

# Second Year International Master in Computer Science: Ubinet

Sophia Antipolis, France



Located in Europe's largest scientific park,  
**Sophia Antipolis**, France

This program is hosted by the University of Nice Sophia Antipolis

**Web Site:** <http://ubinet.unice.fr>

# The Ubinet track



- 2nd year of master (M2)
- The international track of the Computer Science Master at UNS
- 100% in English
- Research oriented: 30 to 50% students start a PhD after
- 15-25 students at most
- Professors from:



# Ubinet Objectives

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- Objective

- Help students to meet the challenges and make the technological choices of tomorrow in the domains of:
  - The Internet
  - Distributed Systems and Cloud

- Keywords

- Emerging trends in networking, e.g., content centric networking
- Analysis methods : performance evaluation, graph theory
- Open up to key related domains, e.g., security.

# Technical courses (100% in English) – Semester 1

## Mandatory courses

- Networking (4 ECTS )
  - Evolving Internet
  - Content Distribution in Wireless Networks
- Performance (4 ECTS )
  - Graph Algorithm and Combinatorial Optimization
  - Performance Evaluation
- Large Scale Applications (4 ECTS)
  - An Algorithmic Approach of Distributed Systems
  - Large Scale Distributed Systems
- Software Engineering for Networked Systems (4 ECTS)
  - Network on Chip
  - Middleware for Internet of Things
- Personal project (6 ECTS)

## Electives courses (4 to pick out of 7)

- Security (4 ECTS)
  - From BitTorrent to Privacy
  - Information Security and Privacy
- Performance (4 ECTS )
  - Algorithms for Telecom
  - Distributed Optimization and Games
- Network and Cloud (4ECTS)
  - Virtualized Infrastructure in Cloud computing
  - Internet Measurement and New Architectures
  - Green Networking

# Master Thesis Semester 2

- You own a labex grant (foreign students only) : MsC thesis in one fo the UCN@Sophia Labex associated academic institutions



- Otherwise, benefit from Sophia enviro



amaDEUS



# MSc thesis 2015

<https://sites.google.com/site/ubinetinternship>

## Internship list 15-16

### Contents

- 1 Experimenting and modeling YouTube Quality of Experience
- 2 Efficient algorithms for the Subset Interconnection Design Problem
- 3 Content distribution over Software Defined Network
- 4 Platform-based design and abstract compilation onto manycore architectures
- 5 Exploring chain of trust on Twitter
- 6 Measuring in a virtualized environment
- 7 Exploring the Micro-Structure of Social Graphs
- 8 Study of P2P Systems for Video Live Streaming
- 9 A tool for static analysis and type-checking of distributed system control-flow graphs
- 10 Optimizing the transport network of a large metropolitan area to improve citizen accessibility
- 11 Modeling Caches with Heterogeneous Contents
- 12 Queueing models for renewable-powered data centers
- 13 Dynamic Big Data Processing
- 14 A Study of the verification and code generation for the Akka programming language
- 15 ElectroSmart, exploring the exposition to microwaves.
- 16 Optimal design and management of green fixed-mobile convergent networks
- 17 Evolution in software Product Line for Knowledge Flows

# What do you do after ?

Class	Total	PhD Sophia	PhD France (not Sophia)	PhD other country	Engineer Sopha	Engineer France (not Sophia)	Engineer other country	Other
09-10	12	5	3	1	1	1	1	
10-11	14	5	3	2	2		2	
11-12	13	5		1	1	1	1	4
12-13	15	4	1	1		2	5	4
13-14	17	3		3	2		3	6

2014-2015 : 6 PhD theses out of 23 students

# International agreements (w/ Ubinet)

<i>Partner</i>	<i>Country</i>	<i>Agreement</i>
<i>INPT – Rabbat</i>	Marocco	Memorandum of understanding (MoU)
<i>INPT – Tanger (UEA)</i>	Marocco	Memorandum of understanding (MoU)
		Double Diploma
<i>University of l'Aquila</i>	Italy	Memorandum of understanding (MoU)
		Double Diploma
		Erasmus +
<i>University of Bari</i>	Italy	Memorandum of understanding (MoU)
		Double Diploma
<i>University of Bologna</i>	Italy	Memorandum of understanding (MoU)
<i>Université Libanaise (ULFG)</i>	Lebanon	Memorandum of understanding (MoU)
		Double Diploma



# Latest news

- EIT Digital – 10 years European project
  - Education
  - Research
- Master schools
  - 8 tracks
  - 1 year in one country
  - 2nd year in another
  - Engineer oriented
  - Focus on entrepreneurship and innovation

Cloud Computing and Services

Data Science

Digital Media Technology

Embedded Systems

Human Computer Interaction and Design

Internet Technology and Architecture

Security and Privacy

Software and Service Architectures

# Internet Technology and Archi.

- First year : UPMC, TUB, KTH and UNITN
- Second year
  - Ubinet (variant)
    - *User-centric networking* at UPMC
    - *Internet technologies* at TUB
    - *Communication systems design* at KTH
    - *Wireless and mobile access networks* at UNITN
    - *Networked Analysis and Experimentation* at UNS
    - *Internet of things* at IT/TB
    - *Technologies for Internet Mobile and Ubiquitous Computing* at UPM