

# **Track Parallel and Distributed Systems**

## **Welcome!**

Master in computer science of IP Paris

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# Institut Polytechnique de Paris

Brings 5 french schools together

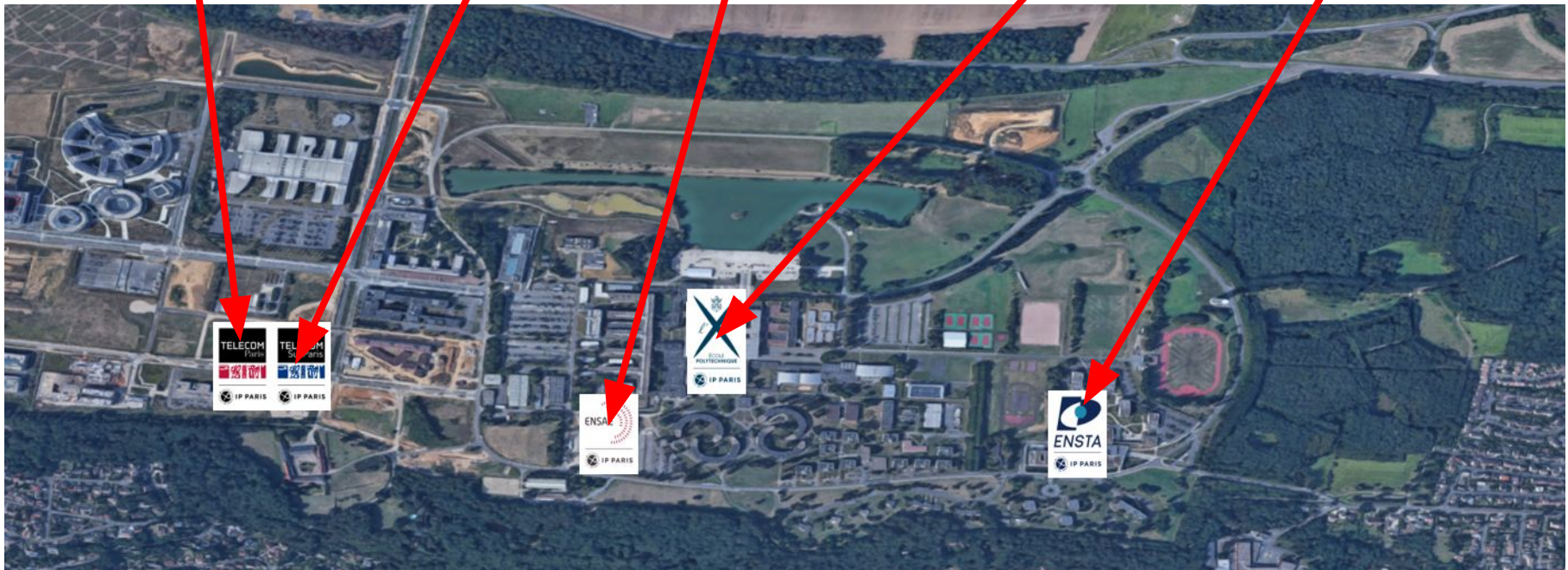
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# Parallel and Distributed Systems track

## Parallel and distributed systems

- Consists in distributing the computation over many computing units (from end devices to data centers) connected by networks
- They are ubiquitous : IA applications, online games, social networks, web services, healthcare simulation...



# Parallel and Distributed Systems track

■ Goal of the track : **understand how parallel and distributed systems are built**

- How we can make them **efficient**
- How we can make them **maintainable**
- How we can make them **correct**

**Learn distributed systems from both a theoretical and a practical point of view**

# Organization

- The courses mostly comes from the engineering tracks of the schools of IP Paris
- In both M1 and M2 (internship excluded)
  - Scientific courses to learn new concepts (~50%)
  - Research seminars to know the last scientific advances (~10%)
  - Research projects to do research in IP Paris' labs (~40%)
- In M2
  - An internship of 6 month in a research lab
  - Starts between february and march
  - A student can choose a research lab of IP Paris or of any other institute

# The scientific courses

- A student can choose any course from the track
  - We don't distinguish the M1 and the M2
  - But some courses are more basic than others
- Very quickly (**ideally today!**), a student has to choose courses
  - The first course (SLR206) starts the 9 of September
- Mandatory ECTS for the scientific courses
  - In M1: 30 ECTS
  - In M2: 22.5 ECTS
- Because of COVID: each course has its own organization (physical courses, remote courses, hybrid courses)

# The research seminar

- Goal: learn the last scientific advances of the field
- Each week, we have a research seminar the friday morning
  - The students regularly present research papers
  - For some of the seminars, we invite other researchers
- **Attending the research seminar is mandatory**
  - Except if you have another course
  - And of course during the internship
- Validation of the research seminar
  - In M1 : 5 ECTS, in M2 : 2,5 ECTS
  - You will have a mark for each of your presentation

# The research projects

- The research project consists in learning research by doing research
  - Between 1 and 4 days each week in a research lab
  - Work with professors and PhD students of IP Paris on ongoing research projects
  - Mainly projects proposed by the professors of IP Paris, but you can also propose your own research project
- Evaluation: through a presentation and a report
  - In M1: 25 ECTS, in M2: 7,5 ECTS



# The research projects

## ■ Schedule

- 11/9/2020: we give the list of the possible research projects
- 18/9/2020: each student chooses a project
- Week of 25/1/2020: mid-term evaluation (M1) or final evaluation (M2)
- Week of 21/6/2021: final evaluation (M1)

# The internships

## ■ M1 summer internship:

- Not mandatory, just a possibility
- 1 or 2 months during the summer
- Does not give ECTS
- A student can continue his/her M1 research project during the internship

## ■ M2 internship

- Mandatory (30 ECTS)
- 6 months, starts in january, february or march
- A student can also continue his/her M2 research project during the internship
- A student can also do an internship in any university
- Can be in a company of clearly research-oriented

# And after the PDS track

## ■ A student can do a PhD thesis

- 3 years, funded (~ 1750 euros/month)
- A PhD consists in doing research
- After a PhD, a student can work in a company or in a university (80/90% in company, 10/20% in university)
- **Contact your professors to discuss PhD opportunities!**

## ■ A student can, of course, also work in a company

- Often in a research and development division
- Sometime only in a pure development division

# Where is the schedule

- You can find it on the web page

<http://www-inf.telecom-sudparis.eu/COURS/masteriparis/pds/>

- For the rooms, you have to check with the professors in charge of the courses

# And now...

■ ... let's choose your courses!

<http://www-inf.telecom-sudparis.eu/COURS/masteriparis/pds/?page=../common/courses>