M1 Mosig

Research projects -- 2024-2025

Gregory Mounié and Thomas ropars

Agenda

- Important dates
- Procedures
- Labs in the Grenoble area
- List of internship offers
- Organization of the internship
- Summer internship

Important dates

Research methodology training

- December 11 – December 13

Research project

- **Part time period:** January 27 - April 18
    - 2 half-days per week
- **Full time period:** May 12 - June 6

Defenses

- June 10 - June 13

Procedures

Once you have been accepted for an internship by a researcher/advisor:

Step 1: Validation by the M1 MoSIG academic supervisors

- Write **to both** T. Ropars and G. Mounié
    - Tag the subject of your email with [M1 Mosig Internship]
- Main validation criterion: doing CS research inside a CS research team

Step 2: Prepare the paperwork with the administrative services of the University

- “Convention d’accueil” or “Convention de stage” depending on the situation
- At Ensimag or UFR IM2AG depending on your student registration
- Detailed information available on the MoSIG Web site (here)

Where to look for internships

Database of Master internship offers for Grenoble CS students

- Pcarre platform

List of offers collected by us

- See link on the M1 Mosig website

Search for interesting topics and contact researchers

- More information in the next slides

Academic labs/institutes in the Grenoble area

In alphabetical order:

- GIPSA-Lab: Images, speech, signal and control (~16 teams)
- G-SCOP: Production systems, product design and operational research (~6 teams)
- LIG: Grenoble Laboratory in Informatics (~22 teams)
- LJK: Laboratoire Jean Kuntzmann (Applied mathematics and computer science) (~17 teams)
- TIMA: Informatics and Microelectronics for integrated systems Architecture (~4 teams)
- TIMC-IMAG: Computer science and applied mathematics for understanding and controlling normal and pathological processes in biology and healthcare (~12 teams)
- Verimag: Embedded systems (~5 teams)

--

- Inria: Research institute in computer science, applied mathematics and control (~23 teams)
    - Most teams are joint teams with other labs

Some other labs in the area

- CEA: R&D in defense and security, energy, technological research for industry, physical sciences and life sciences.

Industrial labs:

- Bull Atos (AI, HPC, smart energy, ...)
- Naver Labs (computer vision, natural language processing, machine learning, optimization)
- Orange Labs
- Schneider Electric
- HPE (AI, HPC, Telecom, Edge, ...)
- STMicroelectronics, Kalray, ...
- Apple, Google, Huawei, Salesforce, ...

Some advises

Applications by email

- Have low success rate
- If you contact researchers by email, make your email specific
    - People do not answer generic emails that look like it could have been sent to a lot of people with the same content
    - Document yourself about the research activity of the group/researcher in advance
- Do not hesitate to send a reminder after a few days (10 days?)

Leverage your contacts

- Face-to-face interactions with teachers
- Meetings/seminars

About Published/on-line offers

- Possible to apply even if they are not initially framed for M1 internships (e.g., M2, PhD), or not for the current academic year

When meeting a researcher

Come prepared

- Have an idea of the topic
- Try to prepare questions (organization and research)

Be transparent

- Be clear about your current skills and ongoing training
- It is normal that you are not an expert yet

Finding research publications

To better understand the activities of some groups/researchers, you may want to take a look at some of their recent publications

Some web sites to retrieve list of publications and accessing documents:

- Google Scholar
- HAL
- DBLP (mostly for lists, not for documents)
- Arxiv.org

Organization of the internship

Finding the internship

- **As soon as possible**
    - Each team has a limited number of opportunities. Don't miss them!!
    - At last, before the Christmas break

The part-time period

- 2 half-days per week
- Main goal: Getting familiar with the topic
    - Reading related publications
    - Learning how to use the platforms and tools
    - Defining more precisely the objective of the internship
- An **intermediate report**
    - 2 pages + bibliographic references
    - Background + Preliminary ideas + Plan for the full-time period
    - Deadline: End of part-time period

Detailed information about the format of reports and deadlines will be provided later

Organization of the internship

The full time period

- Implement and evaluate your ideas
- A **final report**
    - 6 pages + bibliographic references
    - In the style of a research article
    - Deadline: End of the full time period

The defense

- Present your work in front of a jury
    - Expected format: 10 minutes presentation + 10 minutes questions
    - Deadline: Slides to be submitted the day before the beginning of the defenses

Detailed information about the format of reports and deadlines will be provided later

Summer internship

- The project may be continued during the summer (~ 1-2 extra months)
- You may also want to do another internship (completely unrelated to the research project).

About summer internships:

- This summer part is **completely optional**.
- This part will not be evaluated in the context of M1 MoSIG.
    - Free subject in CS (no validation of subject, no evaluation, no grade, no ECTS)
- This part requires extra administrative procedures.