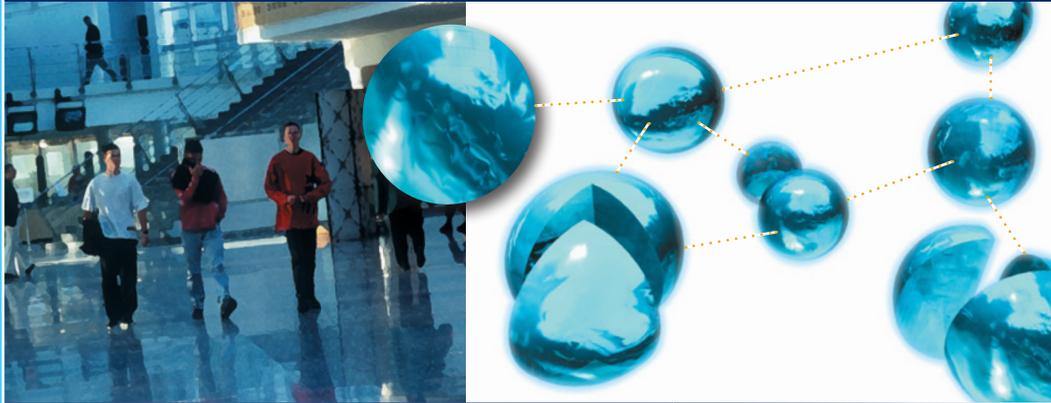


# EMNantes

# EMOOSE

INTERNATIONAL MASTER OF SCIENCE  
IN COMPUTER SCIENCE

**European Master in Object-,  
component-, and aspect-  
Oriented Software Engineering**



Internationally recognized degree issued by the Vrije Universiteit Brussel (Belgium) and managed by the EMNantes (France), with the participation of the European-Latin American network **SENSO** and the European network of excellence on **Aspect-Oriented Software Development (AOSD)**



Vrije  
Universiteit  
Brussel

Belgium



France

# The EMOOSE program

Software is ever growing in complexity. This is not only a matter of size but also a matter of technological infrastructure, of process, and of life cycle. Applications are distributed on heterogeneous, possibly mobile devices. They are designed and implemented as product lines. They are not designed once and for all, they must evolve in order to take into account new requirements. EMOOSE provides students with a solid background in Software Engineering with an emphasis on up-to-date as well as future technologies facilitating the modularization, reuse, and evolution of software. The program addresses the concepts behind these technologies, the building of languages and tools supporting the technologies, and their application to software construction, with a wide range of application domains, from information systems and ubiquitous computing to middleware and operating systems.

## > Career opportunities

The program leads to all the players concerned with mastering complex software systems:

- Research Labs and Universities
- R&D Labs
- Software Industry (from Start-Ups to Major Vendors)
- Consulting Companies
- Software-Dependent Companies

## > Jobs for tomorrow and the future

The Master's program prepares the students for academic and industrial positions where expertise in software engineering is required. The program makes it possible to apply for a position in industry or to apply to a PhD program.

- Researcher and Professor
- Research Engineer
- Software Engineer
- Software Architect
- Consultant

Since 1998, about half the alumni have chosen to specialize in research, starting with a PhD program, whereas the others have got jobs in industry. Today, many alumni have already received a PhD, pursuing a rich academic or industrial career.

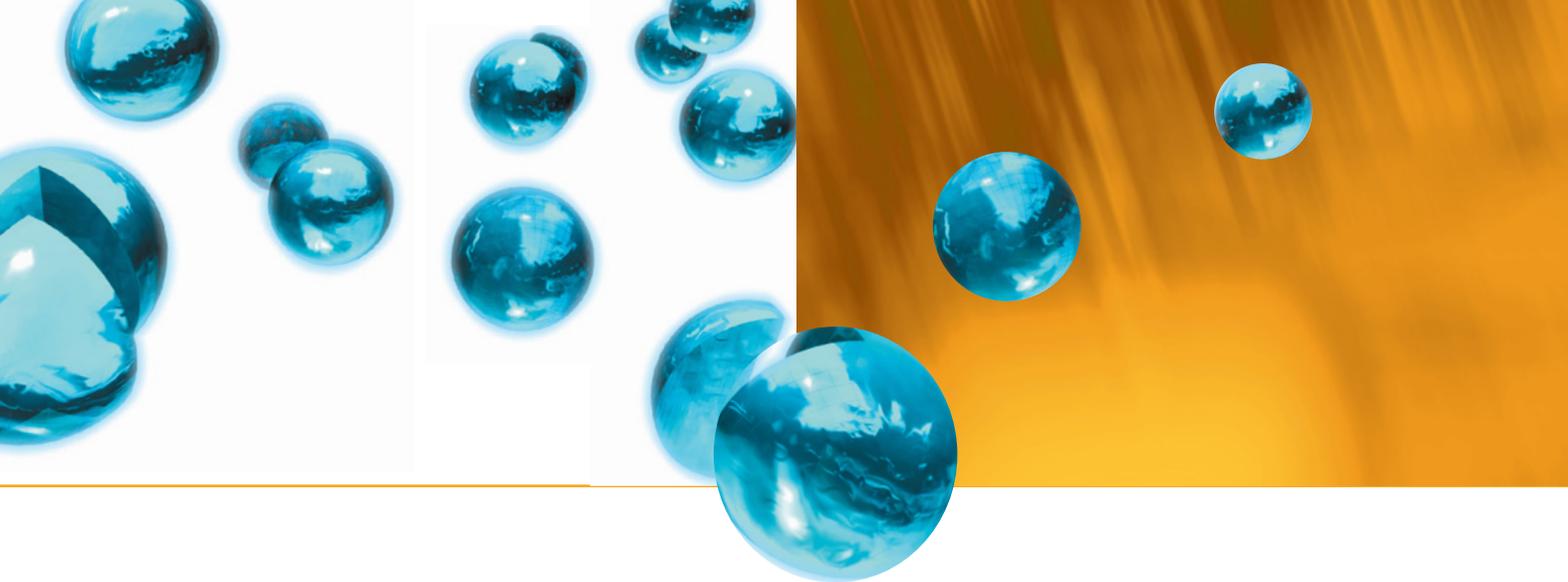
## > The EMOOSE program

The pedagogical approach was conceived to provide students with a high scientific level and methodological knowledge. It is based on an 11-month integrated program (October-August) taught in English.

A 5-month academic period, taking place at the Ecole des Mines de Nantes, in France, is dedicated to theoretical and practical courses including:

- Lectures and research seminars
- Exercices and practical projects associated with lectures
- Preparation for research through a major bibliographical study and specialization training project

This first period is followed by a 6-month research or applied research project in a partner research laboratory, member of the SENSO or AOSD network. The public presentation of the thesis is held at the Ecole des Mines de Nantes.



Principles of Object-Oriented Programming
Advanced Software Engineering Techniques
Software Development for Distributed Systems
Foundations of Software Systems
Aspect-Oriented Software Development
Capita Selecta
Specialisation Training
Master Thesis
Professional Project

Coaching program “Competence Evaluation and Professional Project” (CEPP) and optional French courses.

## > The international and inter-cultural dimension

Both the EMOOSE students and faculty come from many parts of the world, mostly from Latin America and Europe, due to a program originally rooted in Latin America/ Europe cooperation.

Origins of students in the EMOOSE program since 1998:

- **Latin America** 56%
- **Asia** 12%
- **Europe** 32 %

The faculty comprises world experts in object, component, and aspect software engineering from the different partner institutions, who welcome the students for their research project.

Whereas the non-European students may stay in Europe for their research project, European students are invited to change continents.

## > Partners

- **In Argentina** **Alejandra Cechich**  
Universidad Nacional del Comahue  
<http://faea.uncoma.edu.ar/> - [acechich@uncoma.edu.ar](mailto:acechich@uncoma.edu.ar)
- **In Argentina** **Silvia Gordillo**  
Universidad Nacional de La Plata  
<http://www.lifia.info.unlp.edu.ar/>  
[gordillo@sol.info.unlp.edu.ar](mailto:gordillo@sol.info.unlp.edu.ar)
- **In Belgium** **Theo D’Hondt**  
Vrije Universiteit Brussel  
<http://www.vub.ac.be> - [tjd hondt@vub.ac.be](mailto:tjd hondt@vub.ac.be)
- **In Brazil** **Luiz Lima**  
Pontificia Universidade Católica do Paraná  
<http://www.pucpr.br/> - [laplima@ppgia.pucpr.br](mailto:laplima@ppgia.pucpr.br)
- **In Chile** **Eric Tanter**  
Universidad de Chile  
<http://www.dcc.uchile.cl> - [etanter@dcc.uchile.cl](mailto:etanter@dcc.uchile.cl)
- **In Colombia** **Rubby Casallas**  
Universidad de Los Andes  
<http://www.uniandes.edu.co> - [rcasalla@uniandes.edu.co](mailto:rcasalla@uniandes.edu.co)
- **In France** **Jacques Noyé**  
EMNantes  
<http://www.emn.fr> - [jacques.noye@emn.fr](mailto:jacques.noye@emn.fr)
- **In Germany** **Mira Mezini**  
Technische Universität Darmstadt  
<http://www.tu-darmstadt.de>  
[mezini@informatik.tu-darmstadt.de](mailto:mezini@informatik.tu-darmstadt.de)
- **In Portugal** **Fernando Brito e Abreu**  
Universidade Nova de Lisboa  
<http://www.fct.unl.pt/> - [fba@di.fct.unl.pt](mailto:fba@di.fct.unl.pt)
- **In The Netherlands** **Mehmet Aksit**  
University of Twente  
<http://www.utwente.nl/> - [aksit@ewi.utwente.nl](mailto:aksit@ewi.utwente.nl)
- **In Australia** **Sita Ramakrishnan**  
Monash University  
<http://www.infotech.monash.edu.au/>  
[Sita.Ramakrishnan@infotech.monash.edu.au](mailto:Sita.Ramakrishnan@infotech.monash.edu.au)

## > Applications

Application forms and information on the program are available on the website: <http://www.emn.fr>  
Deadline for applications: **End of May**  
For more detailed information:  
[emoose-admission@emn.fr](mailto:emoose-admission@emn.fr)

## > Student profile

- The international EMOOSE Master is open to candidates who have validated 4 years of Computer Science studies in higher education.
- Candidates must be fluent in English with a TOEFL score of at least 80 iBT, or an equivalent proof of proficiency.

## > An ideal study environment:

### ■ The Town, Nantes

- 6th largest town in France
- Nantes, "the most liveable city in all of Europe" (TIME Magazine, August, 22-2004)
- 400 km from Paris (only 2 hours by TGV), 50 km from the Atlantic coast
- Economic capital of the west of France (aerospace, telecommunications, food and service industries)
- Wide variety of cultural activities

### ■ The School

- Modern campus with spacious teaching and research facilities



## Jocelyn Simmonds



I really appreciated the reception that I, along with the other foreign students, had when we came to the Ecole des Mines de Nantes for the first time. French students led us through all the administrative steps, even showing us how to open a bank account. I had never had such a simple adaptation period in my university career.

Regarding the EMOOSE master itself, I found the lectures very interesting, even if I wish I had had more than six months to assimilate it all. But that was the rule : we spent six months in Nantes, and then six months in Brussels. This allowed me to go to a lot of conferences about my field and to meet a lot of people. In particular, I think about Tom Mens, one of the top world specialists on the consistency checking of software models. The conferences help to network with a lot of contacts and to get references for one's curriculum vitae. This experience opened many gates for me for the continuation of my career path.



## Thomas Wallet



I was part of the first EMOOSE promotion. Research and computer science enticed me, and I wanted to follow an ambitious and exciting formation.

This led me to do the EMOOSE master. This program provided me with good tools to develop my thirst for research and innovation. That's how I had the opportunity to collaborate with the National University of La Plata, and also to

work on European research projects led by the INRIA. The idea of working with foreign students and teachers was tempting to me as well, and finally helped me to build a strong address book. For the rest, this is how I found my job as counsellor in project management at Pragma Consultores, in Argentina, where I have lived for the past eight years.

I contribute to the counselling, software tests, developing and project management for many sectors. Once a year, I come to work at the EMOOSE master to keep in touch with the Ecole des Mines de Nantes, which was an important part of my life, as I met my wife there.

- Accommodation for more than 500 students in fully equipped study bedrooms or flats, connected to the school computer and video network
- A wide range of sports facilities
- Restaurant and cafeteria
- Student Union building, the heart of student social and extra-curricular activity

## > Practical information

### ■ Tuition fees

- 10 000 euros for the full program

■ **Scholarships:** for European students, for students from international University partners, of excellence, from industry...

Please contact : [emoose-admission@emn.fr](mailto:emoose-admission@emn.fr)

### ■ Beginning of the semester

- End of September



ECOLE DES MINES DE NANTES

Ecole des Mines de Nantes  
La Chantrerie - 4 rue Alfred Kastler  
BP 20722 - 44307 Nantes cedex 3 - France  
Tel. : + 33(0)2 51 85 81 00 - Fax : + 33(0)2 51 85 81 99  
Website : [www.emn.fr](http://www.emn.fr)



UT  
The Netherlands



ISC - UniAndes  
Colombia



TUD  
Germany



FCT / UNL  
Portugal



UChile  
Chile



PUC PR  
Brazil



F. Inform.-UNLP  
Argentina



UNCOMA  
Argentina



Monash  
Australia