Faculty of Informatics

Annual Activity Report 2000

Dean: **Assoc. Prof. RNDr. Luděk Matyska, CSc.**

Vice-deans: **Assoc. Prof. Ing. Jan Staudek, CSc.**
Assoc. Prof. RNDr. Luboš Brim, CSc.   *(until 30. 4. 2000)*
Assoc. Prof. RNDr. Jan Slovák, CSc.   *(until 31. 1. 2000)*
Assoc. Prof. Ing. Pavel Zezula, CSc.   *(from 1. 5. 2000)*
Assoc. Prof. Ing. Jiří Sochor, CSc.   *(from 1. 2. 2000)*

Chairman of the   **Assoc. Prof. PhDr. Karel Pala, CSc.**
Academic Senate:

Secretary: **Ing. Jana Foukalová**   *(until 30. 9. 2000)*
RNDr. Lenka Bartošková   *(from 1. 10. 2000)*

In the year 2000, the Faculty of Informatics began preparations for the restructuring of its study programme in order to fully harmonize it with the conclusions of the Bologna Declaration. A two-level basic study programme is being prepared in which the Faculty will offer at least two Bachelor's and at least two follow-up Master's programmes to meet the ever-growing demand for graduates with profound theoretical knowledge as well as graduates with more practical skills and able to directly apply in everyday practice.

In the area of research and development, academic staff of the Faculty successfully continued in activities encompassing areas which for the most part connect to successful projects implemented through national and international grants. Activities in international projects of the 5th EU framework programme for digital libraries were restarted.

Three long-term research projects in informatics entered in their second year, namely "Non-sequential Models of Computing", "Human-Computer Interaction, Dialogue Systems and Assistive Technologies" and "The Application of Computer Imaging in Microscopy". These projects, along with the information system security, represent the focus of research at the Faculty. The issue of digital libraries was reintroduced through projects of the EU IST programme. In this area, the Faculty has become one of the main actors in the multimedia digital library programme in support of the SCHOLNET research project. It has also become a member of DELOS NoE "Network of Excellence" in the field digital libraries.

Other research areas in which the academic staff of the Faculty are particularly actively include theoretical informatics, specification-based systems, software engineering and programming methodology, computer networks, electronic typesetting desktop publishing, scientific computation and data visualisation, information systems, multimedia and expert systems, and the impact of IT development in general. The Faculty of Informatics was a direct recipient of a comprehensive grant from the Grant Agency of the Czech Republic for research into virtual reality, and two long-term grants from the Ministry of Education scientific development programme on applications connected to the natural language and communication in it, and on the designing of 3D images depicting the genetic information in cells. Furthermore, academic staff of the Faculty worked on a total of 12 grants from the GA CR. three of which were joint projects, one grant was from the Higher Education Development

Fund, four were grants from abroad and three were grants which do not fall into any of the above categories. The total value of the grants received was almost 15 million CZK.

Research work at the Faculty is very closely connected with specialised research laboratories, funded mainly from grants and significantly supporting both applied and basic research. In 2000, the Faculty operated the "Laboratory of Natural Language Processing", "Human-Computer Interaction Laboratory", "Laboratory of Dialogue Systems", "Laboratory of High-Resolution Cytometry" and "Laboratory of Parallel and Distributed Systems". Apart from academic staff and students working on postgraduate studies, the best students from the Master's programme also have the opportunity to become involved in the research activities of these laboratories.

As is becoming a tradition, the Faculty again organised the international SOFSEM conference, which ranks among the most important informatics conferences in informatics in the Czech Republic. Another important event organised by the Faculty was the DATASEM conference, the main national conference on database and information systems. A successful "Workshop TSD 2000" was also organized on the topical issues of natural language computer processing with an emphasis on the integration of means of processing text, spoken language and dialogue systems.

The Faculty continued to organize the *Colloquium in Informatics*, where the latest results of research and development in informatics are presented. At the colloquia, 10 foreign and 18 Czech speakers gave presentations. Eighteen Faculty members actively participated in the preparation of international conferences and congresses. Faculty students took part in the ACM Programming Contest and in IEEE CSIDC, where they placed amongst the top 20 teams from the whole world.

The Faculty of Informatics provides university-type courses with an emphasis on scientific training and theoretical foundations of the disciplines. The system of study at the Faculty is as open as possible to students and enables them to choose subjects according to their particular interests.

At present, the Faculty offers training on the Bachelor's, Master's and Ph.D. levels. A number of subjects in study programmes are organised in co-operation with the Faculty of Science (particularly mathematics), while teacher-training courses are organized as inter-faculty studies. Students of specialised studies major in informatics and also subscribe to a minor secondary subject. The Faculty provides in informatics as the major discipline in two programmes: either in the more practical Bachelor's programme, or in the more demanding and theoretical Master's programme. As there is considerable overlap between the basic courses of both of these study programmes, students can easily switch between them. Last year, the scope of options available to students was further adapted to their needs, and new specialized Bachelor's courses were introduced in some subjects. The Master's courses require the completion of certain academic prerequisites at the end of the third year, at which time those students who continue in the Master's programme may obtain a Bachelor's degree (which enables graduates to progress to higher forms of study at other institutes of higher education in this country or abroad).

In the past year, special attention was paid to post-graduate studies in informatics, which the Faculty considers very important. The interest in this form of study is continuously growing. At present, the Faculty has 58 full-time and 11 combined study post-graduate students. The Faculty is endeavouring to create the best conditions for the students to join in on research projects, and it expects scientific results in the form of quality dissertations and publication in renowned foreign journals or reviewed almanacs.

In all of its forms of study, the Faculty uses the credit point system, encompassing a combination of courses that are compulsory for a selected form of study, subjects for specific specialisations, and the optional courses chosen by the students themselves according to their own professional preferences.

The Faculty continued to keep up its wide international contacts with numerous foreign institutions. Twenty-two Faculty members were involved in work for various committees of international conferences boards of international professional societies (IFIP, IEEE CZ, TUG, ACM Chapter CZ and ERCIM), or sat on editorial boards of scientific journals. Thirteen Faculty members were invited to take part in study-trips and series of lecture abroad, while three teachers from abroad gave courses at the

Faculty. Faculty members went on 96 trips abroad, most of which involved active participation at international conferences and seminars. The Faculty played host to 13 guests from abroad.

In the year 2000, active long-term co-operation in theoretical research continued with City University London (UK), the University of Namur (Belgium) and the Technical University of Munich (Germany).

The Faculty maintained active co-operation with universities in Oxford (UK) and in Heidelberg (Germany) in research in the area of image analysis in cytometry. New contacts were made with counterpart institutions in Italy, Germany, Sweden, France, and Greece through the SCHOLNET project. Cooperation within the DELOS NoE network, which brings dozens of European and American facilities together, developed successfully.

In 2000, Faculty members published a total of 177 works, 94 of which were published in this country and 83 abroad. Three monographs (one abroad) and 138 works in reviewed almanacs or journals were also published. Other works include study materials and articles of a popular nature.

Honorary doctorates, medals and other awards

Prof. Dr. Jozef Gruska was awarded the MU Rector's Prize and the Slovak Literary Fund Award. The MU Rector's Prize for Students with Excellent Academic Achievements went to Jan Strejček and Daniel Polanský. The Faculty of Informatics Dean's Prize for representing the Faculty at the IEEE CSIDC and ACM Programming Contest was awarded to Lenko Grigorov, Jan Kohout, Martin Suchánek, Věroslav Kaplan, Damon Vrkoč, Tomáš Hanžl and Radek Pelánek. The MU Faculty of Science Dean's Prize and the Mathematics Department Award was given to Martin Nečesal.