



Master of Science in Industrial and Applied Mathematics (MSIAM) M2

# Msc Thesis Internships rules

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## Master thesis project

- **Research or industrial project in applied mathematics**
- Academic laboratories (from UGA, G-INP, Inria)
  - In Grenoble: LJK, TIMC, LIG, GIPSA, ...
- Research centers in industry
  - In Grenoble: Orange labs, CEA, ST Microelectronics, Schneider Electric, Xerox Research Center, Hewlett-Packard, ...
- In France or abroad

## Key dates

- Full-time: from February to June
- Defenses first round: around June 24<sup>th</sup> and 28<sup>th</sup>  
(if applying to PhD research grants from doctoral school MSTII)
- Possible extension: from July to August
- Defenses second round: August 26<sup>th</sup> - 30<sup>th</sup>
- No internship should extend after August 31 (not after the jury for diploma)
- Minimum duration: 20 weeks for Ensimag students, 14 weeks otherwise
- Standard duration: 5 months

## Project work

- Understanding scientific issues in any domain of applied maths
- Analysis and synthesis of the state of the art related to the subject
- Proposal for a solution and positioning contribution with respect to related work
- Validation of the proposed solution (experimental or/and theoretical)

## How to choose a project

- List of master thesis proposals on MSIAM website <http://msiam.imag.fr/mpproposals2018> (see also pcarre)
- Many other subjects available on the web or by personal contact
- Contact possible supervisors, discuss with them
- When you agree on a subject with a supervisor, e-mail [\[jean-baptiste.durand, edouard.oudet\]@imag.fr](mailto:[jean-baptiste.durand, edouard.oudet]@imag.fr) for validation (~ Jan 15<sup>th</sup>). Include a complete description.
- Students undertaking a project outside a local academic laboratory or an industrial project must find a local tutor (teacher, researcher, ...)

## Criteria for validation

- To be validated, the project description should include:
  - The context of the work, what is to be done and to which extent this is new, what has been done in this field before (with references), why there are still difficulties to address and how the student and supervisor plan to solve them.
  - The lab or company, and the name and email of the supervisor.
- The project should involve some applied mathematics (not just programming) - at least one item among:
  - Obtaining new theoretical results (proving theorems...)
  - Mathematical modelling (to build and study a new model, or use existing models in a new framework, with some validation.
  - Experimental / numerical comparison or validation of several models or numerical methods

## Project internship agreement

- **INP students: contact [Moufida.Derbal@grenoble-inp.fr](mailto:Moufida.Derbal@grenoble-inp.fr)**
  - The online agreement must be completed as least 4 weeks before the beginning of the internship
  - More details on internships on Ensimag Intranet: “Stages et PFE”
- **UGA students : contact [Carole.Durand@univ-grenoble-alpes.fr](mailto:Carole.Durand@univ-grenoble-alpes.fr)**
  - The *Internship information form* is available online
  - More information on the Intranet page
  - <https://im2ag.univ-grenoble-alpes.fr/menu-principal/formation/stages-et-relations-avec-les-entreprises/vous-effectuez-un-stage-ou-ter-/vous-effectuez-un-stage-ou-un-ter--98100.kjsp?RH=1475137620752>

# Project report

- Written in English
- Structure: introduction, problem description, state of the art, implementation, evaluation, conclusions, bibliography
- Writing: vocabulary, spelling, grammar
- Style: clear, concise, illustrated and readable
- Size: 30 +/- 10 pages
- Send report, one page and one slide presentations (download templates) to [\[jean-baptiste.durand, edouard.oudet\]@imag.fr](mailto:jean-baptiste.durand,edouard.oudet@imag.fr) and bring 2 printed copies at your defense (or sooner if requested by reviewer)



# Project defense

- Each defense lasts 60 min
- 30-35 min presentation (must include 2-3 min perspectives for research projects, typically what could be done in PhD)
- 15-20 min of questions
- 10 min of deliberation

# Assessment

- Report assessed by independent reviewer
  - If you have a tutor, he/she should be your reviewer
  - Otherwise: supervisor should propose 3 names - outside your team – please tell her-him.
  - Reviewers do not have to attend defenses
- Assessment by supervisor (autonomy, quality of code, ...)
- Oral presentation assessed by 2 members of the jury + reviewer if attending.
- Grids: <https://msiam.imag.fr/aboutmasterproject>

# Information

- MSIAM website:  
<https://msiam.imag.fr/aboutmasterproject>
- MSIAM billboard in Ensimag's lobby
- Sylvia's office: Ensimag D101 bis<sup>(1)</sup>
- Carine's office: UFR IM2AG Registrar's office  
"scolarité"
- [\[jean-baptiste.durand, edouard.oudet\]@imag.fr](mailto:[jean-baptiste.durand, edouard.oudet]@imag.fr)

(1) E001 being used at the beginning of the school year only, as registrar office

# Plagiarism

- You have to respect the laws of intellectual property-such as copyright
- No one is allowed to appropriate the labor of the original author

**=> University disciplinary commission**

# Plagiarism

- <http://en.wikipedia.org/wiki/Plagiarism> (especially sections 2, 3.1, 3.3)
- <http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>
- <http://www.writing.utoronto.ca/advice/using-sources/paraphrase>
- <http://www.writing.utoronto.ca/advice/using-sources/quotations>
- Gipp, Bela (2014). Citation-based Plagiarism Detection: Detecting Disguised and Cross-language Plagiarism using Citation Pattern Analysis. Springer Vieweg. ISBN 978-3-658-06393-1. p.10
- In short:
  - Use citations when presenting definitions, theorems, models, results obtained by someone else.
  - Use citations and quoting marks when copying some expression, sentence or paragraph.
  - If you do not cite anyone, this is either personal original work or plagiarism.

# Development Council

- University rules require that we found a development council (MSIAM M1+M2)
- Aims at improving students training, connections with industry, ...
- Two student representatives and two deputies needed (2 in M1, 2 in M2 - maybe a foreign student?)
- To apply please contact the heads. Vote if multiple applications?



# PhD fellowships

Webpage describing the French system of PhD fellowships:

[https://ensiwiki.ensimag.fr/index.php?title=Various kinds of PhD fellowships in France](https://ensiwiki.ensimag.fr/index.php?title=Various_kinds_of_PhD_fellowships_in_France)



Thank you for your attention

Questions?

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