

Welcome to IASD

masteriasd.eu

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Pierre Senellart, François Goulette

Welcome to IASD



www.masteriasd.eu

IA & Data Science

■ Topics

- Machine Learning / Deep learning
- Optimization
- Big data, data bases,
- 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

A year at IASD

- **Now — December:** Fundamentals
Fundamentals of ML, optimization for ML, knowledge representation, Deep learning, advanced DBMS ...
- **January — March:** 6 options out of 15 available
NLP, Computational social choice, graph mining, Monte-Carlo for games, Ethics...
- **March — August:** Internship
 - Typically in research lab
 - Topic must be related to IASD, (will be validated by the coordination team)
 - Ends with a Master thesis and a defence.

Optional courses

- Advanced machine learning Yann Chevalyre
- Introduction to reinforcement learning Yann Chevalyre
- Anonymization, privacy Pierre Senellart
- Computational social choice Jérôme Lang
- Data wrangling, data quality Pierre Senellart
- Deep learning for image analysis Etienne Decencière
- Ethics and artificial intelligence François Goulette
- Point clouds and 3D modeling François Goulette
- Foundations of graph and RDF query languages Leonid Libkin
- Graph mining Daniela Grigori
- Incremental learning, game theory, and applications Rida Laraki
- Knowledge graphs, description logics, reasoning on data
Michaël Thomazo and Camille Bourgaux
- Monte-Carlo search and games Tristan Cazenave
- Natural language processing Alexandre Allauzen
- Machine learning on Big Data Dario Colazzo
- Systems, paradigms, and languages for Big Data Dario Colazzo

► Meeting in december

Internship

...

Referents

- Organization and logistics
Yasmine Abdi
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- ENS:
Pierre Senellart
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- Mines:
François Goulette
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- Dauphine & others universities:
Tristan Cazenave
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Benjamin Negrevergne
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Communication and planning

■ Communication

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

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■ Planning

- Official planning is **ADE** (see website for more info)
- Much planning information will be available on Teams

Online/offline lectures

Lectures can be either

- Fully online
 - Fully offline
 - Hybrid
- ▶ Recommended platform for online/hybrid is *Microsoft Teams*

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Rules (see Déroulement des enseignements):

- If there is no extra planning information, meet in the room specified on ADE
- If there is a Team group and a scheduled meeting:
 - if it is online only: join the meeting at scheduled time
 - if it is hybrid, join the meeting, or meet in the corresponding ADE room (the class distribution will be specified)
- Otherwise, instructions will be explicit (check emails)

Warning

- You **must** complete your administrative registration as soon as possible
- You **must** join the corresponding *Team* for each class if it is available (check website)

First period

- Advanced databases: (mostly) online
- Knowledge representation, planning, and reasoning: (mostly) online
- Optimization for Machine Learning: in class (ENS)
- Deep learning: online
- Machine learning fundamentals: hybrid
- Data science project: hybrid

Validation

■ Grade for the 1st period:

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

■ Grade for 2nd period:

- Weighted average of the best 6 grades
- Grades are weighted with the number of ECTS

■ Internship:

- Defense

Validation

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- Weighted average of the best 6 grades
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■ Internship:

- Defense

▶ To pass, you need:

- To obtain more than 10/20 for the first and the second period
- to obtain more than 6/20 for each individual teaching component
- to obtain more than 10/20 for the internship

Validation (Mines)

■ 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)

■ To pass the Mines engineering degree, you need:

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

Who are you?

- 8 students — PSL – Paris Dauphine
- 7 students — PSL – Mines Paris Tech
- 6 students — PSL – École Normale Supérieure
- 5 students — Other french universities
- 4 students — foreign universities

Contact

■ Pedagogic

- **Students from ENS:** Pierre Senellart
pierre@senellart.com
- **Students from Mines:** François Goulette
francois.goulette@mines-paristech.fr
- **Dauphine & others:** Tristan Cazenave & Benjamin Negrevertgne
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benjamin.negrevertgne@dauphine.psl.eu

■ Administrative

- Yasmine Abdi
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