Excellence in IT Systems Engineering

Experience the global character of successful research work in information technologies…

The Hasso Plattner Institute (HPI) is one-of-a-kind in the German university system:

- It is the first and, to date, the only university institute to be funded entirely by private donations;

- It is the only institute offering a degree in IT Systems Engineering – a hands-on alternative to conventional computer science programmes;

- Its School of Design Thinking offers students from all fields an innovative supplementary programme designed to foster the creative development of ideas.

Founded in 1998, the HPI has repeatedly received outstanding scores in higher education rankings. For example, the latest ranking conducted by the Centre for Higher Education Development (CHE) once again assessed the HPI as one of the university institutions offering the best computer science programmes in German-speaking countries. The German federal government acknowledged the achievements of the Hasso Plattner Institute and its founder by holding its first national IT summit at the HPI in December 2006. The institute works with internationally renowned academic institutions such as Stanford University and the Massachusetts Institute of Technology (MIT).

The HPI was founded as a public private partnership by the non-profit Hasso Plattner Foundation for Software Systems Engineering. Philanthropist Hasso Plattner, SAP's co-founder and head of the supervisory board, had initially pledged to endow the foundation with more than €50m of his own capital to fund the institute's operations.

Meanwhile he has more than quadrupled his financial pledges.

About 1,000 graduates, 500 students, 60 professors and lecturers

Ideal conditions for studying and working

Within the 13 years of its existence, more than 700 students have received a Bachelor's degree and more than 290 have earned a Master's degree since the programmes began in the winter semester of 1999/2000. 56 students have successfully defended their doctoral thesis, and around 120 are in progress at the moment. The institute presently has 490 students: 250 in the Bachelor's programme and 240 in the Master's programme. At HPI, students learn to understand, develop and master the intricacies of sophisticated IT systems and software products. They acquire the skills they will need to take up top-level positions as software architects, project coordinators or chief technology officers (CTOs) in the IT sector.

One of HPI's main aims is to foster an engineering culture in the field of IT systems engineering. Overall, 10 full professors and more than 50 other lecturers, senior researchers and visiting professors work at the HPI. The professors at HPI are commonly appointed with the University of Potsdam. Students of HPI are at the same time enrolled at the University of Potsdam and receive an internationally accredited Bachelor of Science or Master of Science degree when they graduate.

The Institute in Potsdam is a pioneer in its field, and its outstanding technical and structural facilities and excellent student-teacher ratio enable it to provide the high-flyers of tomorrow with optimal study and research conditions. Personal mentoring for all students is one of the institute's top priorities. First-year students – around 80 of the best-qualified applicants – are admitted each autumn and participate in a special seminar intended to help them familiarise themselves with their new study environment. Students who are accepted for the Master's programme (a maximum of 60 places are available annually) receive

personal academic guidance from a university mentor. There are computer facilities for all students in the labs and seminar rooms – and no tuition fees to pay.

HPI also explores new technologies for university teaching and drives e-learning and tele-teaching as well as research in everyday applications. By means of the mobile tele-TASK system, HPI records lectures and presentations and transmits recordings over the internet. The tele-TASK portal (www.tele-task.de) provides about 4,000 lecture recordings and 9,000 podcasts from about 1,000 lecturers. The now open social learning platform OpenHPI (https://openHPI.de) offers massive open online course on various aspects of IT technology. The first course for example was about the in-memory technology that was developed at HPI.

HPI Research School

Since October 2005, the HPI's Research School for Service-Oriented System Engineering has been offering an interdisciplinary PhD programme in IT technology. The main focus is service-oriented systems engineering. Every year, up to 10 PhD students and postdoctoral researchers are admitted and awarded a scholarship. In April 2009, the HPI Research School opened an international branch at the University of Cape Town, South Africa, where 10 PhD students are currently

studying. Focus of the HPI Research School at UCT is ICT for development. In 2010, the next branch was opened at the Technion in Haifa, where annually five new PhD students join the programme. The HPI Research School at Technion focuses on scalable computing. In November 2011, the HPI Research School at Nanjing University was opened, which focuses its work on mass data analytics and knowledge generation. The first five Chinese doctoral candidates from the Department of Computer Science and Technology increase the current number of members of the HPI Research School to 50. In their research work, the highly talented junior researchers from around the world can experience the global character of successful research work in information technologies.

HPI Future SOC Lab

The new top level research lab facility, the HPI Future SOC Lab, provides a platform for researching how the potential of the most recent multi-core computer architectures, combined with massively parallel software, can be exploited. The lab was opened mid-June 2010. The latest hard and software, straight from the R&D departments of large IT corporations like SAP, HPI Fujitsu, EMC, enables HPI scientists and guest experts from other academic institutions to research new concepts

and trends in future Service-Oriented Computing (SOC) under real-life conditions. It is a central assumption in this context that future software applications will be run by service providers in the cloud rather than in companies' in-house data centres or by the end-user, as is the case now.

In total, the HPI Future SOC Lab hosts more than 30 servers with more than 30 TB main memory, 2,500 logical CPUs, 200 TB storage capacity, and 100 TB SSD. HPI and the sponsoring companies have agreed to make this lab facility also available for researchers from other academic institution from all over the world.

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HPI School of Design Thinking

The HPI School of Design Thinking – established in 2007 – provides students from many different fields of study with the opportunity of working in multidisciplinary teams to develop particularly user-friendly IT related products and services. The HPI has been working closely in this area with its sister institute, the Hasso Plattner Institute of Design at Stanford University, one of America's leading academic institutions. Besides providing study programmes for young innovators, the two schools launched a joint innovation research programme in November 2008.

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