Master of Science in Ubiquitous Networking and Computing

Sophia Antipolis, France

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http://ubinet.unice.fr
Environment

- **University of Nice-Sophia Antipolis**. Courses will be given at the Polytech Nice-Sophia, the French engineering school from University of Nice Sophia-Antipolis within the Master IFI (Informatique : Fondements et Ingéniérie).

- **CNRS**. The Centre National de la Recherche Scientifique (National Center for Scientific Research) is a government-funded research organization, the largest fundamental research organization in Europe, under the administrative authority of France's Ministry of Research.

- **I3S** is a Joint Research Unit between the University of Nice Sophia Antipolis (UNS) and the CNRS.

- **INRIA**, the French national institute for research in computer science and control, operating under the dual authority of the Ministry of Research and the Ministry of Industry, is dedicated to fundamental and applied research in information and communication science and technology (ICST).
Master IFI (head P. Salvan)

- Architecture Logicielle (AL)
- Cryptographie, Systèmes, Sécurité et Réseaux (CSSR)
- Informatique Ambiante et Mobile (IAM)
- Informatique et Mathématiques Appliquées à la Finance et l'Assurance (IMAFA)
- Interfaces Homme-Machine (IHM)
- Knowledge and Information System (KIS)
- Système Complexe (SC)
- Vision, Image et Multimédia (VIM)

Two International Tracks with 100% english taught courses:
- Ubiquitous Networking and Computing (Ubinet)
- Computational biology (CB)

Scientific Program of Ubinet

M2 Semester 1, October-February - 30 ECTS (European Credits Transfer System)
  • 12 courses (24 ECTS)
  • A personal project (6 ECTS)

M2 Semester 2, March-August - 30 ECTS

6-month paid full time internship in one of the research team Indes, Maestro and Planete (INRIA), Aoste, Mascotte and Oasis (INRIA/I3S), Signet, Modalis and Rainbow (I3S) or with one of our renowned industrial partners Orange Labs, SAP, THALES, AMADEUS, etc.

Teaching language: English

A french course is organized for foreign students during the first semester.
Scientific Program

- Period 1 (12 ETCS):
  - Evolving Internet: Architectural Challenges I
  - Algorithms for Telecommunication I
  - Performance Evaluation of Networks I
  - Wireless Networks I
  - An algorithmic approach of Distributed Systems
  - Foundations and models for the design of on-chip systems and networks.

- Period 2 (12 ETCS):
  - Mandatory Courses: (4 ETCS)
    - Large scale distributed systems
    - Middleware for ubiquitous computing
  - Menu Courses: (4 courses to be chosen among 7)
    - Evolving Internet II
    - Performance Evaluation II
    - From BitTorrent to privacy
    - Algorithms for Telecoms II
    - Application security and intrusion detection
    - Wireless networks II
    - Compute and Data Clouds
Personal project (6 ECTS)

- Research activity part of the UbiNet program – 6 ECTS
- The project corresponds to 120 hours of work.
- Conducted before the Internship

- It consists either in
  - study of the state of the art,
  - problem analysis,
  - solution design,
  - prototype development, etc.

- The supervisor provides 1 h/week support (face to face or e-mail).

- Student should at the end
  - write a report describing their work,
  - demonstrate the program they developed and
  - make an oral presentation in front of a jury.
Internship (30 ECTS)

- Full time research activity during 6 months (March – August) in one of the research team
  - Maestro and Planete (INRIA),
  - Mascotte, Aoste and Oasis (INRIA/I3S),
  - Signet, Modalis and Rainbow (I3S)

or with one of our renowned industrial partners Orange Labs, SAP, THALES, AMADEUS, Thomson Technicolor, Alcatel, etc…
The students

Scholarship program opened to outstanding students

• **In 2009/2010**, ~40 applications, 13 students accepted from: Argentina, China, France, India, Italy, Lebanon, Morocco, Pakistan, Poland, Tunisia, Vietnam, Cameroon, Ivory Coast

• **In 2010/2011**, ~60 applications, 18 students accepted from: Vietnam, Colombia, Bangladesh, Argentina, Ethiopia, Sri-Lanka, Lebanon, Madagascar, India, Tunisia, Benin, France

• **In 2011/2012**, 72 applications, 15+2 students accepted from: Cambodge (3), Canada, Colombie, Cote d’Ivoire, Ethiopie, Italie (2), Maroc, Sri-lanka, Ukraine (2), Vietnam (2).
12 students got the Master Diploma in 2009/2010. In 2010/2011, 9 are doing a PhD:
- 5 in Sophia Antipolis (either INRIA, I3S or LEAT),
- 1 in Toulouse,
- 1 in University of Bretagne South,
- 1 in East China Normal University (ECNU),

3 are working in the industry
- Network Engineer, Google, Dublin, Ireland
- Network Engineer, Fortinet, Sophia Antipolis
- Software Engineer, TeamExpert, Paris
14 students got the Master Diploma in 2010/2011. In 2012, 10 are doing a PhD:
- 5 in Sophia Antipolis (either INRIA, I3S 2 collabor Industry),
- 1 in Toulouse, ISAE
- 1 INRIA lille,
- 1 Clermont ferrand
- 1 in Finland University Oulou,
- 1 Irland UCD Dublin

4 are working as engineers
- 2 Network Engineer, INRIA
- Network Engineer Sri lanka
- Software Engineer, Vietnam
To apply

- Contacts:

<table>
<thead>
<tr>
<th>Ubinet</th>
<th>Master Scientific Committee</th>
<th><a href="mailto:ubinet@unice.fr">ubinet@unice.fr</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Guillaume Urvoy Keller</td>
<td>Head of the Master Ubinet</td>
<td><a href="mailto:urvoy@unice.fr">urvoy@unice.fr</a></td>
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- Visit http://ubinet.unice.fr

- **December - April**: First Round of applications
- **Mid May**: Final notification of acceptance for the 1st round

*Applying in the first round increases the chances of getting a scholarship*

- **May - mid-June**: Second Round of applications
- **End of June**: Final notification of acceptance for the second round
### The Professors

<table>
<thead>
<tr>
<th>Name</th>
<th>Position / Affiliation</th>
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<tbody>
<tr>
<td>Sara Alouf</td>
<td>Research Scientist INRIA</td>
</tr>
<tr>
<td>Konstantin Avratchenkov</td>
<td>Research Scientist INRIA</td>
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<tr>
<td>Chadi Barakat</td>
<td>Research Scientist INRIA</td>
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<tr>
<td>Jean-Claude Bermond</td>
<td>Research Director CNRS, Project-Team Leader Mascotte</td>
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<tr>
<td>Gérard Berry</td>
<td>INRIA and French Academy of Sciences</td>
</tr>
<tr>
<td>Denis Caromel</td>
<td>Professor Université Nice-Sophia Antipolis, Project-Team Leader Oasis</td>
</tr>
<tr>
<td>Ilaria Castellani</td>
<td>Research Scientist INRIA</td>
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<tr>
<td>David Coudert</td>
<td>Research Scientist INRIA</td>
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<tr>
<td>Walid Dabbous</td>
<td>Research Director INRIA, Project-Team Leader Planète</td>
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<tr>
<td>Olivier Dalle</td>
<td>Associate Professor Université Nice-Sophia Antipolis</td>
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<tr>
<td>Frédéric Giroire</td>
<td>Research Scientist CNRS</td>
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<td>Frédéric Havet</td>
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<tr>
<td>Fabrice Huet</td>
<td>Associate Professor Université Nice-Sophia Antipolis</td>
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<td>Stéphane Lavroite</td>
<td>Associate Professor Université Nice-Sophia Antipolis</td>
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<tr>
<td>Arnaud Legout</td>
<td>Research Scientist INRIA</td>
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<tr>
<td>Guillaume Urvoy-Keller</td>
<td>Professor, Université Nice-Sophia Antipolis, Project-Team Leader Signet</td>
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<tr>
<td>Johan Montagnat</td>
<td>Research Scientist CNRS, Project-Team Leader Modalis</td>
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<tr>
<td>Joanna Moulierac</td>
<td>Associate Professor Université Nice-Sophia Antipolis</td>
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<tr>
<td>Philippe Nain</td>
<td>Research Director INRIA, Project-Team Leader Maestro</td>
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<tr>
<td>Giovanni Neglia</td>
<td>Research Scientist INRIA</td>
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<td>Stéphane Pérennes</td>
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<td>Michel Riveill</td>
<td>Professor Université Nice-Sophia Antipolis, Project-Team Leader Rainbow</td>
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<tr>
<td>Manuel Serrano</td>
<td>Research Director INRIA, Project-Team Leader Indes</td>
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<tr>
<td>Jean-Yves Tigli</td>
<td>Associate Professor Université Nice-Sophia Antipolis</td>
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Institutions involved

Centre National de la Recherche Scientifique
http://www.cnrs.fr

Laboratoire d’Informatique, Signaux et Systèmes de Sophia Antipolis
http://www.i3s.unice.fr/

Université de Nice Sophia Antipolis (UNS)
http://portail.unice.fr

Institut National de Recherche en Informatique et en Automatique
http://www.inria.fr