

# Welcome to IASD

[masteriasd.eu](http://masteriasd.eu)

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Pierre Senellart (ENS), Etienne Decencière (Mines)





Relevant entities:

- Graduate Program for Computer Science in PSL
- MIDO (Computer science department in Dauphine)

# PR[AI]RIE

PaRis Artificial Intelligence Research InstitutE



## [INDUSTRIAL MEMBERS]



# AI & Data Science

## ■ Topics

- Machine Learning, Deep learning
- Optimization
- Big data, databases
- Data Science
- Knowledge representation, automated reasoning, planning

## ■ Careers

- Academic career: Ph.D. in a university, CNRS/CEA/Inria
- R&D labs: Facebook (FAIR), Criteo, 1000mercis
- Data scientist in a company
- Startups

# First period: fundamentals

September – December

## ■ 7 Mandatory fundamental courses

- Foundations of Machine Learning 33h – 5 ECTS
- Optimization for Machine Learning 48h – 6 ECTS
- Data acquisition, extraction, and storage 33h – 5 ECTS
- Data Science Lab 33h – 5 ECTS
  
- Deep Learning for Image Analysis 24h – 3 ECTS
- Large Language Models 24h – 3 ECTS
- Reinforcement Learning 24h – 3 ECTS

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- Reinforcement Learning 24h – 3 ECTS

► First term exams: week of December 18, 2023

# Second period: optional courses

January – March

## ■ 6 optional courses out of 13 courses available

- Advanced Machine Learning
- Deep Reinforcement Learning & Applications
- Computational social choice
- Deep reinforcement learning and applications
- Graph Analytics
- Incremental Learning, Game Theory, and Applications
- Knowledge Graphs, Description Logics, Reasoning on Data
- Machine Learning on Big Data
- Monte-Carlo Search and Games
- NoSQL Databases
- Planning, Search, and Constraint Solving
- Point Clouds and 3d Modeling
- Privacy for Machine Learning



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  - NoSQL Databases
  - Planning, Search, and Constraint Solving
  - Point Clouds and 3d Modeling
  - Privacy for Machine Learning
- ▶ Information meeting on November 6, 2023, you will need to choose 6
- ▶ Second term exams: week of March 25, 2024

# PSL Weeks

November 2023, March 2024

## ■ 2 mandatory “thematic weeks”

- Two weeks cleared in the schedule for *PSL Weeks*
  - November 20, 2023 – November 24, 2023
  - March 4, 2024 – March 8, 2024
- Complete list and registration available at:  
<https://psl-week.psl.eu>

## You may be interested in PSL Weeks from the Data Science Program

- <https://data-psl.github.io>
- In November: AI for Economics and Finance – Explainability and Interpretability in ANN – Ethic & AI – NLP for Social Sciences
- In March: Digital Humanities meet AI – ML for physics and engineering – ‘Green’ AI – ML in Genomics – NLP for Social Sciences – Statistical Phy and ML

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► You need two, register early!

# Internship

April - August

## ■ An internship in research / R&D

- 5 months minimum
- Information meeting on November 6, 2023
- Deadline for choosing an internship: March 1, 2024
- Deadline for submitting the master thesis : September 1, 2024
- Internship defense: September 9 to September 13, 2024

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April - August

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- Deadline for submitting the master thesis : September 1, 2024
- Internship defense: September 9 to September 13, 2024
  
- Final jury for the year: September 23, 2024

# Validation

## ■ Grade for the 1<sup>st</sup> period:

- Weighted average of each grades
- Grades are weighted with the number of ECTS

## ■ Grade for 2<sup>nd</sup> period:

- Average grade of the 6 optional courses
- Grades are weighted with the number of ECTS

## ■ Internship:

- Defense

# Validation

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## ■ Internship:

- Defense

## ► To pass, you need:

- To attend (and validate) two PSL Weeks
- To obtain a grade  $\geq 10/20$  for the first and the second period
- to obtain a grade  $\geq 6/20$  for each individual teaching component
- to obtain a grade  $\geq 10/20$  for the internship

# Validation (Mines Paris)

## ■ To pass the IASD master degree, you need:

- Choose max. 10 ECTS at Mines
- Acquire the required number of ECTS for the year (Mines + IASD)
- Comply with the IASD validation rules, for the teaching components that are graded by Dauphine (see previous slide)

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- ▶ We recommend that you take at least 4 IASD Mandatory Courses
- ▶ You must inform us before October 30

# Communication and planning

## ■ Communication

- Read your email *@dauphine.eu*
- Check [masteriasd.eu](http://masteriasd.eu) (info-student section) for
  - rules and organization
  - positions and internship offers
  - ...

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## ■ Relevant information

- [myplanning.dauphine.eu](https://myplanning.dauphine.eu)
- Check course's website or Teams page
- Ask professor in charge (via email)

# Contact

## ■ Pedagogic

- **Students from ENS:** Pierre Senellart  
pierre@senellart.com
- **Students from Mines:** Etienne Decencière  
etienne.decenciere@mines-paristech.fr
- **Dauphine & others:** Olivier Cappé & Benjamin Negrevergne  
olivier.cappe@ens.psl.eu, benjamin.negrevergne@dauphine.psl.eu

## ■ Administrative

- Ariane Corblet  
ariane.corblet@dauphine.psl.eu