIMAT meetings: Leipzig, Paris, Barcelona, and Cambridge

## RESEARCH ACHIEVEMENTS

- CuAlNi and CuAlMn: The twinning deformation and transformation processes in both alloys were investigated and among the three possible twinning processes in the 2H martensite structure type I, type II, and compound twinning only the latter two were in compression observed. Twinning - resolved shear stresses were evaluated.
- CoNiAl: The ( $\beta+\gamma$ ) two-phase CoNiAl alloy was studied by optical observations, compressive deformation, and investigation of magnetic properties.