English language track of the master’s degree in Applied Mathematics and Informatics
joint program between Université Joseph Fourier (UJF) UFR IM²AG and Grenoble INP Ensimag

With the increasing externalization of corporations and organizations in a global multimedia and interconnected world, security of information systems and integration of data protection technologies are among the most critical issues. Yet, security of Information Systems is an active field of research. Especially, within the University Grenoble Alpes, the Grenoble technopole gathers experts in Informatics, Mathematics and Electronics from both Grenoble INP (Institut polytechnique de Grenoble) and UJF (Université Joseph Fourier), in the field of Information Systems and Security at an international level.

Objective

Educating experts in security and coding technologies
Cryptology: Mathematical Protocols (RSA, AES, ECC, coding, FHE)
Security: Software/hardware (Network, System, Integration)
Applications: Watermarking, Multimedia, Smartcard...
Master of Science in Informatics of Grenoble (Mosig M1)
Students can perform the first year of the graduate program in the framework of MoSIG Master 1
http://mosig.imag.fr/ProgramEn

M2P
Lectures from September to March
Project from April to September

Common core: Cryptology and Security [15 ECTS]
- Security Models
- Symmetric and Asymmetric Cryptology-PKI Infrastructures
- System Administration and Network Security
- English or French

Elective specialization [12 ECTS]: choose one between
- Security of Information Systems [12 ECTS]
  - Advanced System and Network Security
  - Secure Hardware Architecture
  - Distributed Algorithms and Fault-tolerance
  - Secure Infrastructure Deployment project
- Cryptology, Coding and Multimedia Applications [12 ECTS]
  - Advanced Cryptology
  - Multimedia Applications, Watermarking
  - Coding and Fault-tolerance

Elective course unit [3 ECTS]: choose one between
- Smart Card Security; Audit and Normalization [3 ECTS]
- New trends in Cryptology [3 ECTS]

Master thesis [27 ECTS]
Since its creation, we have graduated more than 300 students.

Related research labs in Grenoble: Institut Fourier, LJK, LIG, VERIMAG, Gipsa-Lab, TIMA, and also Inria research centre. Those labs federate their research in cryptology and security within the research team-action SCCyPhy (Security and Cryptology for CyberPhysical systems) of the competitive scientific cluster of excellence Labex PERSYVAL.
Admissions

Students are selected and admitted to the programme based on their academic records, language skills, motivation and a judgement of their ability to successfully complete the program.

Admission webpage: http://relint.ensimag.fr/MainEn/Admission

Selection on:

- the basis of prior academic and/or scientific achievement as documented by academic transcripts,
- completed on-line application form
- a motivational essay
- letters of recommendation
- standardized test scores: students from countries where English language is not the primary language are required to provide TOEFL test scores or equivalent.

Tuition and fees: Approximately 500 Euros /Year
Note that tuition fees are highly subsidized by the French Government.

Application Deadlines

Admissions Information at http://mosig.imag.fr

- Early admissions (recommended to allow time for visas for non-European Students): Mid-February
- Regular admissions deadline: Mid-March
- Late admissions (European students only): Mid-June

Academic supervizors

Philippe Elbaz-Vincent (UJF)
Philippe.Elbaz-Vincent@ujf-grenoble.fr

Jean-Louis Roch (Ensimag)
Jean-Louis.Roch@grenoble-inp.fr

Vanessa Vitse (UJF)
Vanessa.Vitse@ujf-grenoble.fr

Registrar’s office
Elena Leibowith (Ensimag)
Elena.Leibowitch@grenoble-inp.fr

Cécile Gros (UJF)
Cecile.Gros@ujf-grenoble.fr

SCCI website
http://scci.imag.fr
sccildimag.fr

Université Joseph Fourier-IM²AG/ Grenoble INP-Ensimag