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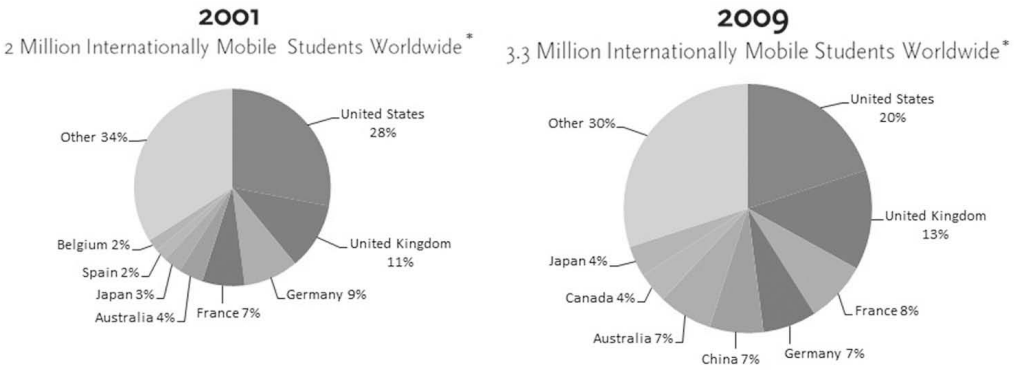
WARSAW SCHOOL'S OF COMPUTER SCIENCE FIRST STEPS TOWARDS INTERNATIONALISATION

Higher education institutions, long before the widespread use of the term „globalization", were those places where the exchange as well as the juxtaposition of ideas was carried out and where innovative pan-national theories and solutions were created. Since the dawn of universities, it was HEIs that were more international in their whole spectrum of activities than the surrounding environment. Many of them have served as centers around which outstanding scientists and students have gathered, often from distant countries.

Modern processes of internationalisation and globalization, have made the role of universities – being the initiator and catalyst for these processes – more intensive and reaching for new, previously unknown areas. It should be strongly emphasized that apart from being mostly the centers of knowledge and skills excellence, as it was in the past, the universities are nowadays also of relevant economic importance for countries that take the leading role in the processes of higher education internationalisation. According to the British Council research, attracting international students to the UK is worth £ 8.5 billion per year to the nation (Source: British Council, Annual Report 2007), the Economic Impact of export education in New Zealand, excluding offshore earnings is approximately 2.1 billion for 2007/2008 (Source: The Economic Impact of Export Education, 2008).

The traditional area of internationalisation of higher education is attracting foreign academic students. In some countries and universities the share of foreign students in the total number of students is significant. In the academic year 2009/2010 in the United States, which is the world leader in the number of foreign students, studied nearly 700 000 students from outside the U.S. In Australia, more than one-fifth of all students are foreigners. The same indicator in the UK reaches 16% and in Germany is higher than 12%. (Sources: UNESCO/OECD 2006 data).

Picture 1. Global destinations for international students at the post-secondary (tertiary) level, 2001 and 2009

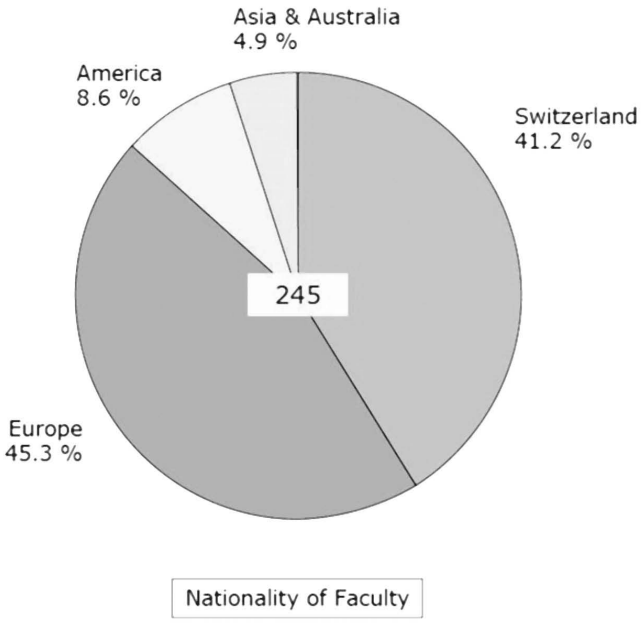


Source: Atlas of Student Mobility, Institute of International Education.

According to OECD, by 2025 almost 8 million students are to be studying outside their home country.

Another indicator on the basis of which the degree of internationalisation of higher education and individual universities is evaluated, is the ratio of employment of foreign teachers and researchers compared to national ones. As the chart below shows, in one of the leading Swiss universities this ratio is 60:40 in favor of foreign lecturers (see picture 2). Universities are trying to attract outstanding researchers from around the world, entrusting them with the best cathedrals and management of scientific research projects, hoping to secure in this way the best possible position on the national and international education market.

Picture 2. EPFL's (Switzerland) International Faculty



Source: EPFL data, 2007.

Other means of measuring the degree of internationalisation of higher education institutions also are mentioned.

For overall aspects as well as teaching and studies:

- the number of international visiting researchers (minimum duration 1 week),
- the proportion of outgoing exchange students and students with an international internship in relation to the total number of students;

for research:

- the number of international visiting researchers (minimum duration 1 week),
- the number of didactic stays abroad undertaken by lecturers in relation to the total number of lecturers,
- the proportion of graduates with joint or multiple degrees,
- the amount of procured third-party funding from international sponsors in relation to the total sum of third-party funds per annum,
- the amount of third-party funding for international projects with international cooperation partners in relation to the total amount of third-party funding per annum.

(Source: How to measure internationality and internationalisation of higher education institutions! Indicators and key figures, 2007).

Many of these are the basis for determining international university rankings. Warsaw School of Computer Science obviously is not the subject of such categorizations. Although it is worth mentioning that last academic year our university for the first time was ranked in the Ranking Web of World Universities. In the general classification of this ranking, we found ourselves on the 8158th position among 12 006 universities evaluated. According to the scholar (Sc) criterion which is the data combination of items published between 2006 and 2010 included in Google Scholar and the global output (2004–2008) obtained from Scimago SIR in the same ranking, we found ourselves on the 3367th position in the world.

Warsaw School of Computer Science has entered the path of internationalisation relatively late, in 2008,. Previous attempts to integrate into the international academic community were just very small steps in that direction. Only receiving the Erasmus University Charter in 2008 and later joining the European Life-Long Learning Program allowed us to undertake the planned, long-term activities on international student exchanges, placement periods and internships abroad as well as academic staff research, other staff exchange and teaching visits. The new impetus to these activities was given by the European Union project for the development of Warsaw School of Computer Science funded by the European Social Fund. One of the project's goals was to intensify the international cooperation and development conducted by WSCS.

This area of the project focused on the preparation of students and teaching staff of the University to use the opportunities which open up with regard to the globalization of education at the tertiary level. An important reason to take up this type of action was also the students' need to improve language skills in order to increase their employability. First of all, the first level studies curriculum has been modified by delivering the content of specialization courses in English. Courses in English have been prepared and conducted in eight thematic modules (a total of 284 hours of lectures and laboratories) for a group of 190 full-time and part-time students of the 2nd, 3rd and 4th year of studies. Secondly, the University initiated and implemented the program entitled the "Visiting Professor" within the framework of which we invited 9 professors from American, French, British and Swedish universities to conduct lectures and conduct some research at WSCS.

The invited academics gave nine open lectures in which a total of 313 students participated. Open lectures under the "Visiting Professor" program were given by

Prof. Jerzy Grzymała-Busse, Data Mining and Usage, Prof. Przemysław Bakowski, Digital Economy: Technological and Economical Aspects in Global Context, Prof. Andrzej Szałas, Semantic Web: the Motivations and Technologies, Prof. Tomasz Michalak, Computational Social Choice Theory, Prof. Talal Rahwan, Coalition Formation in Multi-Agent Systems, Prof. Halina Przymusińska, Logic-Based Approach to Knowledge Representation in Artificial Intelligence, Prof. Teodor C. Przymusiński, Automated Reasoning and Knowledge Acquisition in Artificial Intelligence, Prof. Marek A. Suchenek, If Programming Is So Easy Then Why Is It So Difficult?, Prof. Marian S. Stachowicz, Fuzzy Sets and Digital Biometrics. All the open lectures were recorded and can be accessed and viewed from WSCS web page http://wwsi.edu.pl/pg.php/news/najwieksze_repozytorium_wideo-__/526/.

Visiting professors also gave 180 hours of optional lectures and laboratories, in which 133, mostly MSc students, participated.

Tab. 1
Schedule of optional lectures and laboratories under the Visiting Professors Program:

Name	Time	Subject	University
Prof. Jerzy Grzymała-Busse	12 – 18.10.2010	Partial Data Mining	University of Kansas, USA
Prof. Przemysław Bakowski	6 – 10.12.2010	Digital Economy	University of Nantes, France
Prof. Andrzej Szałas	10 – 14.01.2011	Semantic Web	University of Linköping, Sweden
Prof. Tomasz Michalak	7 – 11.02.2011	Introduction to Computational Social Choice Theory	University of Southampton, UK
Prof. Talal Rahwan	28.02 – 04.03.2011	Forming Coalitions in Multi-Agent Systems	University of Southampton, UK
Prof. Teodor C. Przymusiński	4 – 8.04.2011	Mechanical Theory Proving	University of California, USA
Prof. Halina Przymusińska	18 – 22.04.2011	Logic-Based Approach to Knowledge Representation in Artificial Intelligence	California State University, USA
Prof. Marek A. Suchenek	23 – 27.05.2011	Programming in Abstract Data Types	California State University, USA
Prof. Marian S. Stachowicz	6 – 10.06.2011	Intelligent Control Systems	University of Minnesota, USA

Visiting professors invited by WSCS within the framework of the project, have also conducted some research work. The results of this research are presented in this periodic publication – WSCS Scientific Papers, volume 6 – which, as it should be emphasized, is the first ever scientific publication in English published by Warsaw School of Computer Science. Thanks to this work we hope to be more internationally visible as a computer science research centre.

Finally, I would like to thank all the people whose work contributed to the success of the project – students who were greatly committed to taking part in the project as well as the administrative and financial staff who strongly supported all project activities. But above all, I would very much like to thank all Visiting Professors, who generously honored the academic community of Warsaw School of Computer Science with their scientific knowledge and teaching expertise.