

*Doctoral School towards European  
Knowledge Society -*

**DEUKS**

***Prof. Silvia Ghilezan***

***Faculty of Technical Sciences University Novi Sad***



# ***European Association of Universities Council for Doctoral Education EUA-CDE Objectives***

To enhance the **quality of doctoral education** at European universities by supporting and strengthening

- I. Exchange & dissemination of good practice
- II. Development of institutional policies
- III. Link between education and research
- IV. Availability of data
- V. International dimension
- VI. Joint programmes
- VII. Dialogue with other stakeholders

# I. *Exchange & dissemination of good practice*

Tempus project **DEUKS** (2007-2009)

- To **promote** the current European landscape of doctoral programmes in Serbia;
- To **implement** a pilot Doctoral Programme according to the European innovative recommendations

Doctoral education (third cycle) markedly different-  
linking ERA and EHEA  
two pillars of the modern society

# I. Exchange & dissemination of good practice

## DEUKS Consortium members

- University of Udine, Italy – *grant holder*
- INRIA Sophia Antipolis, France
- Polytechnical University of Valencia, Spain
- University of Novi Sad, Faculty of Technical Sciences, Serbia - *coordinator*
- Mathematical Institute – SANU, Belgrade,
- University of Novi Pazar
- Prof. P. Lescanne, ENS de Lyon, France
- Prof. P. Urzyczyn, University of Warsaw, Poland

EU

Serbia

# I. *Exchange & dissemination of good practice*

## Changing role of doctoral education

- Comparative analysis of PhD programmes in RS and EU
- European University Association (EUA) <http://www.eua.be>:
  - Doctoral Programmes for the European Knowledge Society  
Results of EUA Doctoral Programmes Project, 2005.
  - Doctoral Programmes in Europe's Universities: Achievements and Challenges, 2007.
- Questionnaire – analysis and comparison of doctoral programmes in IT in EU and RS
- Dossier (report) published 2009 - presented at **TREND**

**Doctoral Education –**  
a Road Towards European Knowledge  
Society

## **Doctoral Education**

a Road Towards European Knowledge Society

## **Doktorsko obrazovanje**

put ka Evropskom društvu znanja



## II. *Development of institutional policies*

### FTS-UNS Joint PhD Programme with MI SANU

- Doctoral Programme *Applied Mathematics* has been **accredited in May 2008** -(the first round)
- Research institutes eligible - Law of Higher Education 2005
- Mathematical Institute SANU – **approved**  
**Utilisation of excellent researchers outside of university**  
#####
- **October 2008** starting date of the joint programme



- DEUKS
- Specific Objectives
- Consortium Members
- Partner Country Problem And Needs Analysis
- Presentation Of Consortium
- The Project
- Summary
- Outcomes
  - Coherent system of Doctoral Programmes Promoted
  - Pilot Doctoral Programme in IT developed
  - Teaching methods developed
  - Research environment for PhD students built
  - Dissemination and sustainability
  - Quality control and monitoring
  - Management
- Sites' Activities
- News
  - May 2008, Training

## Main

# Deuks

## Welcome to DEUKS

### *Doctoral School towards European Knowledge Society, Tempus Project JEP - 41099 - 2006*

Main aim of this Project is to promote the current European landscape of doctoral programmes in Serbia.

Particularly, the Project will develop and implement a pilot Doctoral Programme according to the European innovative recommendations with comprehensive approach to information technologies, where foundational theories are fully integrated in a pragmatic engineering approach.

Two more specific goals of the project are: to develop new teaching methods and materials for core courses, trainings in transferable skills, and continuing education, as well as to build a research environment for the Doctoral School linking the EHEA and ERA.

All our aims will be achieved with the help of the Consortium Members:

- [UNIVERSITA DEGLI STUDI DI UDINE \(I\)](#) - Prof. Marina Lenisa (grantholder)
- [UNIVERSITY OF NOVI SAD \(RS\)](#) - Prof. Silvia Ghilezan (co-ordinator)
- [INSTITUT NATIONAL DE RECHERCHES EN INFORMATIQUE ET EN AUTOMATIQUE - Sophia Antipolis \(FR\)](#) - Prof. Luigi Liquori
- [MATHEMATICAL INSTITUTE OF THE SERBIAN ACADEMY OF SCIENCE AND ARTS - Belgrade \(RS\)](#) - Prof. Zoran Ognjanović
- [UNIVERSIDAD POLITECNICA DE VALENCIA - Valencia \(ES\)](#) - Prof. Salvador Lucas

We will have help from Individual experts:

- Pierre Lescanne, Ecole Normale Superieure de Lvon and

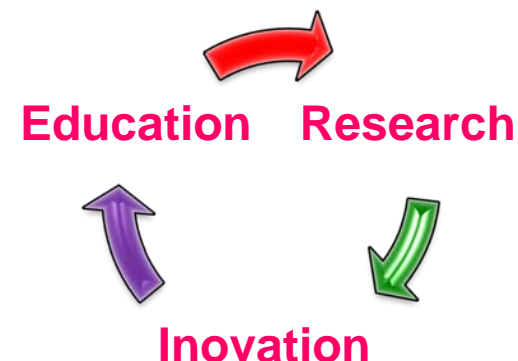
Danube Rectors' Conference  
Novi Sad February 2010



### III. Link between education and research

- **National projects** - 6 out of 40 (top ranking) in 2009 over 100 publications in prestigious journals
- **3 FP 6** – TYPES, ADHOCSIS, SWEB
- **CEEPUS** – Austria, Hungary, Croatia, Romania
- **International** - France, Japan, Italy, Sweden, Slovenia
- **COST IC0901** - new

**Knowledge Triangle:  
Excellence in**



### ***III. Link between education and research*** **Seminars**

#### Research seminars at MISANU and UNS



## ***V. International dimension***

students' mobility (study periods and summer schools)

### **2008 and 2009**

- **Jelena Ivetić** – Bertinoro (Italy); Warsaw (Poland), Udine (Italy), Budapest (Hungary)
- **Svetlana Jakšić** – Bertinoro, Torino, Udine (Italy); Warsaw (Poland), Budapest (Hungary)
- **Tibor Lukić** – Udine (Italy), Budapest (Hungary), Vienna (Austria),...
- **Vesna Pavlović** – Valencia (Spain),...
- **Petar Maksimović** – INRIA (France), Udine (Italy), ...
- **Bojan Marinković** – INRIA (France), Udine (Italy),...

## ***V. International dimension*** **2000 - 2007**

- **Silvia Likavec, PhD:** U.Torino (Italy) – ENS Lyon (France)
- **Viktor Kunčak, PhD:** MIT (USA)
- **Nataša Sladoje, PhD:** U.Upsalla (Sweden)
- **Dragiša Žunić, PhD:** ENS Lyon (France)

## ***V. International dimension*** co-toutelle or co-supervision

2008 -

- **P. Maksimović – co-toutelle INRIA and UNS**  
co-supervision of Dr. L. Liquori, Prof. Z. Ognjanović and Prof. S. Ghilezan
- **V. Ćurić, Upsalla**  
co-supervision of Prof.G. Borgefors , Dr. J. Lindblad (Upsalla, Sweden) and Dr.N. Sladoje (UNS)
- **S. Jakšić,**  
co-supervision of Prof. M. Dezani (Torino,Italy) and Prof. J. Pantović (UNS)
- **J. Ivetić,**  
co-supervision of Prof. P. Lescanne (Lyon, France) and Prof. S. Ghilezan (UNS)

# Summer school Novi Sad June 14-27, 2009

## FIT – Foundation of IT

<http://cms.uns.ac.rs/fit2009>

### The Summer School on Foundations of Information Technologies, FIT,

will be held in Novi Sad, in Serbia, between June 14 and June 27, 2009. It will offer a number of PhD courses for all the students, from Serbia and abroad, interested in this field. In addition to the lectures on selected topics related to the theory and applications of Information technologies, students will have an opportunity to work in small teams on specific scientific assignments. Such an approach supports the main idea of modern doctoral education – training for research by doing research.

The organizer of FIT is The Chair of Mathematics, Faculty of Technical Sciences in Novi Sad. The FIT Summer School is supported by the TEPMUS Programme through the Project “Doctoral School towards European Knowledge Society – DEUKS”. All the partner institutions in the DEUKS Project are giving valuable contribution to the Summer School, ensuring its high scientific and educational quality. The lecturers are professors from Università degli Studi di Udine, Italy, Universidad Politécnica de Valencia, Spain, and INRIA Sophia Antipolis, France.

Tempus project DEUKS aims at promotion of the current European landscape of doctoral education in Serbia. The developed and implemented Pilot Doctoral Programme in information technologies at the Faculty of Technical Sciences in Novi Sad, jointly ran with the Mathematical institute, SANU, Belgrade, strongly relies on the European innovative recommendations and improved and new teaching methods. Summer School FIT is an important step on the way towards modern and efficient doctoral education in Serbia, and our further integration into the European knowledge society.



### Important dates

Deadline for applications: **May 15, 2009**

Opening: **June 14, 2009**

Closing: **June 27, 2009**

### Contact

**Jelena Ivetić**  
FIT Organizing Committee  
Faculty of Technical Sciences  
University of Novi Sad  
Trg Dositeja Obradovica 6  
21000 Novi Sad  
Serbia

Mail: [fit2009@imft.ftn.ns.ac.yu](mailto:fit2009@imft.ftn.ns.ac.yu)  
Tel/Fax: +381 21 6350 770

<http://cms.ns.ac.yu/fit2009>



Published/Printed by  
Graphic Center GRID  
Faculty of Technical Sciences  
Trg Dositeja Obradovica 6  
21000 Novi Sad, Serbia



University of Novi Sad



Faculty of Technical Sciences  
Novi Sad



Mathematical Institute  
Serbian Academy of Sciences and Arts,  
Belgrade



DEUKS  
Tempus Project  
JEP - 41099 - 2006

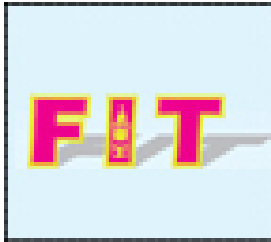
## Summer School on Foundations of Information Technologies

# FIT

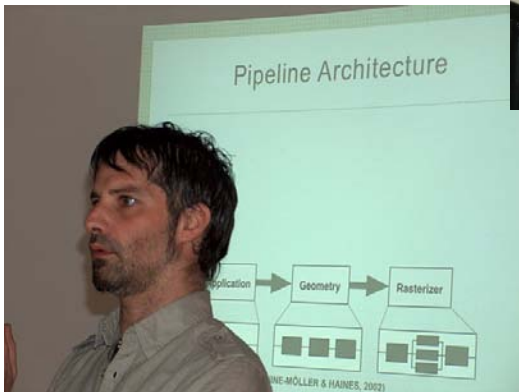
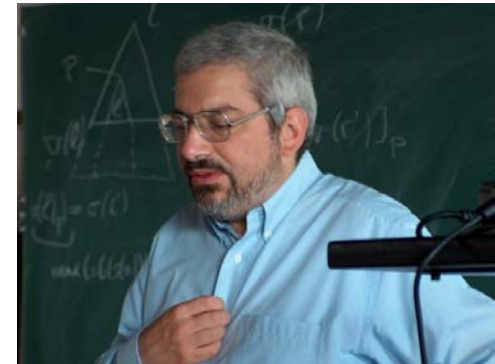
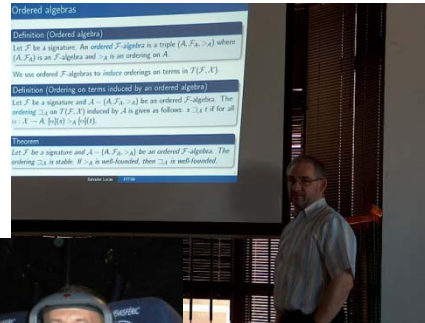
June 14-27, 2009.

Novi Sad, Serbia

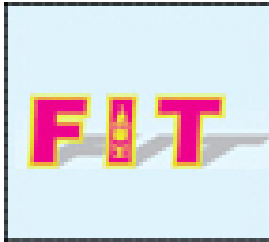




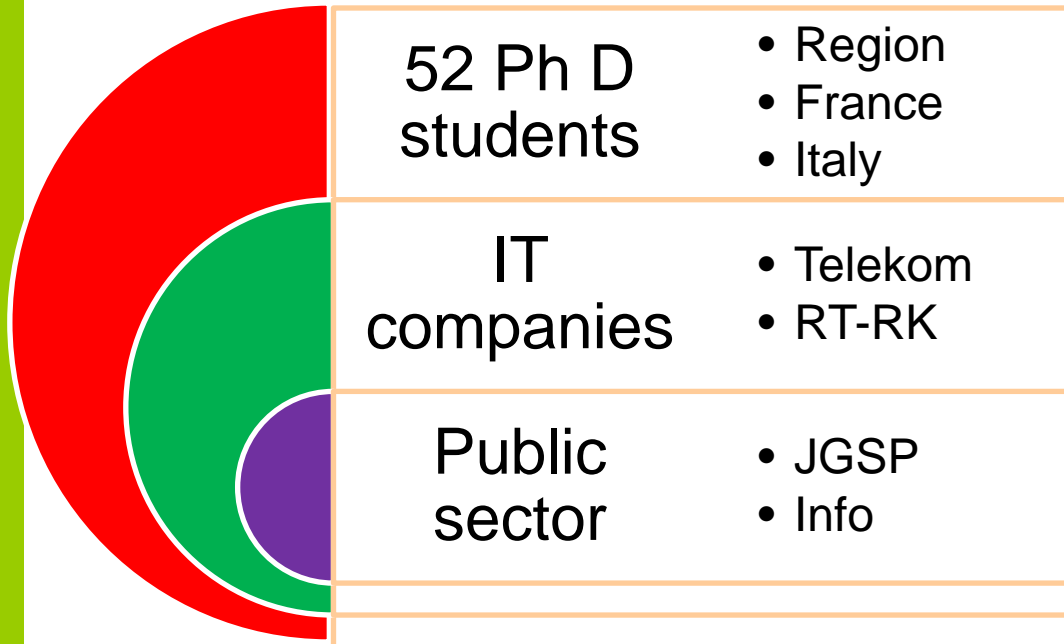
# Creative research environment



Danube Rectors' Conference  
 Novi Sad February 2010



# Participants: students – companies – public sector





## ***VI. Future – Joint Programmes***

- Joint Doctoral Programme

“Science of Information Technologies”

**Universities:** Udine, Valencia, Novi Sad, Novi Pazar.

**Research Institutes:** INRIA-Sophia Antipolis, MI-SANU Belgrade, ENS Lyon, Mathematical Institute Sofia.

**Associated members:** Municipality of Udine, City of Novi Sad, Centar za nove tehnologije Viminacium, Friuli Innovazione.

**Erasmus Mundus Joint  
Doctorates**

# Investment in excellent people & research as an imperative!!!

- scholarships
- work load
- post-doc
- “master/slave”
- supervision
- employment out of academia

# Investment in excellent people & research as an imperative!!!

- scholarships
- work load
- post-doc
- “master/slave”
- supervision
- employment out of academia
- brain drain reduction
- new initiatives
- impact on the “triangle”
- long term impact