User System Interaction Program

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Abstract. The User System Interaction program (USI) is a post-master program at the Technical University Eindhoven (TU/e), the Netherlands. The program is designed to provide students with skills and capabilities for conceptualizing, designing, implementing and evaluating new products, services and applications. The students, working in multidisciplinary and multicultural teams, exploit new technologies for the benefit of users in the domain of communication and information technology.

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1 Introduction

The User System Interaction program (USI), started in 1998, is one of ten two-year full-time Technological Design programs coordinated by the Stan Ackermans Institute (SAI). SAI is a joint venture of the three technological universities of the Netherlands: Eindhoven University of Technology, Delft University of Technology and University of Twente. The SAI design programs have been developed to address the needs of industry for people who are capable of working in the multidisciplinary world of design and who are up to date with the latest design methods and technological developments. The SAI design programs are co-financed by the Dutch Government and by industry. Selected applicants of any of these programs receive a fixed-term employment contract as research assistants and are paid by the University. Graduates are awarded the title "Professional Doctorate in Engineering" (PDEng) and will be registered as a Technological Designer in the Dutch register kept by the Royal Institution of Engineers in the Netherlands (KIVI NIRIA).

Eligible students have a Master's degree in the engineering or behavioral sciences (MSc or MA), i.e., computer science, business engineering, mathematics, psychology and cognitive sciences or industrial design. They come from different countries all around the world. The program accepts about 20 applicants per year. Overall acceptance rate is about 30%. Each USI cohort is composed of a balanced group of students of multidisciplinary and multicultural background. The target composition is 50% engineering, 50% behavioral sciences, 50% Dutch citizenship and 50% non-Dutch citizenship.

2 Educational Program

The program starts with fourteen months of taught modules each lasting one or two weeks. Taught modules are clustered in five clusters: Understanding the User Experience, User Centered Design Processes, Software Engineering, Interaction Technologies and User research methodology. Lecturers in the USI program include internationally renowned experts from different universities and industries.

In the last part of the regular curriculum, students work in small project teams on design cases, in which they apply their knowledge and skills to concrete problems from projects outside the USI program. This design case covers a complete transition from a user requirements analysis, to design, prototype and evaluation. Design cases typically have a problem owner outside the USI program; in many cases industrial R&D departments. The majority of design cases result in publications and presentations at professional conferences and workshops.

Another component of the USI program constitutes the professional development program which provides the students with the necessary skills to function in their future professional environments. These courses address, for example, the training of presentation skills, project management, time management, working together in a multi-cultural environment and self-assessment.

3 Industrial Program

In the second part of the program, students work for nine months as professionals hired out to industry. Projects include interactive applications for consumer electronics, mobile communications, healthcare professionals or health applications for the home, automotive cockpit automation, etc. The projects are defined and conducted at the R&D departments of industrial organizations or applied research institutes. They are supervised by coaches from the host organization and the University.

4 USI Career Perspective

USI graduates often become part of multidisciplinary design teams within industry, business services or government institutions. Examples of positions held by USI graduates are usability engineer, usability consultant, human factors engineer, information architect and customer insight specialist.

For more information, on the program please consult the course website http://usi.tm.tue.nl.