



DIGITAL SYSTEMS
FOR HUMANS
GRADUATE SCHOOL AND RESEARCH



UNIVERSITÉ
CÔTE D'AZUR

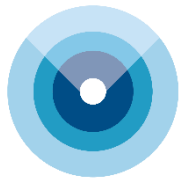
MINORS - TUTORSHIPS - PROJECTS
SPRING 2021



GO!

Today!

**100%
online
on
Zoom**



Program

13h30 - 13h40 EUR DS4H: brief Intro EUR DS4H

13h45 - 13h50 DS4H Masters Training Offer

13h55 - 14h15 Presentation of ADAMS

14h20 - 15h10 DS4H Minors' presentations

15h15 - 15h45 Meet DS4H minors' coordinators
Parallel sessions 1 room zoom / minor

15h50 - 16h20 DS4H Projects' presentations

16h25 - 17h00 Meet DS4H projects' tutors
Parallel sessions 1 room zoom / project

17h05 - 17h30 HANDS ON Session: How to subscribe? Questions
Schooling Questions

13h30-13h40

What is DS4H?

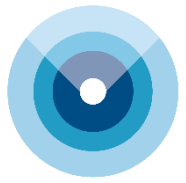
Johan Montagnat, Director



**DIGITAL SYSTEMS
FOR HUMANS**
GRADUATE SCHOOL AND RESEARCH



**UNIVERSITÉ
CÔTE D'AZUR**



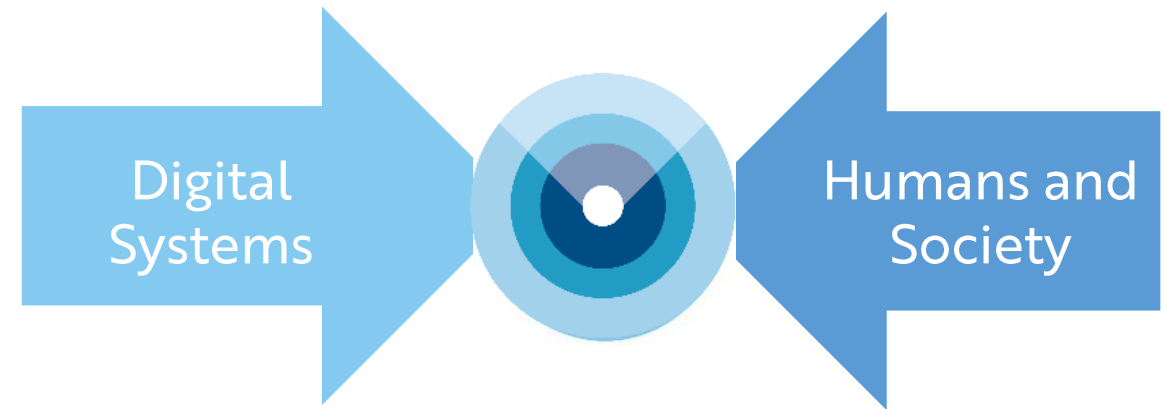
Digital Systems for Humans (DS4H)

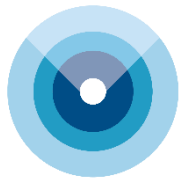
Facing the challenges of the Digital World

- **Science & Technology**
electronics, networks, distributed systems, machine learning, Big Data...
- **Society**
usages, law, confidentiality, acceptability, ethics, security, trust...

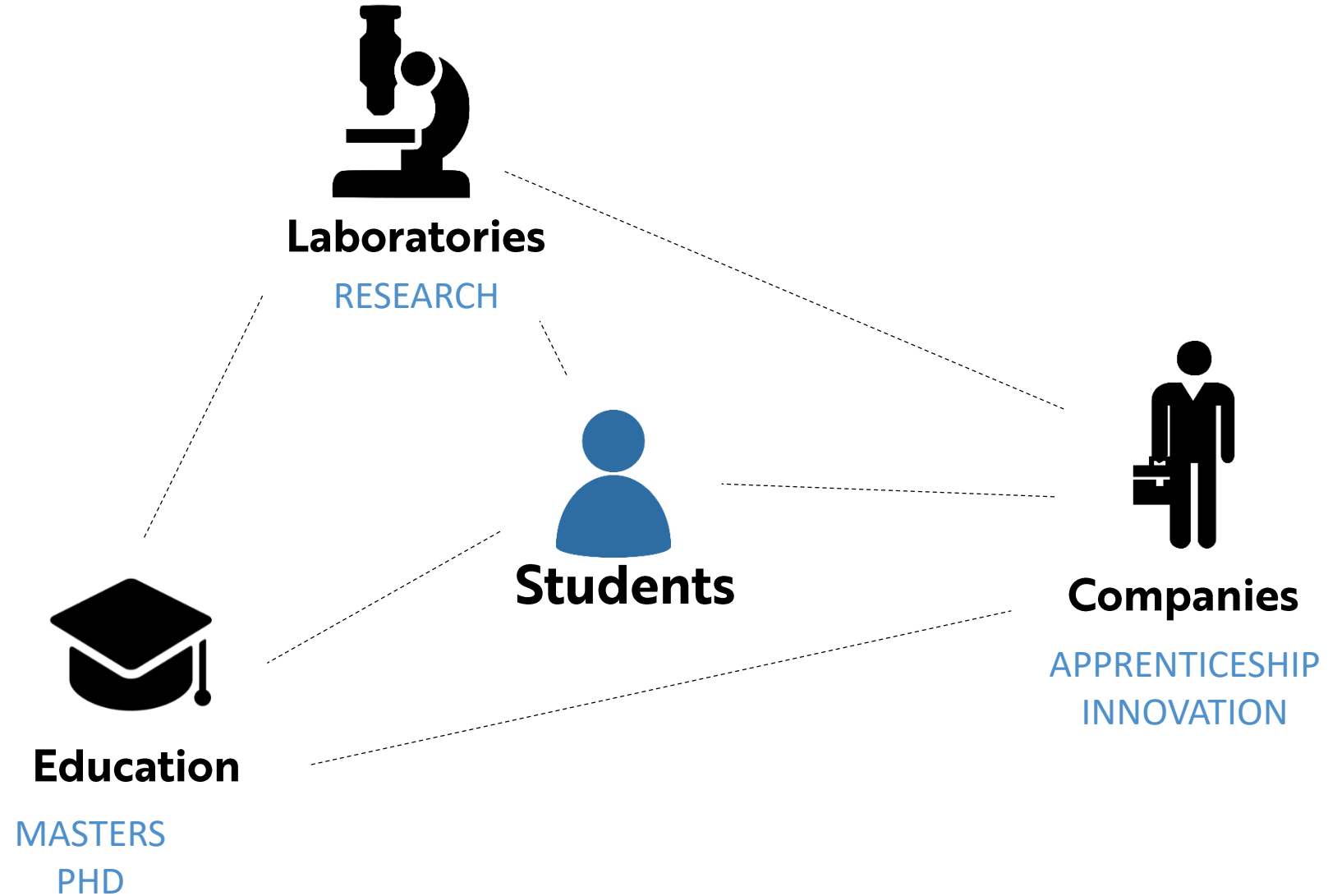
Digitals everywhere

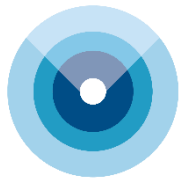
- Digital life, digital jobs
- Globalization
- Climate change challenge





Graduate School and Research





Research

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CÔTE D'AZUR



Laboratories



Education departments

Faculty of Sciences
and Engineering

Economics

Law

Management



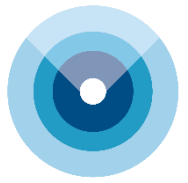
Doctoral schools

ED STIC

Information and
Communication
Sciences and
Technologies

ED DESPEG

Economics, Law,
Management



Sophia Antipolis: largest European Science Park

50TH ANNIVERSARY
SOPHIA ANTIPOLIS
2019

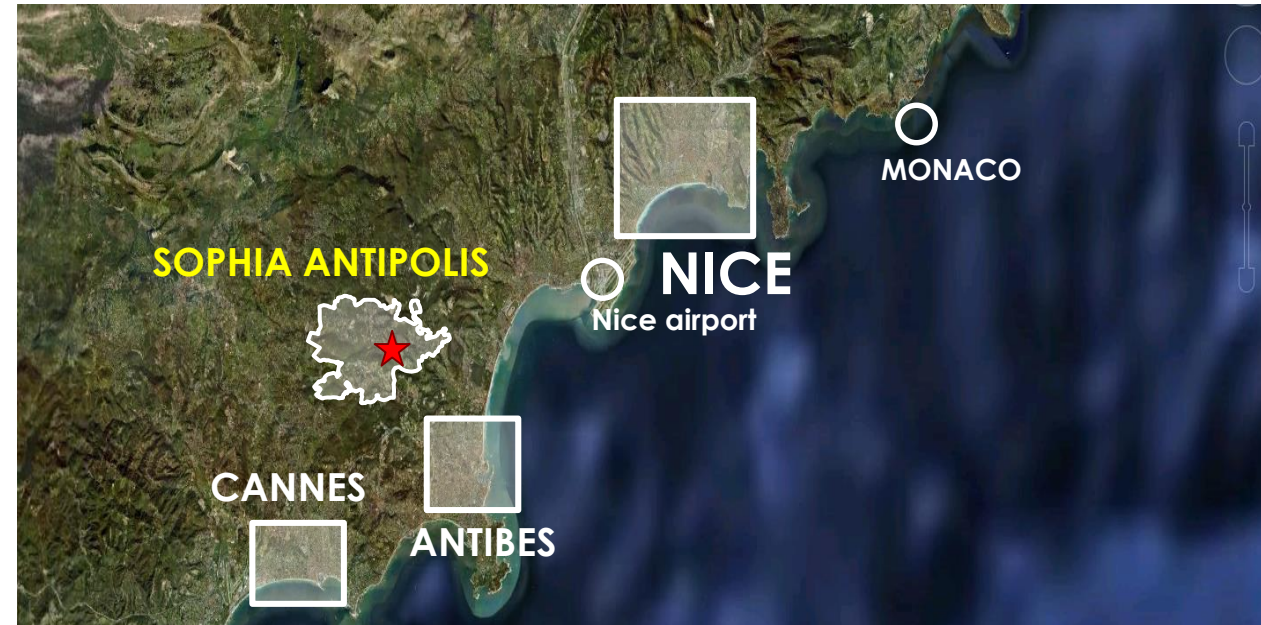


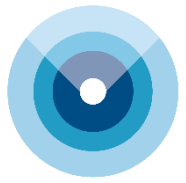
2200+ companies

4000 academic researchers

5500 students

- Network and information technologies
- Artificial Intelligence
- Health, Chemistry, Biotech
- Smart territories, autonomous vehicles
- ...





Pedagogy Guidelines

New skills development

High degree of specialization

Multidisciplinary opening

Soft skills : co-working, agility, autonomy,
interdisciplinarity, communication...

Early professional integration

In laboratory : Master to PhD continuity

In company

Innovation projects

Autonomy and Self-initiative

Individualized curricula

Training actor



Careers

Scientist

- Computer Sciences
- Electronics
- Networks
- Internet of Things
- Data sciences

Data Analyst

- Statistics
- Big Data
- Machine learning
- Artificial Intelligence
- Smart cities

Digital designer

- Ergonomics
- Usage
- Durability

Economist

- Digital strategies
- New markets
- Economy of the digital society

Manager

- Digital business
- Digital labour market
- Decision taking

Teacher

- Digital technologies
- Co-creativity
- Digital education
- Innovation

Lawyer

- Digital objects law
- Intellectual Property
- Legal responsibilities



Johan Montagnat
Director



Luc Deneire
Deputy Director



Sophie Pluton
Project Officer



Anne-Laure Simonelli
Pedagogical Engineer



Olga Kieffer
Business and
International
Relationships



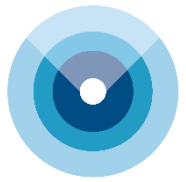
Marion Mounier
Communication
Officer



Isabelle Saussez
Assistant



Virginie Valot
Pedagogical
Assistant



Scholarships « Égalité des chances »

- Scholarships from UCA Foundation
- For master students who already get a scholarship based on social criteria
- Grant from 500 to 1000 euros
- Application : simple! (online form + scholarship holder certificate + motivation letter)
- Application and information: <http://web.univ-cotedazur.fr/fr/index/bourse-dexcellence-uca-champion>

Apply before Dec 18th!
donia.trad@univ-cotedazur.fr





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<http://ds4h.univ-cotedazur.eu>



ds4h-contact@univ-cotedazur.fr

Follow us!



@EUR_DS4H



DS4Hnews



DS4H

13h45-13h50

DS4H Masters training offer

Anne-Laure Simonelli, Pedagogical Engineer



DIGITAL SYSTEMS
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Minors (3 ECTS)

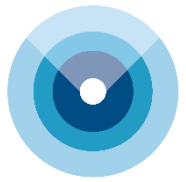
- On Thursday mornings
- No prerequisite
- From mid-Feb to mid-April
- In English

<https://ds4h.univ-cotedazur.eu/education/minors>

Projects (6 ECTS)

- One day / week for a minimum of 8 weeks
- + one full week immersion

<http://erebe-vm6.i3s.unice.fr:8080/ds4h-projects>



It is up to you!

Choose 3 minors in order of preference
via EREBE

Deadline: Dec 13th!!!

Apprenticeship



ALTERNATING SCHEDULE
(No access to DS4H offer)
apart from Master SD (M1, M2)

Choose 3 projects
in order of preference
via EREBE
Deadline: Dec 13th!!!

Initial training



Choose : OPTION

DS4H Minor

Disciplinary option



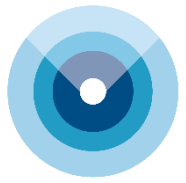
Choose : PERSONAL PROJECT

DS4H Project

Disciplinary
Project

Tutorship
in laboratory

Multidisciplinary Project
• Research



Spring 2021 – Who's concerned?

A. Malapert **M1 Informatics, M1 Computer Science**

~~J.C. Regin~~ **M2 Informatics and Interactions**

~~Y. Roudier~~ **M2 Ingenierie, Ubinet**

P. Renevier **M1 MIAGE**

~~M. Winter~~ **M2 MIAGE INTENSE**

~~N. Sauvage~~ **M2 MIAGE SIRIS**

G. Mopolo-Moke **M2 MIAGE MBDS**

~~M. Winter~~ **M2 MIAGE IA2**

M. Al Khalfioui **M1 Master Electronics (EEA)**

~~J. Lanteri~~ **M2 Master Electronics (EEA)**

M1 + M2 Digital Strategy L. Arena

M1 Business Law AFF J. Bardy

M2 Digital IP & Law DPINT T. Marteu

~~M1 + M2 HIC MAJIC~~ M. Boutet

~~M1 + M2 HIC MAPIC~~ M. Boutet

M1 Ergonomy ECTN P. Therouanne

~~M1 + M2 LTITPC~~ D. Passino

M1 LEA RFI J.P. Darnis

~~M2 LEA TRE~~ S. Labat-Jacqmin



M1 Informatics, M1 Computer Science

A. Malapert

Apprenticeship



ALTERNATING SCHEDULE
(No access to DS4H offer)

Initial training



Choose (S2): OPTION

DS4H Minor

Disciplinary option



Choose (S2): PERSONAL PROJECT

DS4H Project

Disciplinary Project

Tutorship
in laboratory

Multidisciplinary Project

- Research

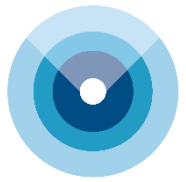


M1 Informatics, M1 Computer Science

A. Malapert

Choose your DS4H minors for S2

- [Accessibility and universal design](#)
- [Anthropology of Technologies](#)
- [Digital Intellectual Property and Law](#)
- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, vendredis matins, @SKEMA et distanciel (ou entièrement distanciel selon conditions sanitaires)
- [Innovation and Creativity](#) online
- [Innovation and Design Thinking](#)
- [Introduction to Machine Learning](#) Winter School, CAUTION: prerequisites ! Semaine entière du 11 au 15 janvier @Sophia (ou distanciel selon conditions sanitaires)
- [Introduction to Scientific Research and Experiment](#)
- [Programming Multiplayer Video Games on the Web Platform / Advanced JavaScript](#) CAUTION: prerequisites! Courses available online
- [Tools 2 Communicate](#)



M1 MIAGE (annualized)

P. Renevier

Apprenticeship



ALTERNATING SCHEDULE
(No access to DS4H offer)

Initial training



OPTION

Mandatory (S2): 1 DS4H minor



Choose (S2) : PERSONAL PROJECT

DS4H Project

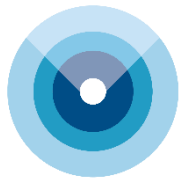
Disciplinary Project

Tutorship

Multidisciplinary Project

In laboratory

• Research

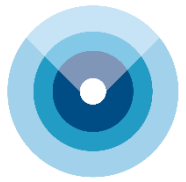


M1 MIAGE (annualized)

P. Renevier

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M2 MIAGE MBDS (annualized)

G. Mopolo-Moke

Apprenticeship



ALTERNATING SCHEDULE
(No access to DS4H offer)

Initial training

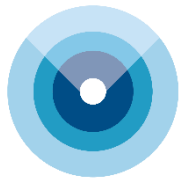


OPTION

Mandatory: 1 DS4H Minor during S3 or S4



PERSONAL PROJECT
(No access to DS4H offer)



M2 MIAGE MBDS (annualized)

G. Mopolo-Moke

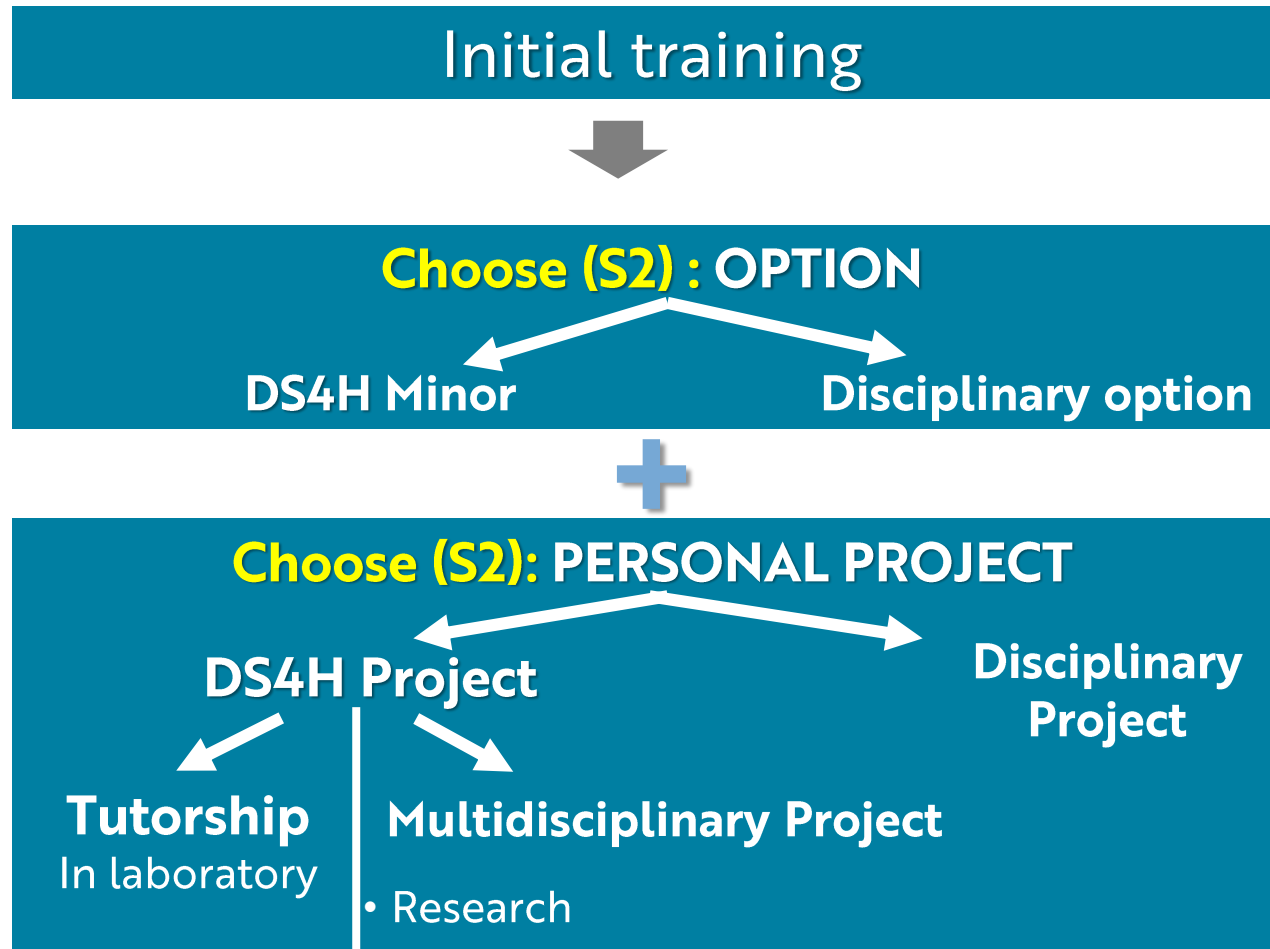
Choose your DS4H minors for S3 or S4

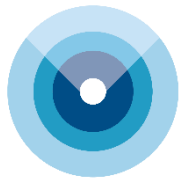
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- [Tools 2 communicate](#)



M1 Master Electronics (EEA)

M. Al Khalfioui



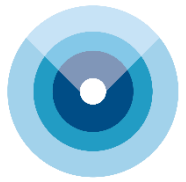


M1 Master Electronics (EEA)

M. Al Khalfioui

Choose your DS4H minors for S2

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- [Anthropology of Technologies](#)
- [Digital Intellectual Property and Law](#)
- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, vendredis matins, @SKEMA et distanciel (ou entièrement distanciel selon conditions sanitaires)
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- [Tools 2 Communicate](#)



M1 Digital Strategy

L. Arena

Apprenticeship

In enterprise on **Wednesdays**,
Thursdays and **Fridays**



Choose (S2): OPTION

DS4H Minor

Disciplinary option

Choose (S2): PERSONAL PROJECT

DS4H Project

Disciplinary Project

Tutorship
In laboratory

Multidisciplinary Project
• Research

Initial training



Choose (S2): OPTION

DS4H Minor

Disciplinary option



Choose (S2): PERSONAL PROJECT

DS4H Project

Disciplinary Project

Tutorship
In laboratory

Multidisciplinary Project
• Research

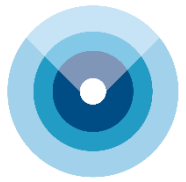


M1 Digital Strategy

L. Arena

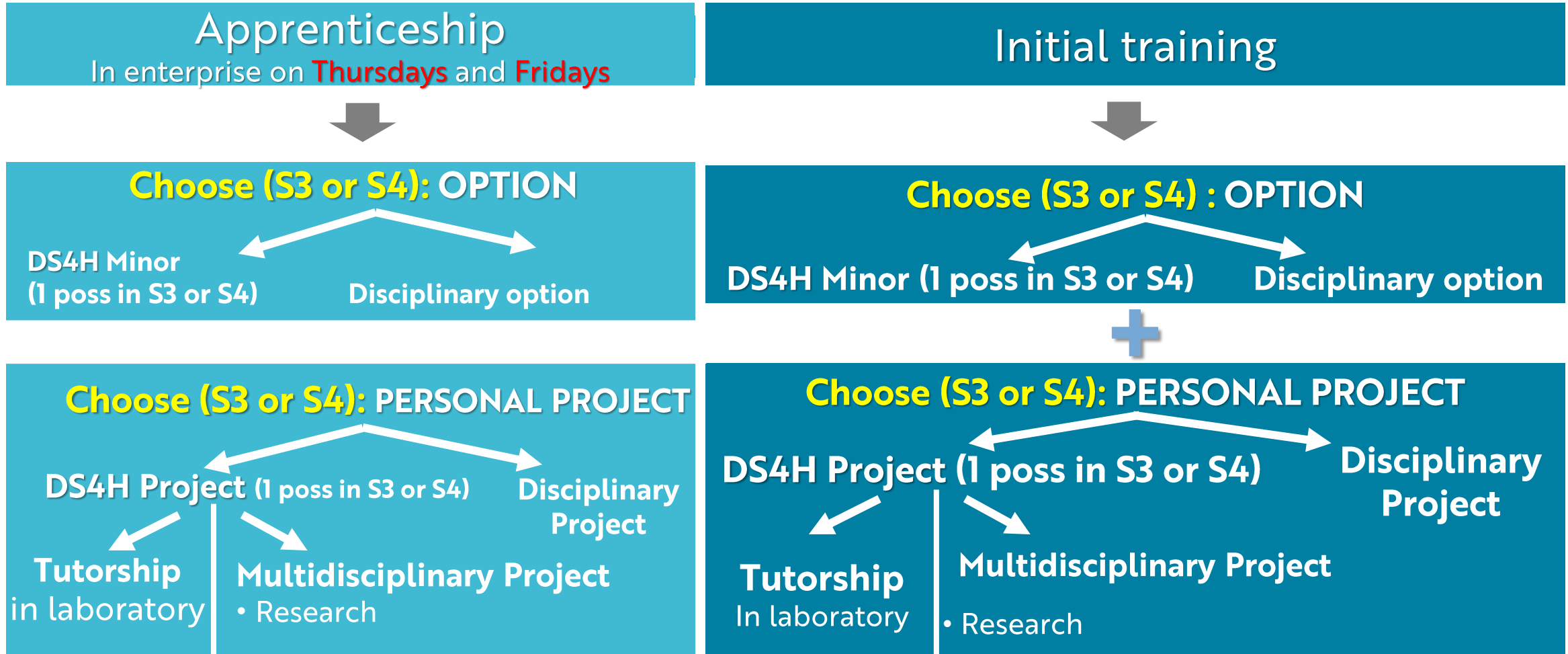
Choose your DS4H minors for S2

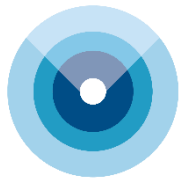
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- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, vendredis matins, @SKEMA et distanciel (ou entièrement distanciel selon conditions sanitaires)
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- [Tools 2 Communicate](#)



M2 Digital Strategy (annualized)

L. Arena



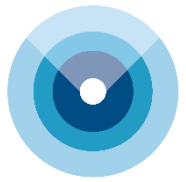


M2 Digital Strategy (annualized)

L. Arena

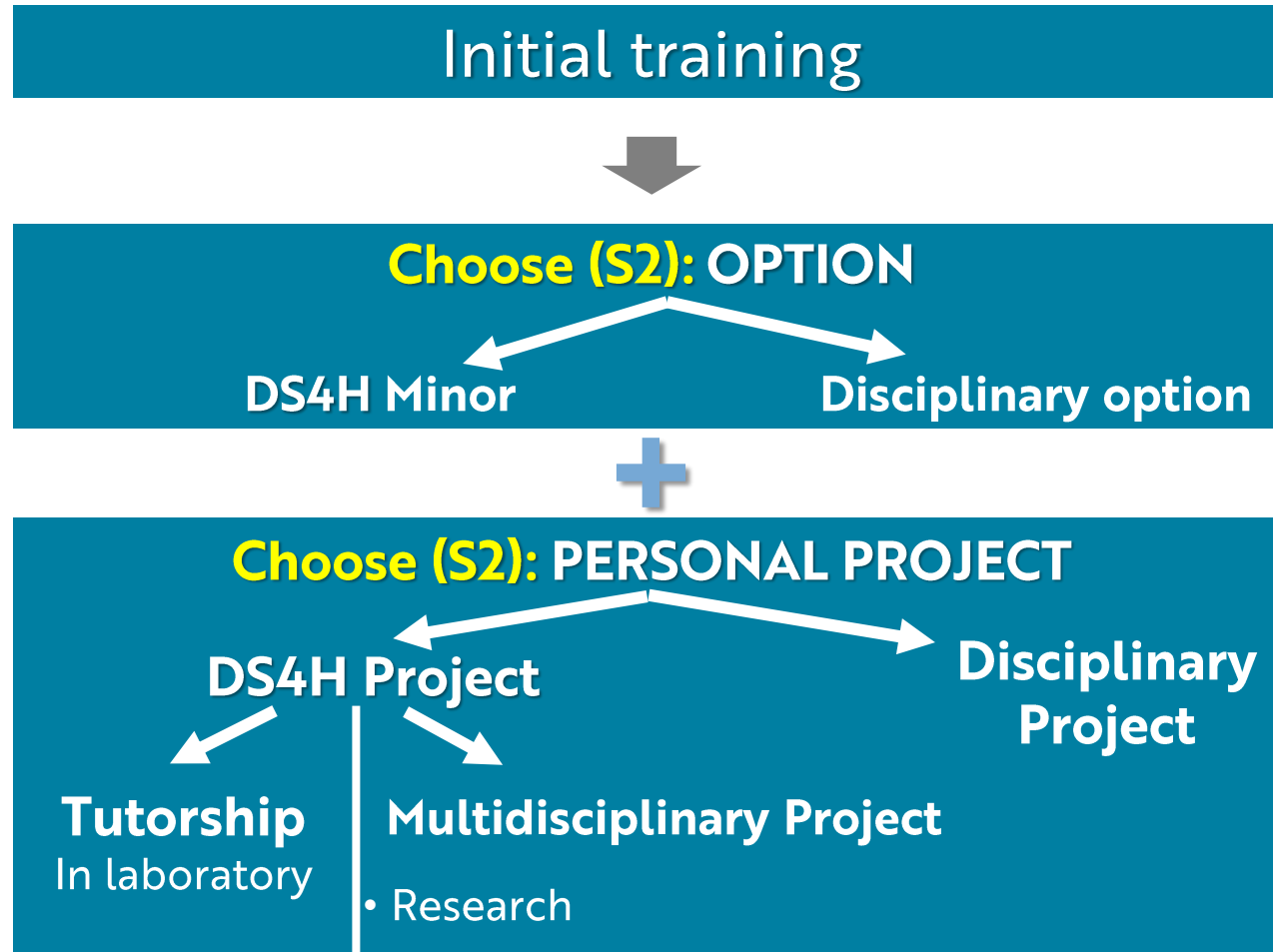
Choose your DS4H minors for S3 or S4

- [Accessibility and universal design](#)
- [Anthropology of Technologies](#)
- [Digital Intellectual Property and Law](#)
- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, vendredis matins, @SKEMA et distanciel (ou entièrement distanciel selon conditions sanitaires)
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M1 Business Law AFF

J. Bardy



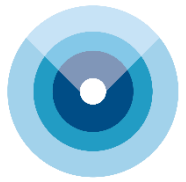


M1 Business Law AFF

J. Bardy

Choose your DS4H minors for S2

- [Accessibility and universal design](#)
- [Anthropology of Technologies](#)
- [Digital Intellectual Property and Law](#)
- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, Vendredis matins, @SKEMA et distanciel (ou entièrement distanciel selon conditions sanitaires) —
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M2 Digital IP and Law DPINT

T. Marteu

Apprenticeship



ALTERNATING SCHEDULE
(No access to DS4H offer)

Initial training



OPTION
(No access to DS4H offer)



Choose (S4): PERSONAL PROJECT

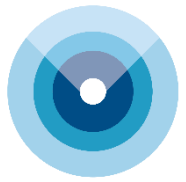
DS4H Project

Disciplinary Project

Tutorship
In laboratory

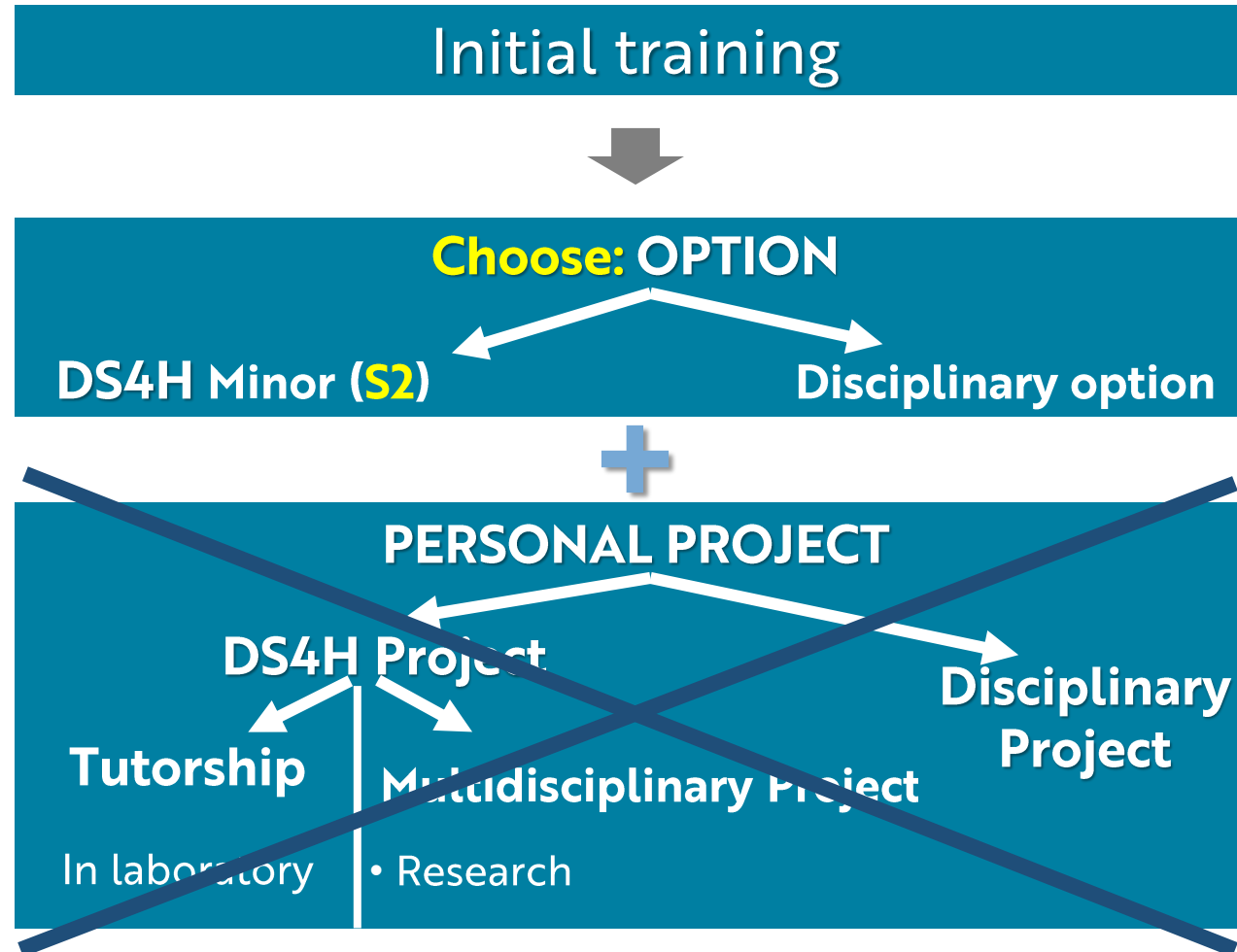
Multidisciplinary Project

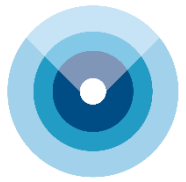
- Research



M1 HIC MAJIC

M. Boutet



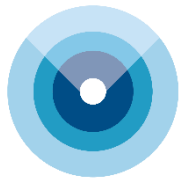


M1 HIC MAJIC

M. Boutet

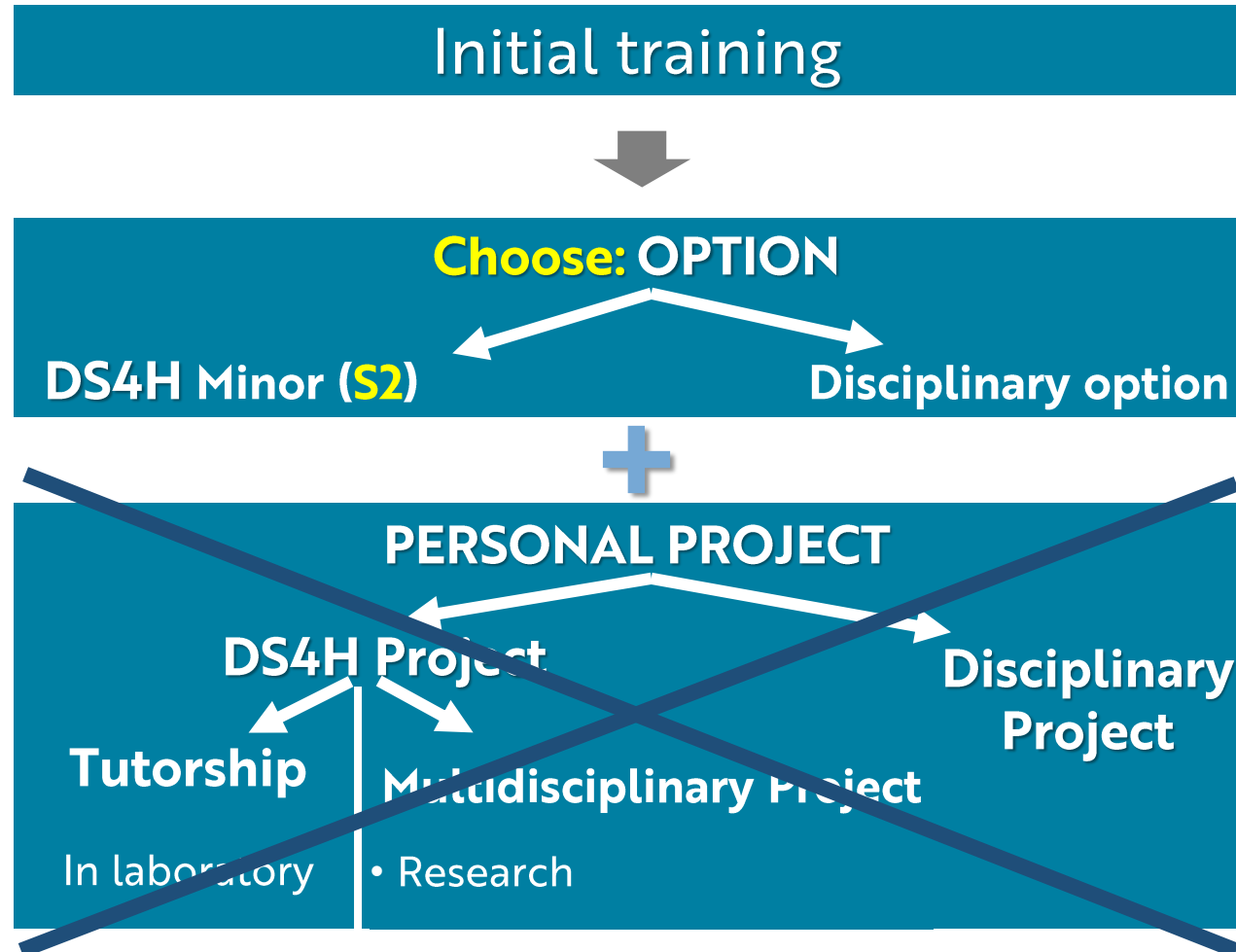
Choose your DS4H minors for S2 ???

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- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, vendredis matins, @SKEMA et distanciel (ou entièrement distanciel selon conditions sanitaires)
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M1 HIC MAPIC

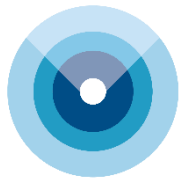
M. Boutet





Choose your DS4H minors for S2 ???

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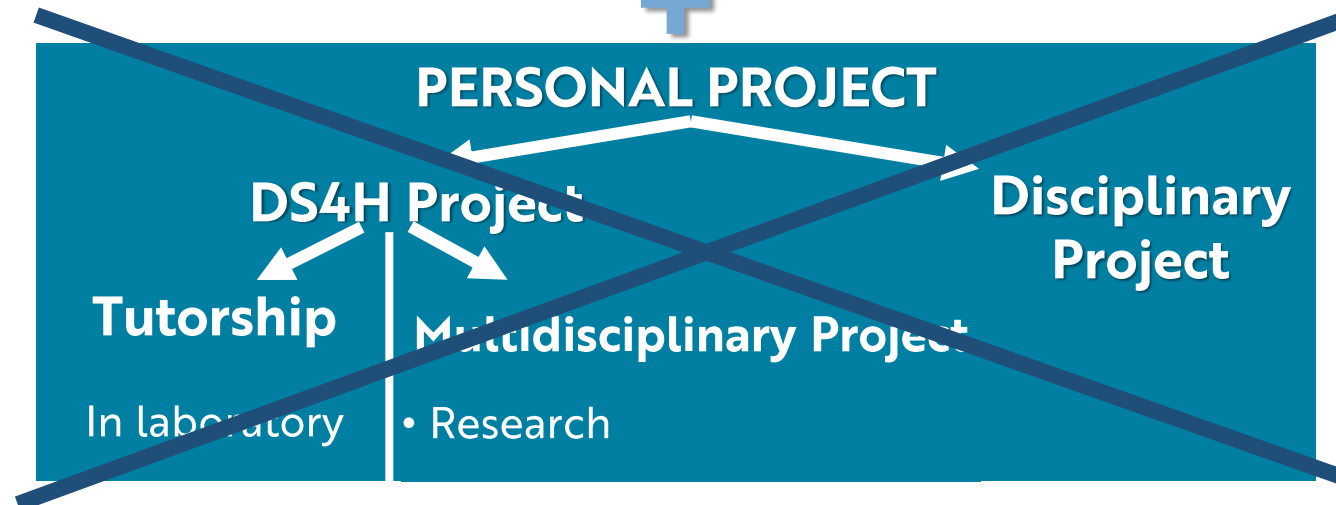
M1 Ergonomy ECTN

P. Therouanne

Initial training



OPTION
Mandatory (S2): 1 DS4H Minor



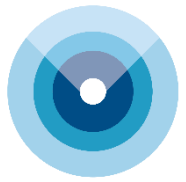


M1 Ergonomy ECTN

P. Therouanne

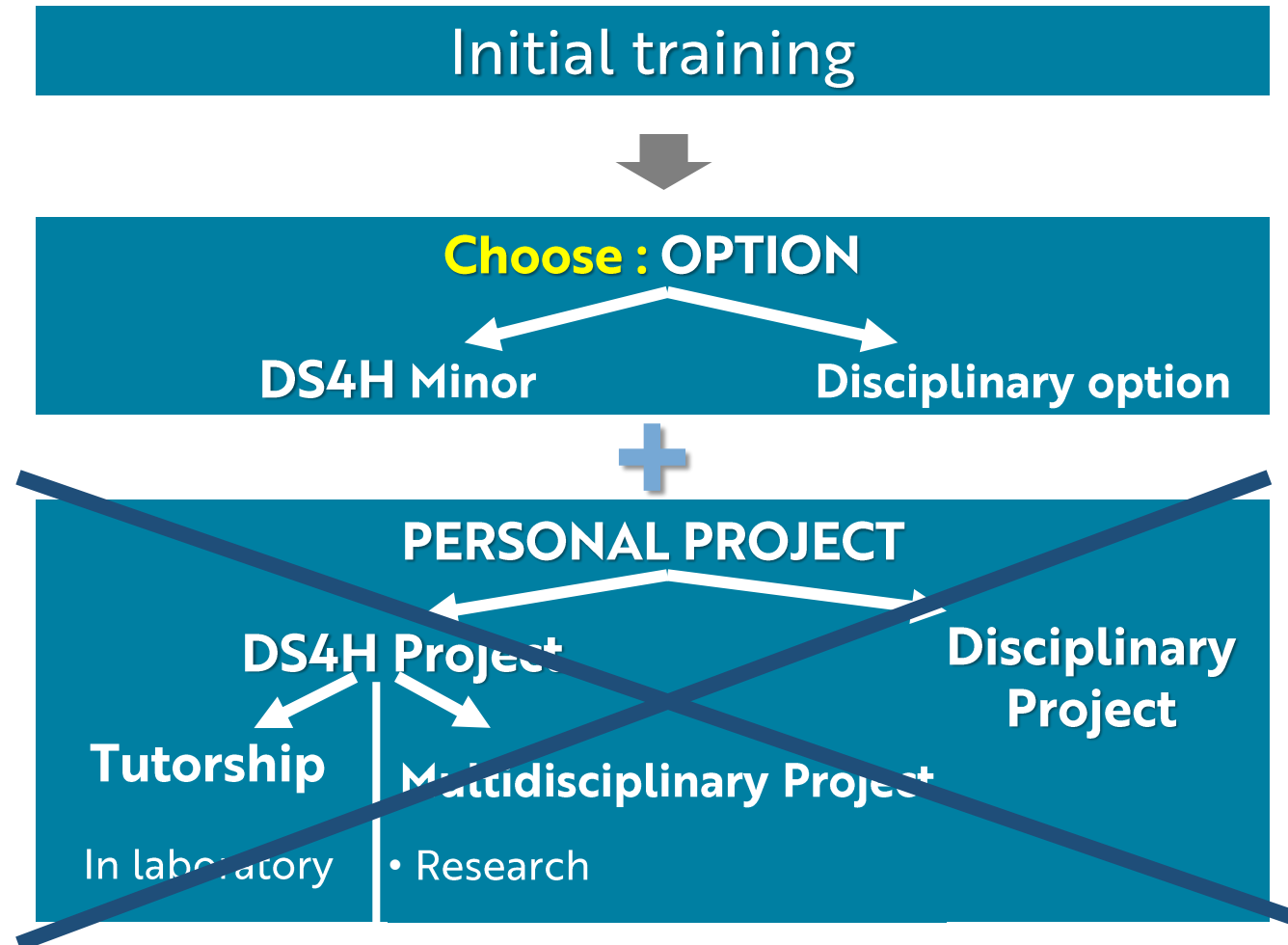
Choose your DS4H minors for S2

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M1 LEA LAI RFI

J.P. Darnis





M1 LEA LAI RFI

J.P. Darnis

Choose your DS4H minors

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- [Anthropology of Technologies](#)
- [Digital Intellectual Property and Law](#)
- [Entrepreneurship](#) CAUTION ! du 8 janvier au 5 mars, vendredis matins, @SKEMA et distanciel
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13h55-14h15

Presentation of DS4H ADAMS Association of Doctoral And Master Students

Marta Ballatore, Luc Gerrits, Jimmy Coste



DIGITAL SYSTEMS
FOR HUMANS
GRADUATE SCHOOL AND RESEARCH



UNIVERSITÉ
CÔTE D'AZUR

PRESENTATION

DS4H ADAMS

Jimmy, Luc, and Marta



DIGITAL SYSTEMS
FOR HUMANS
GRADUATE SCHOOL AND RESEARCH



UNIVERSITÉ
CÔTE D'AZUR



DS4H
ADAMS

Digital
Systems
4 (for)
Humans

Association
Doctoral
And
Master's
Students

**Creation of an association that brings together
masters and doctoral students
from different disciplines.**



- **Give Master's students the opportunity to become familiar with the research world from the outset.**
- **Facilitate multidisciplinary meetings and projects.**

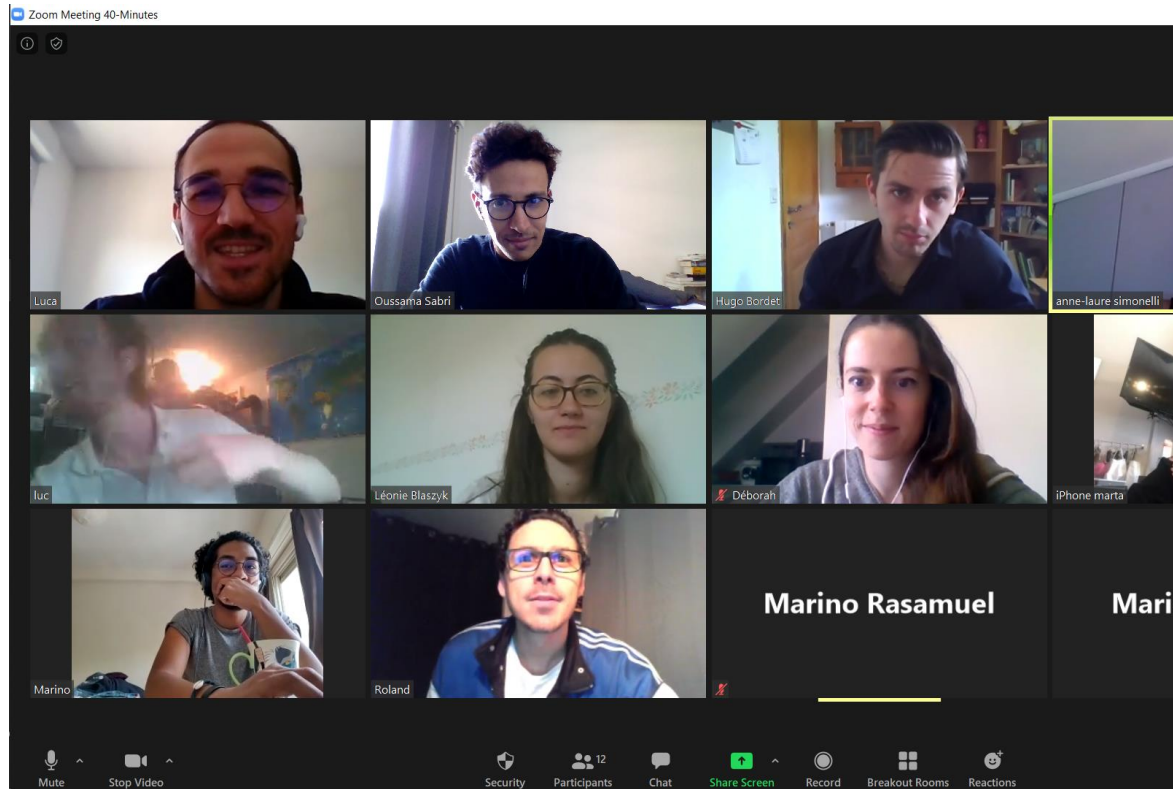
Computer Science + MIAGE + Electronics + Law + Economy

WHY

DS4H ADAMS

What the association
organizes

ACADEMIC EVENTS





UNIFYING EVENTS

What the association organizes

S₁ T₁ A₁ Y₄

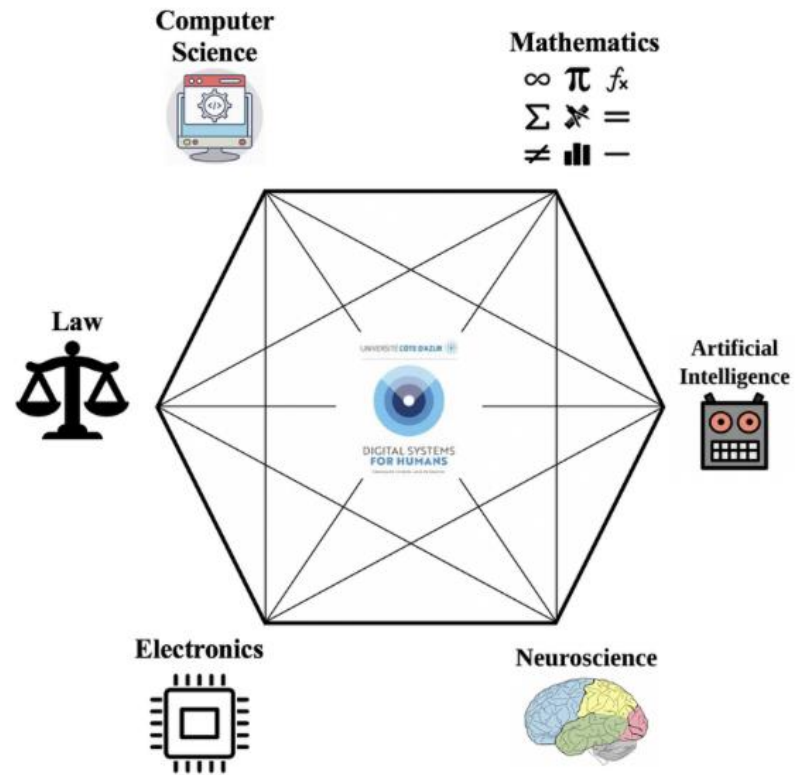
H₄ O₁ M₃ E₁

S₁ T₁ A₁ Y₄

S₁ A₁ F₄ E₁

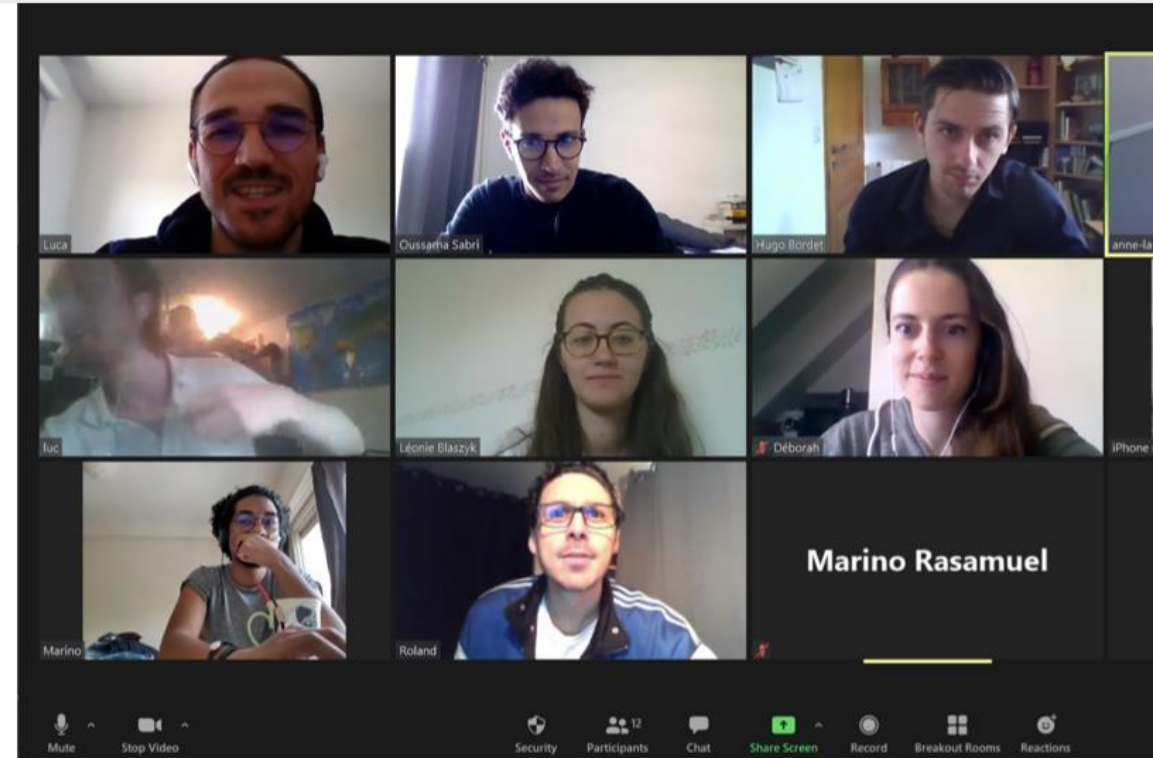
...WITH ADAMS

DS4H ADAMS - PEER LEARNING



WHAT?

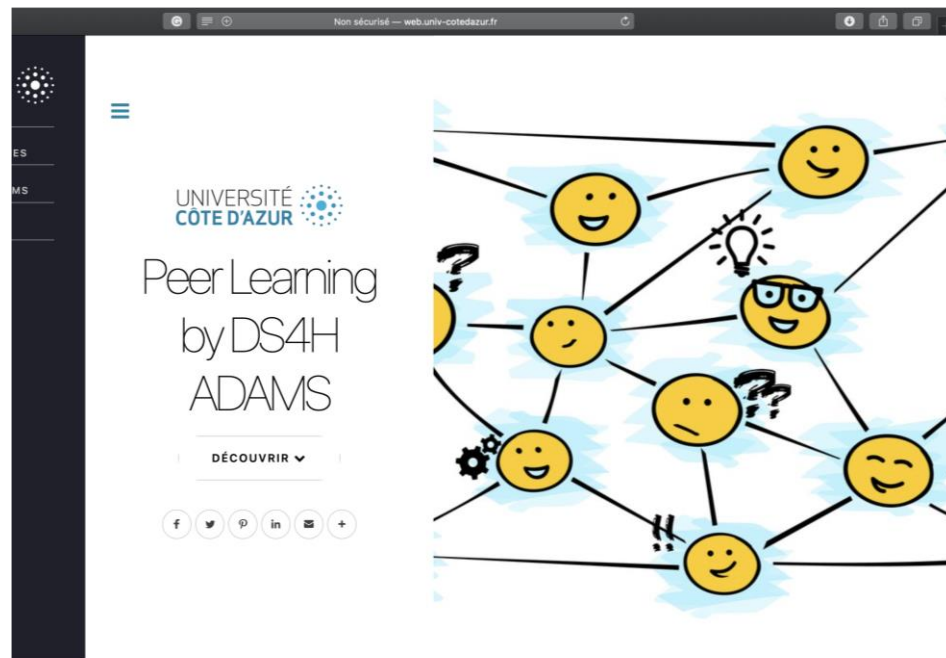
- Student to student help program.
- Experts in domains can help other students with their questions.
 - Share and transmit knowledge.
- Exchange ideas and create collective creativity/intelligence.



SUBSCRIBE FOR THE NEXT SESSION !

WHEN ? 11th DECEMBER 5:30PM

WHERE ? ZOOM

A screenshot of a web browser displaying the registration form on the Université Côte d'Azur website. The form is titled "Registration" and is set against a dark blue background. It contains several input fields and checkboxes. The fields are labeled "Nom", "First Name", "E-mail address", and "Education track". The "Education track" field has "M1 Informatique" entered. Below these fields is a section titled "I have question(s) about (multiple selection possible):" with a list of checkboxes for "Mathematics", "Computer Science", "Electronics", "Digital Strategy", "Transferable skills (written communication, organisation and time management, etc.)", "I am a newcomer / foreign student looking for support", and "Other (please specify below)". At the bottom, there is a section titled "A few details about my question(s):" with a large text area for input.



ADAMS PLAY TOGETHER !

- WHAT ? AGAR - SKRIBBL
- WHEN ? 17th DECEMBER 8:30PM
- FILL THE GOOGLE FORM (ZOOM CONVERSATION)
- INVITE YOUR FRIENDS



Imagine and Create
your student life
with DSLH ADAMS

JOIN US !

ds4h.adams@gmail.com



@DS4H_ADAMS

Thanks
DS4H ADAMS



14h20-15h10

DS4H Minors' presentations

<https://ds4h.univ-cotedazur.eu/education/minors>



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DS4H Minors (3 ECTS)

- On Thursday mornings
- No prerequisite
- From mid-Feb to mid-April
- In English

<https://ds4h.univ-cotedazur.eu/education/minors>



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GRADUATE SCHOOL AND RESEARCH



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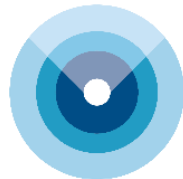
14h20-14h25

Minor

Introduction to Machine Learning

WINTER SCHOOL

Rodrigo.Cabral-Farias@univ-cotedazur.fr



DIGITAL SYSTEMS
FOR HUMANS
GRADUATE SCHOOL AND RESEARCH



UNIVERSITÉ
CÔTE D'AZUR

Introduction to Machine Learning

WINTER SCHOOL

CAUTION !!!

Prerequisites Basic programming in Python

When? From Jan 11th to Jan 15th



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FOR HUMANS
GRADUATE SCHOOL AND RESEARCH

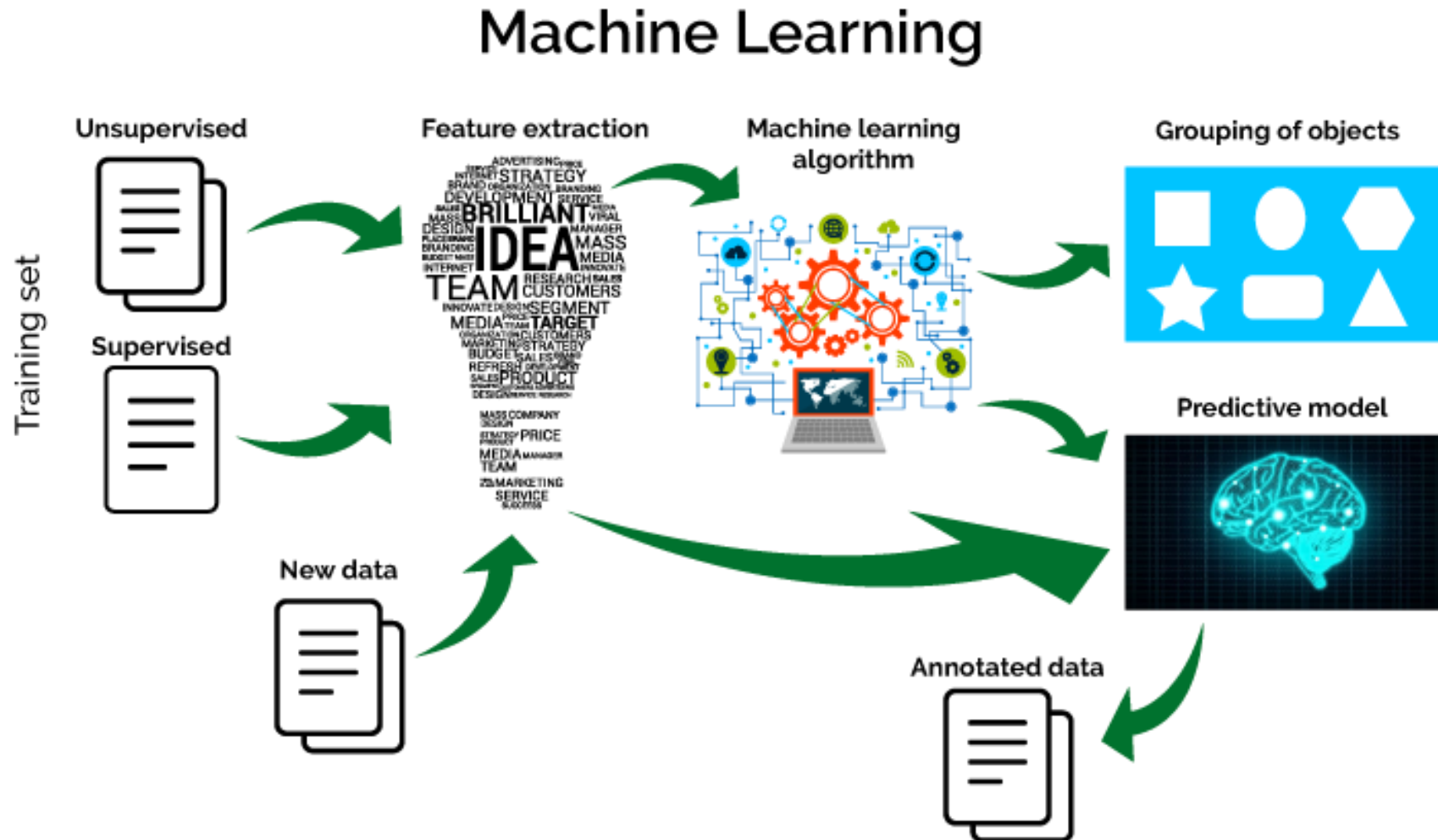


UNIVERSITÉ
CÔTE D'AZUR

What is Machine Learning?

- “Machine Learning systems discover hidden patterns in data, and use these patterns to make predictions about future data.”
- An example
 - I want to predict the tomorrow weather...
 - from yesterday's time and today's time.
 - Two ways to proceed:
 1. I know a set of physical laws, and I build a model that implements these laws
 2. I have enough data (X, y) , X being the time over two days and y the time to predict and I try to build a model M , which solves equation $M(X) = y$
- Machine learning is this second approach.
- Some examples
 - **Face detection:** Identify faces in images (or indicate if a face is present).
 - **Email filtering:** Classify emails into spam and not-spam.
 - **Medical diagnosis:** Diagnose a patient as a sufferer or non-sufferer of some disease.
 - **Weather prediction:** Predict, for instance, whether or not it will rain tomorrow.

What is Machine Learning?



Lecture goal

- Give you the keys to understanding the issues in the field and the tools to deal with simple data sets.
 - Emphasize how an algorithm works and especially its use
 - Not on the programming of the algorithm
 - Place ourselves from the point of view of a user
- Lab in Python 3
 - For the winter school edition, we are trying to simplify the programming part. It is therefore accessible to those with limited programming experience.
 - The prerequisites are described here.
 - http://www.i3s.unice.fr/~riveill/python/auto_eval.html
 - We focus on the use of the different models and the importance of the parameters, more than on the pre-processing of the data.
 - In real life, the essential part is the pre-processing of the data.

Course outline – 1 full week

1. Python → learn by ourself:

- <https://www.learnpython.org/>

2. Regression and Classification model

- 1.2 Linear regression
- 1.3 Logistic regression
- 2.1 Deep learning
- 2.2 Random forest

3. Complementary approach

- 3.1 Clustering
- 3.2 Reduction dimension
- 4.1 Working with text
- 4.2 Recommender systems

4. Investigate by ourself

- Final project

▶ Bibliography:

Statistics and Machine Learning in Python.

Edouard Duchi, Tommy Löfstedt

- ▶ Python language for machine learning
- ▶ Free pdf on Internet

14h25-14h30

Minor

Anthropology of Technologies

Valentina.Tirloni@univ-cotedazur.fr



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Minor Anthropology of Technologies

Aims of this Minor

- The aim of this minor is to develop critical thinking on technological issues.
- We generally consider technology as a very useful tool to improve our life, to solve problems and to enjoy ourselves. Though, is there any negative downside? Has human being lost something of his/her peculiar nature? Is human being enhanced or diminished? How human being has changed with technological progress? Did we lose any particular value during that evolution?

Minor Anthropology of Technologies

4 Axes

- Anthropological inquiry on Technics:
 - New sociability
 - A New Narcissism
 - The impact of Technologies and Communication Tools on human life
- Transhumanism:
 - Enhancement, augmentation, transformation of human body by technological devices
- Philosophical inquiry on Technics^[L]_{SEP}—
 - The Question of Technics: what is the technological paradigm?
 - Technophobia versus Techno-philia
- An ethical approach to Technics:
 - The ethical inversion: Tools and Aims
 - Rights and Freedoms
 - Privacy protection ^[L]_{SEP}

Minor Anthropology of Technologies

Prerequisites

NONE !!!

Minor Anthropology of Technologies

Schedule

- Spring Term:
 - On Thursday from 9 a.m. to noon:
 - February the 18th, the 25th
 - March the 11th, the 18th, the 25th
 - April the 1st, the 8th, the 15th
-
- Campus Carlone or online

Minor Anthropology of Technologies

Exams

- March the 18th : written question
- April the 15th : written question

14h30-14h35

Minor

Digital Intellectual Property and Law

Frederic.Marty@gredeg.cnrs.fr



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The team



AI Transparency Institut



The institutions

The 3 modules



**PERSONAL DATA
PROTECTION**

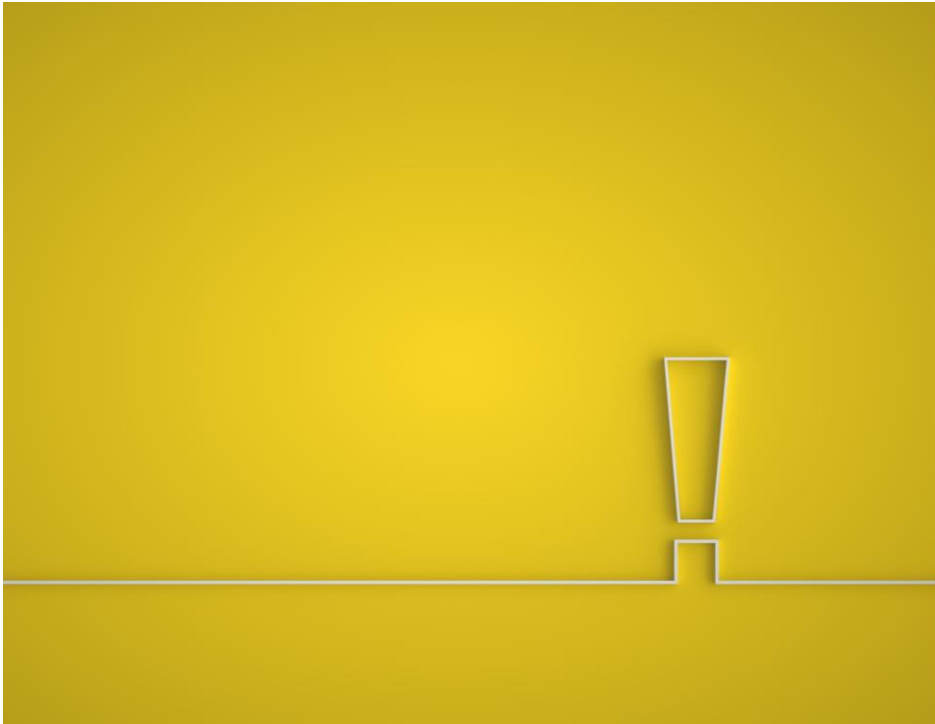


COMPETITION LAW



**INTELLECTUAL PROPERTY
LAW**

Personal data protection



- The collection, processing and exploitation of data is at the heart of the digitalization of commercial and civil exchanges.
- This new reality is at the origin of new rights and obligations, including the entry into force of the General Regulation on Data Protection in Europe (GDPR).
- This part of the course is intended to draw up an inventory of current regulations in this area and its practical consequences for companies.



- The development of IT, with its new developments (AI, Blockchain, smart contract), is at the heart of technological innovation.
- These technologies can be considered as property objects for the benefit of their creators.
- This part of the course is intended to reveal the mechanisms of intellectual property and, more specifically, those dedicated to the protection of digital innovations.

Intellectual Property law (software production law, copyright, open source)

Competition law applied to digital markets

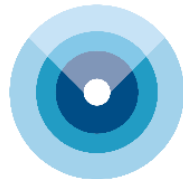
- Understanding the issues related to algorithms-driven economy for contractual, consumer, and competition laws
- Analysing the competition between and within ecosystems
- Mastering the regulations related to competition on online markets

14h35-14h40

Minor

Entrepreneurship

Bruno.Cirillo@skema.edu



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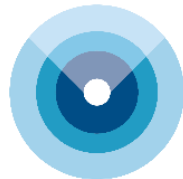


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Minor Entrepreneurship

CAUTION !!!

When? Friday mornings, Jan 8th-March 5th



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IDENTIFYING AND MANAGING BUSINESS OPPORTUNITIES (IMBO)

Bruno Cirillo

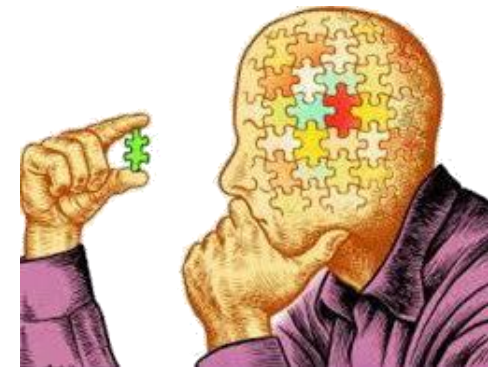
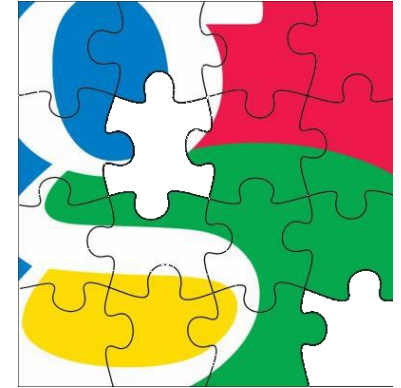
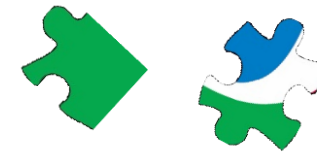
Associate Professor of Strategy and Entrepreneurship
SKEMA Business School
Sophia Antipolis



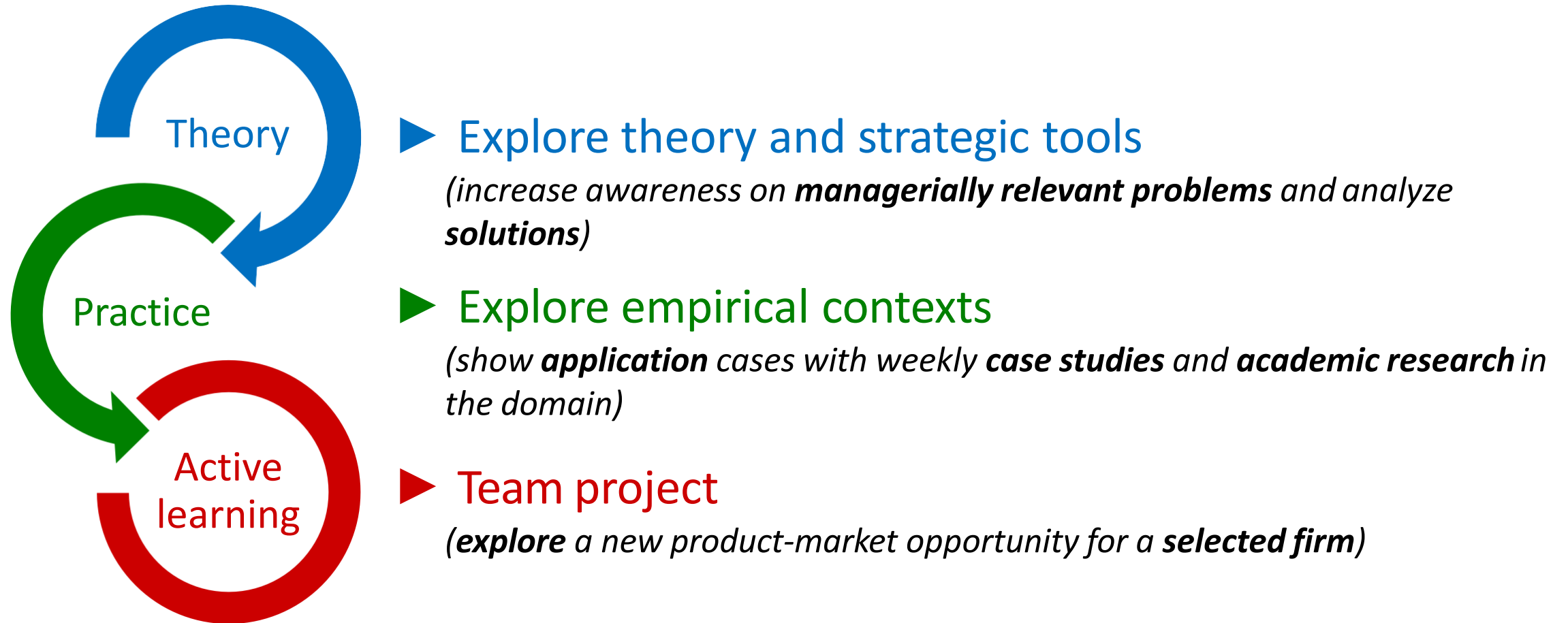
Why this course?

How do firms discover and exploit new product-market opportunities to create value and sustain competitive advantage?

- ▶ Discovering business opportunities requires that individuals not only possess knowledge, but that they also have the cognitive abilities that allow them to value and exploit that knowledge within teams.
- ▶ The course is organized in interactive sessions aimed at helping you explore the cognitive processes to identify and leverage business opportunities within organizations and to develop analytical and critical reasoning skills with a strong emphasis toward practice.
- ▶ To this aim, as an essential part of the course, participants will work on a product-market proposal, which will consist of exploring a new opportunity for a selected technology-based firm.



Pedagogical Approach



Course Outline & Grading



8 WEEKS



3 HOURS
PER WEEK

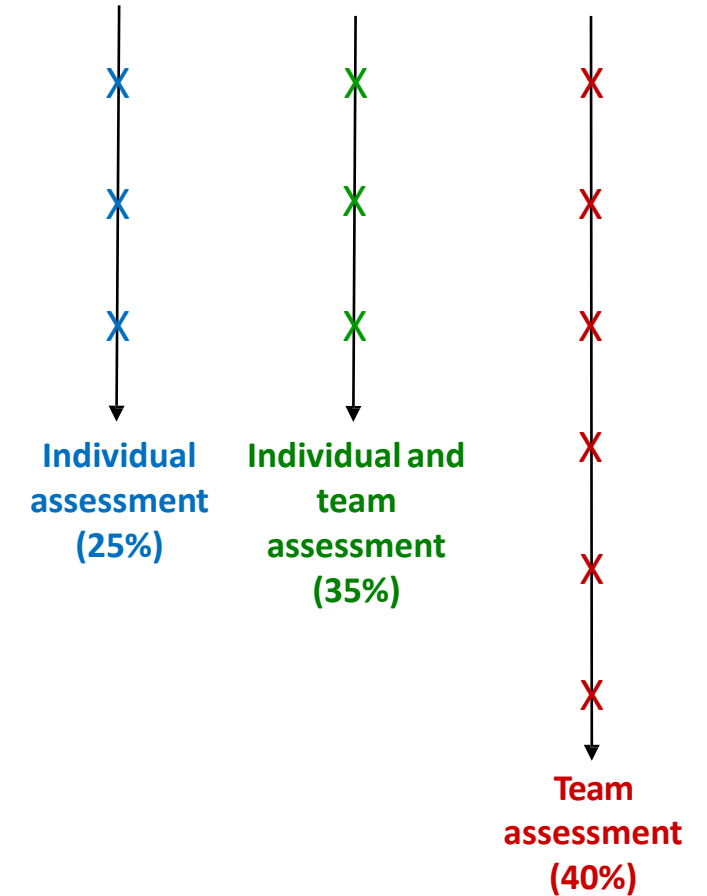
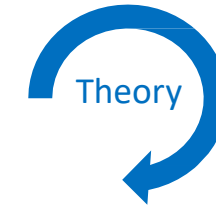


WEEKLY
READINGS



WEEKLY
DEBATES

▶	Week 1	Entrepreneurship theory and practice
▶	Week 2	The individual side of opportunity recognition and exploitation
▶	Week 3	The organizational side of opportunity recognition and exploitation
▶	Week 4	Managing and extracting value from new business opportunities
▶	Week 5	Analysis of the firm's technological advantage and opportunity domain
▶	Week 6	Identification of a new product-market opportunity domain
▶	Week 7	Identification of an opportunity window and corporate venturing proposal
▶	Week 8	Final presentations



Questions?

Bruno Cirillo

Associate Professor of Strategy and Entrepreneurship
SKEMA Business School (Sophia Antipolis)

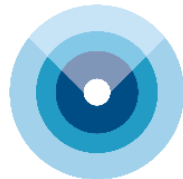
bruno.cirillo@skema.edu

14h40-14h45

Minor

Innovation and Design Thinking

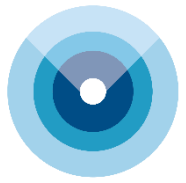
Marina.Videau@univ-cotedazur.fr



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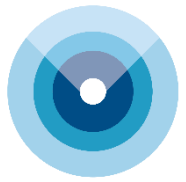


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Invent@UCA spirit & concept

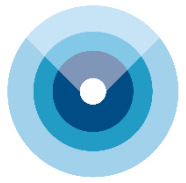
A word cloud illustrating the spirit and concept of Invent@UCA. The words are arranged in a cluster, with the most prominent ones being **Innovation**, **Design Thinking**, **Creativity**, and **Multidisciplinary**. Other visible words include **Team work**, **Self-confidence**, **Coaching**, **Inclusive**, **Challenge**, **Leadership**, **Experience**, **Learner**, **Be bold**, **Change**, **Problem solver**, **Value**, **Sustainable**, **Opportunity**, **Open-minded**, **Creator**, **Projects**, **Diversity**, and **Devolpment**.



Innovation at the heart of Invent@UCA

- Design Thinking
- Effectuation
- Collaborative and iterative process
- Coaching & facilitation





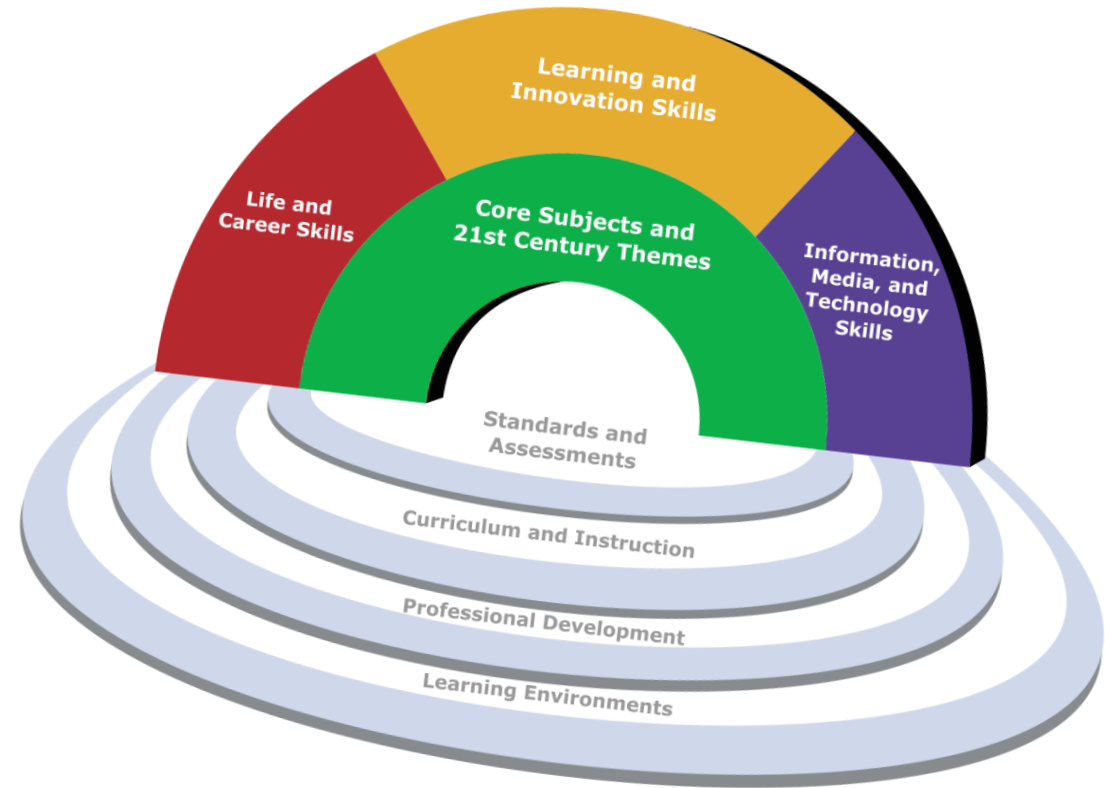
Workshops at Invent@UCA: a customized offer

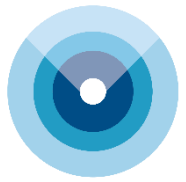
Learning and Innovation Skills

- **Design Thinking**
- **Game Design**

Business

- **Digital Marketing**
- **Business Model**

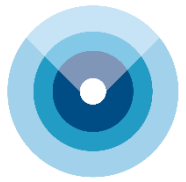




Join us!

Title	Date	Time	Venue	Link
Digital Marketing	Feb, 18 Feb, 25	9:00 am – 1:00 pm	Campus SJA	https://www.weezevent.com/workshop-digital-marketing-spring-2021
Design Thinking	March, 18 March, 25	9:00 am – 1:00 pm	Campus SJA	https://www.weezevent.com/workshop-design-thinking-spring-21
Business Model	April, 1 April, 8	9:00 am – 1:00 pm	Campus SJA	https://www.weezevent.com/workshop-business-model-spring-21
Game Design	April, 15 April, 22	9:00 am – 1:00 pm	Campus SJA	https://www.weezevent.com/workshop-game-design-spring-21

(!) Please select 3 WS. Registration is mandatory ;)



Added value of Invent@UCA

- Development of transversal 21st century skills, project management skills and intercultural management
- Network development, branding and value in the labor market
- A certificate accredited by the Côte d'Azur University
- ECTS credits
- « Life changing. It gave me the self-confidence I needed »

THE 4 C'S OF 21ST CENTURY SKILLS

1. CRITICAL THINKING

Finding Solutions to problems

2. CREATIVITY

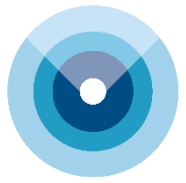
Thinking outside the box

3. COLLABORATION

Working with others

4. COMMUNICATION

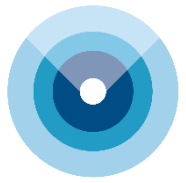
Conveying ideas



A place of creativity, Vernassa space



Saint-Jean-d'Angély Campus (NICE), ISEM Building



Contact

- Our website: <http://univ-cotedazur.fr/fr/innovation/programmes-innovants/invent-uca>
- Do you have any questions? invent@univ-cotedazur.fr
- Follow us 😊

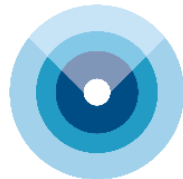


14h45-14h50

Minor

Accessibility and Universal Design

Marco.Winckler@univ-cotedazur.fr



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GRADUATE SCHOOL AND RESEARCH



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Accessibility and universal design of interfaces

Mineure DS4H

Semester 2, 2020-2021

Areas: Computer Science, Ergonomics, Law

Lecturers: Marco Winckler (UCA, I3S)

Pierre Thérouanne (UCA, LAPCOS)

Mai-Anh Ngo (UCA, GREDEG)

Shadi Abou-Zahra (W3C)

Jérôme Dupire (CNAM, Paris)

Coordinators: Marco Winckler, Pierre Thérouanne

Location: campus SophiaTech, campus Saint Jean d'Angély

Why Accessibility?

- “**Accessibility** is ease of use of a product, a service, an environment or a facility, **regardless of individuals' capabilities.**” (Standard ISO 9241, 2008).
- Multiples implications for:
 - Understanding individuals capabilities
 - Design of assistive technology
 - Regulations and laws for making social impact

Assistive technology, a few examples



Why Accessibility and Universal Design?

- People autonomies makes life easier for all!
- We always might have hard time in life
- As the winter... aging is coming...
- Making money
- So we all concerned

Overview of the programme

- Definition of accessibility and universal design; Current views on impairment, disability, and handicap.
- Social issues and simulations of handicap situations (physical limitations, use of a screen reader).
- Visual, auditory, motor and cognitive impairments and the resulting disabilities.
- Assistive technologies for visual interfaces: responsive design; video games accessibility.
- Guidelines for designing computer interfaces ensuring access for all.
- Legal regulatory issues; overview of different cases (e.g., American Section 508); Deep examination of recent European directives.
- Models of accessibility and universal design.
- Recommendations from the World Wide Web Consortium about tools and web content to make the Web accessible to all; Methods for checking web accessibility.

Schedule

Date	Lecturer	Topics
18/02	Marco Winckler	Introduction to accessibility and situationally induced impairments and disabilities
25/02	Mai-Anh Ngo and Pierre Thérouanne	Social issues and simulations of handicap situations
11/03	Pierre Thérouanne	Visual, auditory, motor and cognitive impairments and the resulting disabilities
18/03	Marco Winckler	Overview of assistive technology and Universal Design
25/03	Shadi Abou-Zahra	Accessibility standards and guidelines
1/04	Mai-Anh Ngo	Legal and regulatory issues related to Accessibility.
8/04	Jérôme Dupire	Games accessibility
22/04	Pierre Thérouanne and Marco Winckler	Final assessment

Contact

Mai-Anh Ngo <Mai-Anh.NGO@gredeg.cnrs.fr>

Law

Pierre Therouanne <Pierre.THEROUANNE@univ-cotedazur.fr>

Ergonomics

Marco Winckler <winckler@univ-cotedazur.fr>

Computer Sciences - Human-Computer Interaction

14h50-14h55

Minor

Introduction to Scientific Research and Experiment

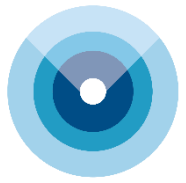
Fabien.Ferrero@univ-cotedazur.fr



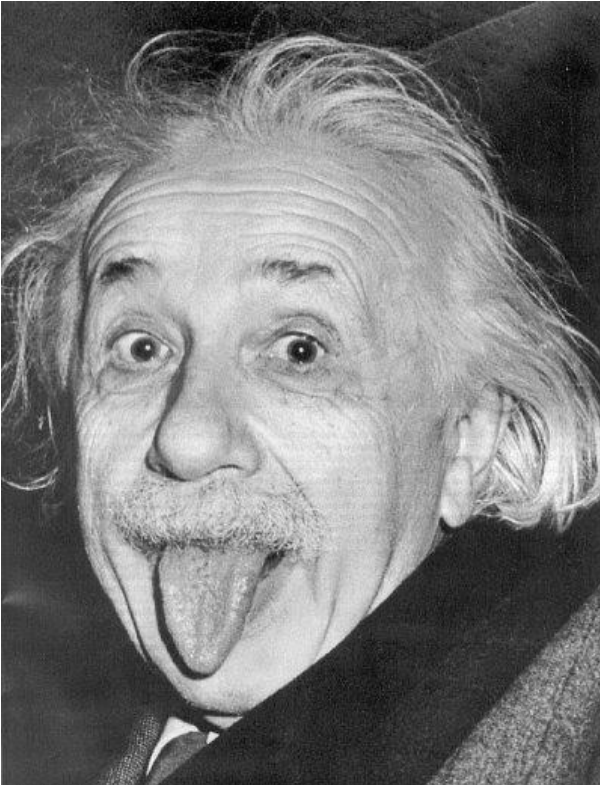
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Introduction to scientific Research

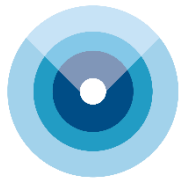


Being born
a genius...
... or not,

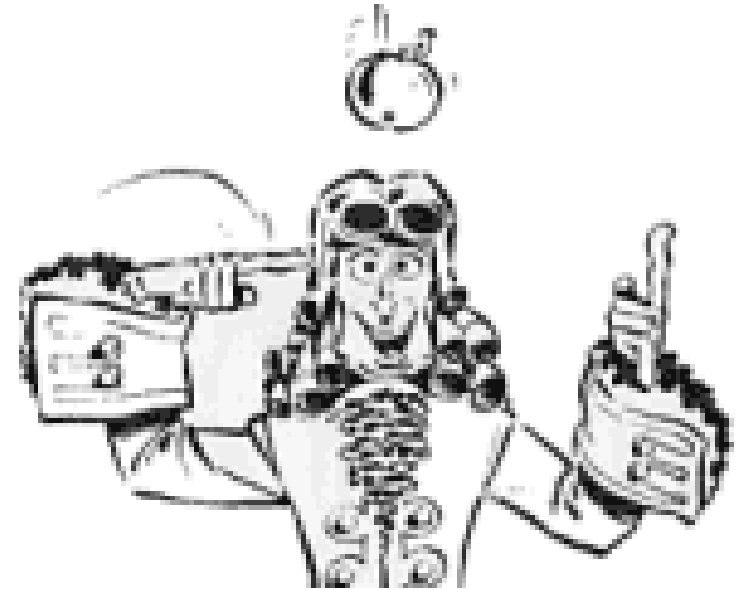
under all
circumstances,



scientific methodology will help you think, understand,
deduce, anticipate... in a remarkably efficient manner.

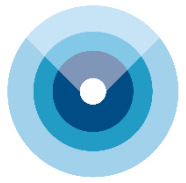


Introduction to scientific Research



Scientist is a profession, but also a way to be

Science has rules, practices, methodology... *Work the scientist out of you*



Introduction to scientific Research

Better than a Woody Allen film...

... Everything you always wanted to know about science (but were afraid to ask)





Introduction to Scientific Research

G. Bernot, F. Ferrero, E. Picholle, A. Postoaca, S. Touati, M. Winckler, AL Simonelli

- Epistemology, "what is science?"
- A job of passion
- Bibliographical research
- Methods for conducting research
- PhD and its career opportunities
- Conducting experiments
- Scientific writing
- Scientific collaborations
- Digital deontology

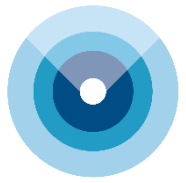


Intro. to Scientific Research

-

Schedule

Date	Time slot	Room	Lecturer	Course title
Feb 18	9h00-10h30		Éric Picholle	Epistemology
Feb 18	10h45-12h15		Anne-Laure Simonelli	Research: a vocation
Feb 25	9h00-10h30		Marco Winckler	Method for research/bibliography
Feb 25	10h45-12h15		Sid Touati	Bibliography
Mar 11	9h00-12h15		Fabien Ferrero	Scientific Writing
Mar 18	9h00-12h15		Sid Touati	Lab: experiments and statistics
Mar 25	9h00-12h15		Claire Migliaccio	Lab: antenna measurements
Apr 1	9h00-10h30		Anana Postoaca	Deontology
Apr 1	10h45-12h15		Anne-Laure Simonelli	PhD and opportunities
Apr 8	9h00-10h30		Fabien Ferrero	Scientific collaborations
Apr 8	10h45-12h15		Gilles Bernot	TD article analysis
Apr 15	9h00-12h15			Labs summarized by students - Evaluation
Apr 22				Article Analysis - Evaluation



Introduction to scientific Research

Prerequisites:

None

Capacity:

24 students

Evaluation:

- Bibliographic report
- Oral presentation of the hands on workshop

14h55-15h00

Minor

Tools 2 Communicate

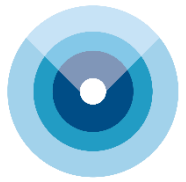
Anne-Laure.Simonelli@univ-cotedazur.fr



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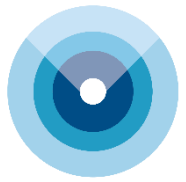
Tools 2 Communicate

To become aware of the importance of becoming an effective communicator.

To identify the audience, the main purpose of the communication and adapt the communication adequately.

You'll learn:

- **how to communicate specifically to enter **the work force****
- **how to communicate effectively to a **wider audience****



Tools 2 Communicate

How to communicate specifically to enter the **work force**

How to write /
improve your CV...



... a cover letter / an email

with Sylvain Lareyre (Employment Branding Consultant)

LinkedIn Profile



How to set up and edit my LinkedIn profile + **personal branding**

Professional photo shoot
offered at the end of the session



Internships/Apprenticeship/**job search strategies:**
spontaneous application, job boards,
cooptation / networking, being hunt...

How to **prepare a job interview**



Prise de parole en public

The **job market**

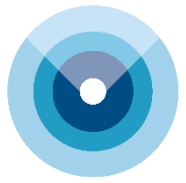
Parallel sessions:

- IT job market
- Strategy Digital
- Electronic job market
- Law



How to communicate effectively
to a **wider audience**

- Short video production
- Oral communication



Tools 2 Communicate

Prerequisites:

To already have a LinkedIn Profile created and a written Resume/CV

Capacity:

20 students

Evaluation:

- Engagement throughout the session (10 %)
- Quality of revised CV (30%)
- LinkedIn Profile (30%)
- Short video production (30%)

15h00-15h05

Minor

Programming Multiplayer Video Games on the Web Platform / Advanced JavaScript

Michel.Buffa@univ-cotedazur.fr



DIGITAL SYSTEMS
FOR HUMANS
GRADUATE SCHOOL AND RESEARCH



UNIVERSITÉ
CÔTE D'AZUR

Programming Multiplayer Video Games on the Web Platform / Advanced JavaScript

CAUTION !!!

Prerequisites

JavaScript knowledge

HTML/CSS knowledge

Ideally : CS student in M1 or M2



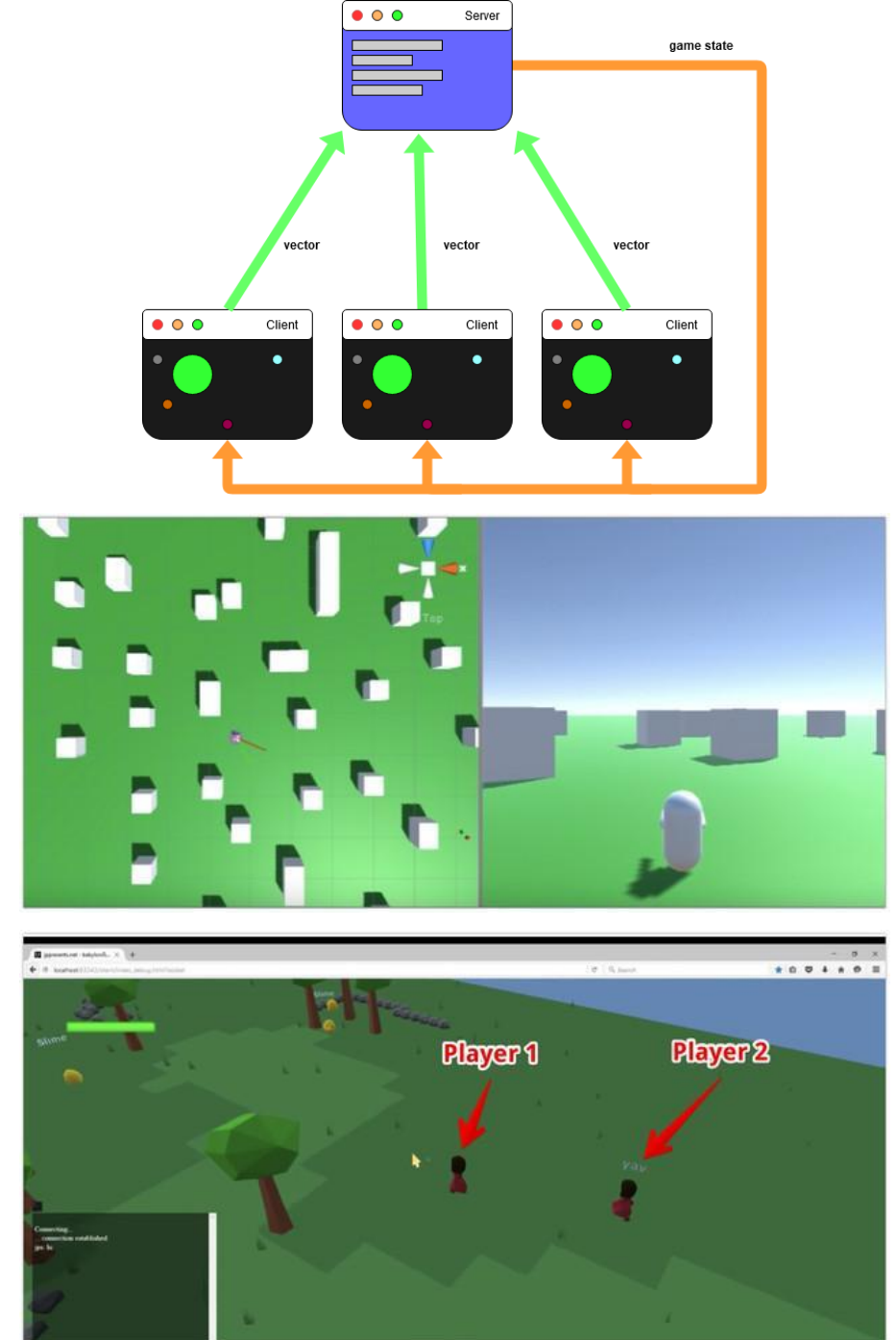
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Content of this course

1. **Introduction to drawing and animation at 60 fps 2D in HTML5 canvas.** In parallel: modern Object Oriented Programming in JavaScript.
2. **Introduction to 3D programming by presenting all the basic concepts** illustrated using the [BabylonJS](#) 3D library.
3. **Use of algorithms to give intelligence to entities controlled by the computer** (steering behaviors, etc.).
4. **Implementation of a NodeJS server for a naive implementation of a multiplayer game.** In parallel: introduction to asynchronous programming in JavaScript.
5. **Highlighting classic latency problems between client and server.** Introduction to the notions of prediction and correction (latency compensation). [DEMO](#)



Prerequisites

Having a background in computer programming (i.e knowing Object Oriented Programming)

Know the basics of JavaScript (even if you're not mastering the language)

Mainly targeted for people from CS Masters (MIAGE, Computer Science)

But opened to other DS4H masters (electronics, etc.) if students have programming skills and for example, followed the Web Technologies Minor previously.

Evaluation

During the course, there will be three Assignements :

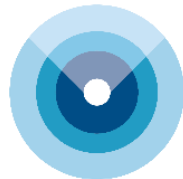
1. First and second one will be small exercises to complete before the next session (20%) (individual)
2. Another one will be the final project (60%), done by a group of 1 or 2 students
3. For the moment, the course is scheduled to be in classrooms, but could switch to remote if needed (COVID)

15h05-15h10

Minor

Innovation and Creativity

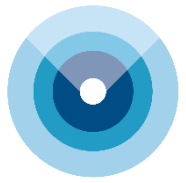
Cindy.De-Smet@univ-cotedazur.fr



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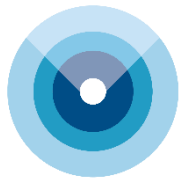
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Minor Innovation and Creativity



[> Video](#)

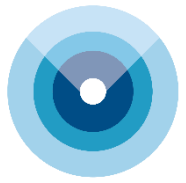


Minor Innovation and Creativity

Schedule

Classes accessible online + Online tutorial sessions

- 5 online courses
- Individual and collective guidance and updates via mail.
- 2 tutoring sessions (recorded allowing later playback as many times as you want):
 - Feb, 25th, 18h30-20h00 (on Zoom)
 - March, 25th, 18h30-20h00 (on Zoom)
- Evaluation
 - April, 16th : Evaluation task 1 + task 2
 - Between March, 22nd and April, 16th : Evaluation task 3



Minor Innovation and Creativity

Prerequisites:

None

Capacity:

30 students

Evaluation:

Assessment of the course is based on three activities.

The average of the 3 scores (Total = 20) is used as the final score.

- 0 to 20 points. Activity #2.
- 0 to 20 points. Activity #3.
- 0 to 20 points. Activity #4.

15h50-16h20

DS4H Projects' presentations



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DS4H Projects (6 ECTS)

- One day / week for a minimum of 8 weeks
- + one full week immersion

<http://erebe-vm6.i3s.unice.fr:8080/ds4h-projects>

Deadline: Dec, 13th

<http://erebe-vm6.i3s.unice.fr:8080/ds4h-projects>

Deadline: Dec, 13th

Choose
your Project

If Tutorship:
Choose a project
in accordance with
the domain

Type	Domain(s)	Advisor	Title
MultiDisc.	Computer Science, Other	Sid Touati (I3S)	Etude des performances et parallélisation d'une application de simulation biologique: la plateforme logicielle MACULAR
Tutorship	Computer Science	Sid Touati (I3S)	Optimisation des performances d'un programme par compilation optimisante
Tutorship	Computer Science	Margarida Romero (LINE)	Chaînes de Markov dans l'analyse d'une tâche de résolution de problèmes
Tutorship	Computer Science	Hui-Yin Wu (Inria)	Un voyage dans la conception des journaux : Comment quantifier l'esthétique ?
MultiDisc.	Digital Management and Economy, Computer Science	Jean-Sébastien Vayre (GREDEG)	DESIGN OF A TOOL FOR AUTOMATIC ACQUISITION, PROCESSING AND VISUALIZING THE NETWORK OF PRIVATE AND PUBLIC ACTORS INVOLVED IN THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES
Tutorship	Computer Science	Emanuele Natale (Inria)	Null Processes for Computational Neuroscience
Tutorship	Computer Science	Frederic Cazals (Inria)	Learning energy of functionals for molecular systems
Tutorship	Computer Science	Frederic Cazals (Inria)	Trekking in high dimensional landscapes
Tutorship	Electronics	Leonardo Lizzi (LEAT)	Design of a pattern reconfigurable antenna for adaptive and energy efficient IoT devices
Tutorship	Electronics	Daniel Gaffé (LEAT)	Symbolic handling of numerical constraints by Linear Decision Diagrams (LDD)
Tutorship	Computer Science	Luigi Liquori (Inria)	Simulating Resource discovery in omnet++ discrete event simulator
Tutorship	Computer Science	Luc Hogue (I3S)	Conception and implementation of a distributed platform for the experimentation of distributed computing in the IOT
Tutorship	Computer Science	Luc Hogue (I3S)	Conception and implementation of a distributed platform for the experimentation of distributed computing in the IOT - interoperability using REST
MultiDisc.	Computer Science, Other	Luc Hogue (I3S)	Web dev/ergonomics: Conception and implementation of a distributed platform for the experimentation of distributed computing in the IOT - Web monitoring interface
Tutorship	Electronics	Leonardo Lizzi (LEAT)	Estimation of small antenna performance using machine learning
MultiDisc.	Computer Science, Other	Sid Touati (I3S)	Etude des performances et parallélisation d'une application de simulation biologique: la plateforme logicielle MACULAR
MultiDisc.	Computer Science, Other	Sid Touati (I3S)	Analyse et optimisation des performances d'une application de calculs scientifiques: simulation de fusion nucléaire au sein du projet ITER de Cadarache
Tutorship	Computer Science	Diane Lingrand (I3S)	Learning-based gestural interaction for accessible music composition with Variational Auto-Encoders and style-transfer
MultiDisc.	Digital Management and Economy, Electronics	Marta Ballatore (GREDEG)	Implementation and acceptability by ecosystem actors of a Blockchain Technology and Smart-Contracts application layer sending sensor measurement data in car accident cases
Tutorship	Computer Science	Frédéric Mallet (Inria)	Analyse Efficace d'exigences temporelles paramétriques pour le véhicule autonome
MultiDisc.	Computer Science, Other	Frédéric Mallet (Inria)	Voiture autonome - modèle formel du comportement humain

STEP 1: from Dec 7th

> Select your projects' choices <http://erebe-vm6.i3s.unice.fr:8080/ds4h-projects/ProjectsSelection.html>

AND in the mean time TAKE CONTACT and MEET the tutor of the wished projects
(!!!AL SIMONELLI must be in copy!!!)

> The tutor accepts your candidature & you accept the Project? Inform AL SIMONELLI asap!

> Wait for Master responsible agreement. He/She agrees?

STEP 2: has to be completed before mid January!!!

> Proceed to your Tutoring agreement (platform: AlumnForce)

> Send to ALS the agreed schedule

(to be defined between student and tutor) for the Spring semester:

one week immersion (week 9)

+ one day / week during a minimum of 8 weeks (Fridays from mid Feb until mid April).

Conception and implementation of a distributed platform for the experimentation of distributed computing in the IOT

Luc Hogie

Cnrs/Inria/Université Côte d'Azur

December 6, 2020

Conception and implementation of a distributed platform for the experimentation of distributed computing in the IOT

JThings defines a P2P network of communicating components. It will be used at Université Côte d'Azur/Inria/I3S as soon as it is ready, to:

- investigate decentralized algorithms for IOT
- provides distributed DB for time-based scientific data

The main idea behind JThings is to be able to:

- deploy used-defined components on computers
- expose a complete yet simple communication API
- efficiently execute parallel/distributed code

#1

The student will have to:

- implement the following typical use cases
 - distributed/parallel computation on Inria cluster
 - IOT network simulation
- identify flaws and limitations
- propose/implement solutions and related unit tests

#2 — interoperability using REST

The student will have to:

- understand the architecture of Things' REST interface
- understand the requirements of Grafana's REST interface
- adapt JThings to be able to connect both
- defining Grafana workbenches to monitor JThings

#3 — Web monitoring interface

The student will have to:

- make a State of the Art of Web libraries for interactive data visualization
- identify the changes in JThings in order to enable interoperability (that I will implement)
- implement a Web-based demonstrator (most probably in JavaScript)

Working conditions

Depending of the sanitary situation:

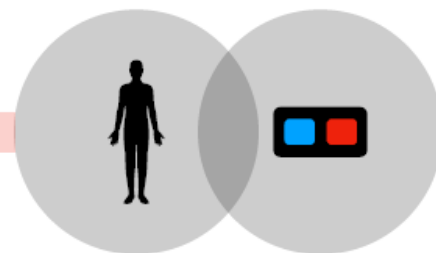
on site the student would have an office at Inria

teleworking we would maintain a permanent contact using a collaborative solution (now using Slack with a student and it's just fine).

A voyage on journal design: how to quantify aesthetics?

Supervisors:

Dr. Hui-Yin Wu and Dr. Pierre Kornprobst, Biovision project-team, Inria Sophia-Antipolis, France



Low-vision

Visual impairments
without relief from
corrective lens nor medical procedures

Complex document segmentation

Multilayered newspaper segmentation:
**image processing &
convolutional neural networks**

VR news reading design

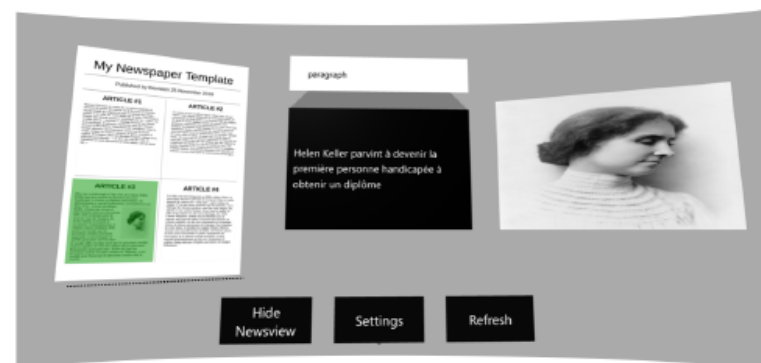
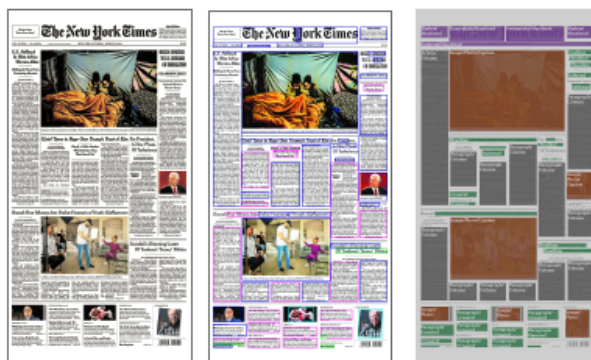
Arrange text and image content
in a **wide 360° visual space** with
personalised visual parameters



Original

Segmented

Classified

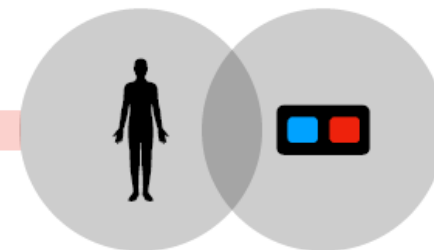


H.-Y. Wu, A. Calabrèse, P. Kornprobst, 2019.10, "Towards accessible news reading design in virtual reality for low vision". [Research Report] RR-9298, UCA, Inria.(hal-02321739) (abstract accepted to Vision 2020, full paper under review for Springer *Multimedia Tools and Applications*)

A voyage on journal design: how to quantify aesthetics?

Supervisors:

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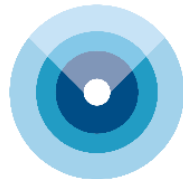
- Visual elements: paragraphs, headings, images, captions...etc.
- Columns
- Text size
- Arrangement of images and text
- Spacing, separators
- Visual balance, symmetry
- ...

PROJECT GOALS

1. Explore **aesthetic properties** of journals [GG2017],
2. Study how such properties can be **computationally formalised** [K2012,NTB2003], and
3. Implement an **evaluation of these measures** on pre-segmented newspapers [WCK2020].

17h05-17h30

Hands on Session: How to subscribe? Questions



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<http://erebe-vm6.i3s.unice.fr:8080/ds4h-projects>
Deadline: Dec, 13th



<http://ds4h.univ-cotedazur.eu>



Anne-Laure.Simonelli@univ-cotedazur.fr
ds4h-contact@univ-cotedazur.fr

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