

# **EUROPEAN MASTER IN INFORMATICS**

**University of Trento (Italy)**

**RWTH Aachen University (Germany)**

**University of Edinburgh (Scotland)**

## **Call for Student Applications**

**Academic Year 2005/06**

Sponsored by the European Commission Programme

ERASMUS MUNDUS



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# 1. EUROPEAN MASTER IN INFORMATICS

The University of Trento (Italy), RWTH Aachen University (Germany), and the University of Edinburgh (Scotland) offer a **two year (120 ECTS credits)** Joint Master's Programme, named **European Master in Informatics (EuMI)**. The objective of the Master's Programme is to educate professionals who will understand advanced techniques, tools, and methodologies in the field of Computer Science, and who will be able to put this knowledge to practice in the key application domains of **Net-Centric Informatics**, **Life Science Informatics**, and **Embedded Systems Informatics**. The Programme will admit a maximum number of **40 students** for the academic year 2005/06.

## 2. MASTER'S PROGRAMME

### Description of the Programme

The objective is to educate professionals who will understand advanced techniques, tools, and methodologies in the field of Computer Science, and who will be able to put this knowledge to practice in key application domains. In particular, EuMI offers three areas of specialization in

- *Net-Centric Informatics*: This specialization covers all those aspects of informatics related to the design, implementation and analysis of distributed, ubiquitous information and computing systems. This area covers a wide range of topics, ranging from network architectures and communication infrastructures to techniques for the design and analysis of distributed knowledge, media applications and large-scale information systems, to the design and implementation of distributed web-service applications.
- *Life-Science Informatics*: This area of specialization will prepare professionals for research or employment at the intersection of the study of Life Science (biology, neuroscience, cognitive science) and the study of computation and engineering. Students will take basic courses on the fundamentals of biology and/or cognitive science and advanced courses studying the application of computer science techniques to the analysis of structural and behavioural aspects of biological and cognitive systems.
- *Embedded Systems Informatics*: This specialization introduces the fundamental principles underlying the theory and the practical design and implementation of embedded systems. Moreover, it allows students to put these principles into practice in applications in the area of control systems (e.g., controllers for automotive systems or industrial plants) and to ambient intelligence applications (e.g., domotics or sensors networks).

These are application domains that, being emergent, rapidly evolving, and of growing impact on society, require specialized competencies not covered by more traditional degree programmes.

### Structure of the Programme

For each area of specialization, a joint curriculum is defined which involves two universities of the consortium. Students admitted to a selected curriculum will study in two universities, taking courses on advanced topics in theoretical and practical Computer Science, and with a focus on the selected area of specialization. They will spend the initial part of their Master's course in one of the two universities (the "main university"), the central part in the second university (the "partner university"), and will return to the main university for thesis preparation.

### Duration of Studies

The Master's Course lasts two years, one in each of the two universities, starting in September 2005.

### Learning outcomes

EuMI aims to train students in emerging research domains with a high potential impact to shape the future of applied computer science disciplines. It prepares students for employment in such multidisciplinary domains and/or for continuing their studies within PhD programmes.

After completing the EuMI programme the student will possess the competencies necessary for the design and implementation of complex software systems, including their embedding in technical and socio-technical systems. The student will achieve knowledge in both theoretical and applied Computer Science, which will allow him/her to adapt quickly to the changes in this constantly evolving field, and specific competencies necessary to operate in the chosen area of specialization. The student will also attain expertise in putting his/her knowledge into practice by participating in laboratory projects and/or in industrial student placement schemes. Moreover, the student will attain practical project management skills which are necessary for an effective application of the knowledge acquired.

During his/her studies, the student will work within research groups of three leading European universities, and will interact with professors, researchers and scholars working in advanced research in computer science and associated enabling technologies.

The international dimension of the Master's Course guarantees that students familiarise themselves with different educational methods and a multicultural education through the immersion in two different European universities.

### Language

All courses are taught in English. Students will also undertake courses on the culture and language of the European countries of the main and partner universities.

### Graduation thesis

The thesis will be developed at the main university. Students will be jointly supervised by instructors from both universities.

## 3. MASTER'S DEGREES

Upon the successful completion of the curriculum and fulfillment of the Master's course requirements, students will be awarded a double degree, consisting of a degree from each of the two visited universities. The awarded degrees correspond to:

- a Master of Science in Computer Science or Media Informatics from the RWTH Aachen University
- a Master of Science in Informatics from the University of Edinburgh
- a Master of Science in Informatics from the University of Trento

## 4. ADMISSION REQUIREMENTS

Applications for students' positions are accepted from candidates, regardless of sex, age, and nationality, who comply with the following requirements:

- A first level (at least three years) degree in Computer Science or closely related disciplines, awarded by an internationally recognised university-level institution.
- Fluent written and spoken English (certified by either an IELTS score of at least 6.0 or a TOEFL score of at least 550/213).
- A strong background in computer science and mathematics and a keen interest in the research topics covered by the Master's Programme.

A maximum number of 40 students will be accepted for the academic year 2005-06.

Some of these positions are reserved to students from countries outside the European Union, according to the guidelines of the Erasmus Mundus Programme (<http://europa.eu.int/comm/education/programmes/mundus/>).

## 5. TUITION FEES

The tuition fees for the Master's Programme are 4000 EUR per year. The tuition fee may be waived in part or totally depending on the financial sources available at the moment of the student's selection. Students will be provided with the facilities of the participating universities (library, computers, laboratories, Internet).

## 6. SCHOLARSHIPS

For the academic year 2005/06, 27 scholarships are offered for students from countries outside the European Union. The amount of the scholarship is 21.000 EUR per year. These scholarships are funded by the European Commission within the Erasmus Mundus programme (<http://europa.eu.int/comm/education/programmes/mundus/>).

Some of these scholarships are reserved to students from specific Asian countries as specified in the Erasmus Mundus calls.

In addition to these scholarships, a limited number of scholarships will be made available depending on the financial sources available at the time of student selection.

## 7. HOW TO APPLY

The application requires two steps: An **on-line application** (due by **January 31st, 2005**) and the **hard-copy submission** of documents (due by **February 15th, 2005**).

Applicants will be **notified about admission** and whether they will be offered a scholarship by **May 31st, 2005**.

The on-line applications should be made at the website <http://www.eumi.unitn.it/eumi/application.html> on or before **January 31st, 2005**. Applicants are required to fill the on-line form and to provide the following documents electronically or by fax:

- Photocopy of the applicant's identity card or passport (indicated as "Attachment 1")
- A copy of the IELTS-certificate (with a minimum score of 6.0) or the TOEFL certificate (with a minimum score of 550 (paper-based) or 213 (computer-based)) (indicated as "Attachment 2"). The TOEFL score report must not be

older than January 2003. Applicants who are Nationals and/or first-degree-holders of Antigua&Barbuda, Australia, The Bahamas, Barbados, Belize, English-speaking Canada, The Gambia, Ghana, Grenada, Guyana, Republic of Ireland, Jamaica, Kiribati, Liberia, Mauritius, Micronesia, New Zealand, Nigeria, Papua New Guinea, St. Kitts-Nevis, St. Lucia, St. Vincent, Sierra Leone, Solomon Islands, Trinidad&Tobago, United Kingdom, United States of America, Zambia or Zimbabwe do not have to submit language certificates.

- A copy of all first degree academic certificates (indicated as "Attachment 3").
- A translation of the degree certificates, made by an officially recognised translator in English, in case the original documents are not written in English, German, or Italian (indicated as "Attachment 4").
- Copies of all transcripts or other academic records that give proof of the undergraduate studies including credits and grades achieved in each single subject (indicated as "Attachment 5").
- A translation of the transcripts and records made by an officially recognized translator in English, in case the original documents are not written in English, German, or Italian (indicated as "Attachment 6").

The attachments can be submitted either electronically, following the instructions provided at the website <http://www.eumi.unitn.it/eumi/application.html>, or by fax to the following number: +39 0461 88 2061. Documents submitted by fax should contain a clear indication of the student's application ID provided during the electronic submission of the application form and of the attachment number.

**Additionally**, copies of the following documents must be sent by surface mail by **February 15, 2005** to address:

Judith Gordon  
Informatics Graduate School (EuMI)  
University of Edinburgh  
5 Forrest Hill  
Edinburgh EH1 2QL  
Scotland, UK

- A signed copy of the application form previously made on-line
- A photocopy of the applicant's identity card or passport (indicated as "Attachment 1")
- A copy of IELTS or TOEFL certificate (indicated as "Attachment 2"). The TOEFL score report must not be older than January 2003. This document is not required for students who are not required to submit its electronic version.
- A copy of all first degree academic certificates (indicated as "Attachment 3").
- A translation of the degree certificates, made by an officially recognised translator in English, in case the original documents are not written in English, German, or Italian (indicated as "Attachment 4").
- Two letters of recommendation from academic referees (indicated as "Attachment 7" and "Attachment 8"). Each recommendation letter must be sent in an envelope sealed and signed by the referee. It should be written preferably on the headed paper of the referees' institution, or with the official stamp of the referees' institution.

All submitted documents should contain a clear indication of the student's application ID provided during the electronic submission of the application form and of the attachment number.

Unreadable documents and attachments that do not contain the application ID number will not be considered. On-line applications which have not been completed by January 31st, 2005 will not be considered. Applications for which copies of the documents are not received by February 15th, 2005 will not be considered, even if sent on time. The "European Master in Informatics" does not accept responsibility for loss of applications through errors in the address as well as possible postal problems.

## 8. ACADEMIC COMMITTEE

**Marco Pistore**, Director of the School, University of Trento  
**Gerhard Lakemeyer**, Local coordinator, RWTH Aachen University  
**Michael Rovatsos**, Local coordinator, University of Edinburgh  
**Maurizio Marchese**, Local coordinator, University of Trento  
**Matthias Jarke**, RWTH Aachen University  
**Lynda Henderson**, University of Edinburgh  
**Fausto Giunchiglia**, University of Trento

## 9. IMPORTANT DATES

- **January 31st, 2005** Deadline for on-line application
- **February 15th, 2005** Deadline for surface mail application
- **May 31st, 2005** Notification of admission and of scholarship

## 10. CONTACTS

EuMi Consortium  
c/o DIT – Department of Informatics and Telecommunications  
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