
FACULTY OF MATHEMATICS AND INFORMATICS, SOFIA UNIVERSITY

Maria Nisheva

Abstract: *The Faculty of Mathematics and Informatics (FMI) of Sofia University "St. Kliment Ohridski" is briefly presented as an educational and research institution. The possible contribution of FMI to KT-DigiCULT-BG project is analyzed.*

Keywords: *computer science, information technologies..*

Sofia University "St. Kliment Ohridski"

Sofia University "St. Kliment Ohridski" (<http://www.uni-sofia.bg>) is the oldest and most prestigious educational centre in Bulgaria offering over 80 BSc degree programmes and much more MSc degree programmes and PhD programmes in mathematical sciences, natural sciences and humanities.

Its academic staff consists of about 1800 lecturers including over 600 professors and associate professors. Sofia University has over 25000 students studying in 15 faculties.

Sofia University is one of the best scientific centres in the country. The most important characteristic of the research activities of Sofia University is their close relation with the educational process.

Faculty of Mathematics and Informatics: General Information

The Faculty of Mathematics and Informatics (FMI) is an inheritor of the former Physico-Mathematical Department founded in 1889. In 1904 the Department was renamed as Physico-Mathematical Faculty and in 1963 it was separated as an independent faculty at the Sofia University. From 1986 it exists as a Faculty of Mathematics and Informatics. Now it is basically situated in the University campus "Lozenetz" (fig. 1).

FMI is responsible for the realization of teaching and research in the fields of Mathematics, Applied Mathematics, Computer Science and Information Technologies. It has over 2200 students and postgraduates.

The training process is provided by full-time lecturers (including about 70 professors and associate professors and more than 80 assistant professors) and by guest-lecturers who are usually well-known scientists from Bulgaria and abroad.

FMI has 14 departments and a lot of auxiliary sections (computer laboratories etc). The faculty staff and students have at their disposal a library with about 80000 volumes which contains the oldest collection of mathematical literature in the Balkan states.



Fig. 1: The main building of FMI

Training Activities

BSc Degree Programmes

FMI offers four BSc degree programmes that have been given the highest rating by the National Agency for Evaluation and Accreditation:

- Mathematics
- Applied Mathematics
- Informatics
- Mathematics and Informatics (provided for teacher qualification)

Three new BSc degree programmes in correspondence with ACM Computing Curricula 2001 are at different stages of preparation: Computer Science, Software Engineering, Information Systems. In particular, the Computer Science BSc degree programme started successfully in 2004/2005 academic year with a great number of extremely good candidates.

MSc Degree Programmes in Computer Science and Information Technologies

FMI carries out the training in a significant number of MSc degree programmes. Most attractive are the programmes in the fields of Computer Science and Information Technologies:

- Artificial Intelligence
- Bioinformatics
- Computational Science and Engineering
- Distributed Systems and Mobile Technologies
- E-Business
- E-Learning
- Information Systems
- Logic and Algorithms
- Software Engineering

International Exchange of Students and Lecturers

FMI participates actively in the programmes for international exchange of students and lecturers. Many staff members of the faculty realized useful long-term and short-term visits to famous European universities within the framework of a number of TEMPUS projects. Now students and lecturers from FMI use the opportunities for international exchange given by the SOCRATES/ERASMUS Programme. FMI has more than 20 bilateral agreements with universities in Germany, France, UK, Sweden, Norway, Denmark, Italy, Portugal and Greece for this purpose.

Research Potential in Computer Science and Information Technologies

The academic staff of FMI doing teaching and research in the fields of Computer Science and Information Technologies includes:

- 19 associate professors
- 18 assistant professors (4 of them with PhD degree)

About 40 PhD students are also doing research in these fields.

The most effective areas of research in Computer Science and Information Technologies at FMI may be generalized in the following list:

- Programming Languages and Data Structures
- Markup Languages
- Databases and Information Systems
- Knowledge Based Systems
- Data Grids
- Virtual Reality
- E-Business
- E-Learning
- Mobile Technologies

Project Activities in Computer Science and Information Technologies

FMI has rich experience in the management and implementation of research and development projects in the fields of Computer Science and Information Technologies. Some of the most successful projects of FMI in the last years are [Popov, 2003]:

- 5FP IST-1999-21148 (2000-2002) "Best Practice Pilot for the Implementation of Integrated Internet Based Remote Working Places for Virtual Teams Developing their Work at SMEs (IWOP)"
- 5FP IST-1999-20852 (2000-2002) "Best Practice Pilot for the Promotion and Implementation of Teleworking Tools at European SMEs of the Service Sector (PROTELEUSES)"
- 5FP IST-1999-12646 (2000-2002) "A Picture of Social Observation of Call Centre (TOSCA)"
- PHARE TEMPUS Institutional Building Project IB_JEP-14047-1999: Centre of Excellence in Information Society Technologies
- 5FP IST-2001-34488 (2002-2004) EXPERT Project "Best Practice on E-project Development Methods"
- 5FP IST-2001-37460 COCONET "Context Aware Collaborative Environments for Next Generation Business Networks"
- 5 FP IST Project "DIOGENE: A Training Web Broker for ICT Professionals"
- 5 FP 2001/C 321/17 (2002-2005) GEM-Europe Project "Global Education in Manufacturing"
- 5 FP IST Project "WebLabs: New Representational Infrastructures for Learning"
- PHARE Multi-Country Programme in Distance Education (1998-1999) "DEMAND: DEsign, implementation and MANagement of telematics based Distance education"
- INCO-Copernicus 1445 Project "Flexible and Distance Learning through Telematics Networks: A Case Study of Teaching English and Communication and Information Technologies"
- INCO-Copernicus Project PL961125 under EC Directorate General XXIII "Intelligent Learning Environment for Course Telematics – INTELLECT"
- INCO-Copernicus Project 977074 LarFlast under EC Directorate General III "Learning Foreign Language Scientific Terminology"
- INCO-Copernicus Project 977102 ILPnet2 "Inductive Logic Programming Network of Excellence"

Possible Contribution to KT-DigiCULT-BG Project

FMI may successfully contribute to KT-DigiCULT-BG Project with research and development activities in the following main directions:

- Development of software tools for creation, editing and visualization of catalogue descriptions of manuscripts and printed literature. Some promising results in this direction have already been achieved [Pavlov, 2004];
- Development of software tools for analysis of catalogue descriptions and digitized collections of written records using AI methods and techniques;
- Development of proper Web interface to electronic catalogues and digitized collections of cultural and scientific records;
- Providing a convenient access to the oldest collection of mathematical literature in the Balkan states.

Bibliography

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Author Information

Maria Nisheva-Pavlova – Faculty of Mathematics and Informatics, Sofia University, 5 James Bourchier blvd., Sofia 1164, Bulgaria; e-mail: marian@fmi.uni-sofia.bg