09h45-10h55

DS4H Minors' presentations

Anne-Laure Simonelli

https://ds4h.univ-cotedazur.eu/minors

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DS4H Minors in a nutshell

- 3 ECTS
- On Thursday mornings
- No pre requisite *
- From mid-Feb to mid-April
- In English

https://ds4h.univ-cotedazur.eu/minors

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09h45–09h50

Accessibility and Universal Design

https://ds4h.univ-cotedazur.eu/education/minor-accessibility-and-universal-design

Speaker: Marco Winckler
Marco.WINCKLER@univ-cotedazur.fr

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Semester 2 - 2021-2022

MINOR

Accessibility and Universal Design

Marco Winckler

Areas: Computer Science, Ergonomics, Law

Lecturers: Marco Winckler (UCA, I3S)

Pierre Thérouanne (UCA, LAPCOS)

Mai-Anh Ngo (UCA, GREDEG)

Jérôme Dupire (CNAM, Paris)

Coordinators: Marco Winckler, Pierre Thérouanne

Location: campus SophiaTech, campus Saint Jean d'Angély, zoom

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MINOR

Accessibility and Universal Design

Marco Winckler

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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

Situationally induced impairments and disabilities (SIID)

"Both the environment in which individuals are working and their current [activities] … can contribute to the existence of impairments, disabilities, and handicaps."

Andrew Sears &
Mark Young (2003)

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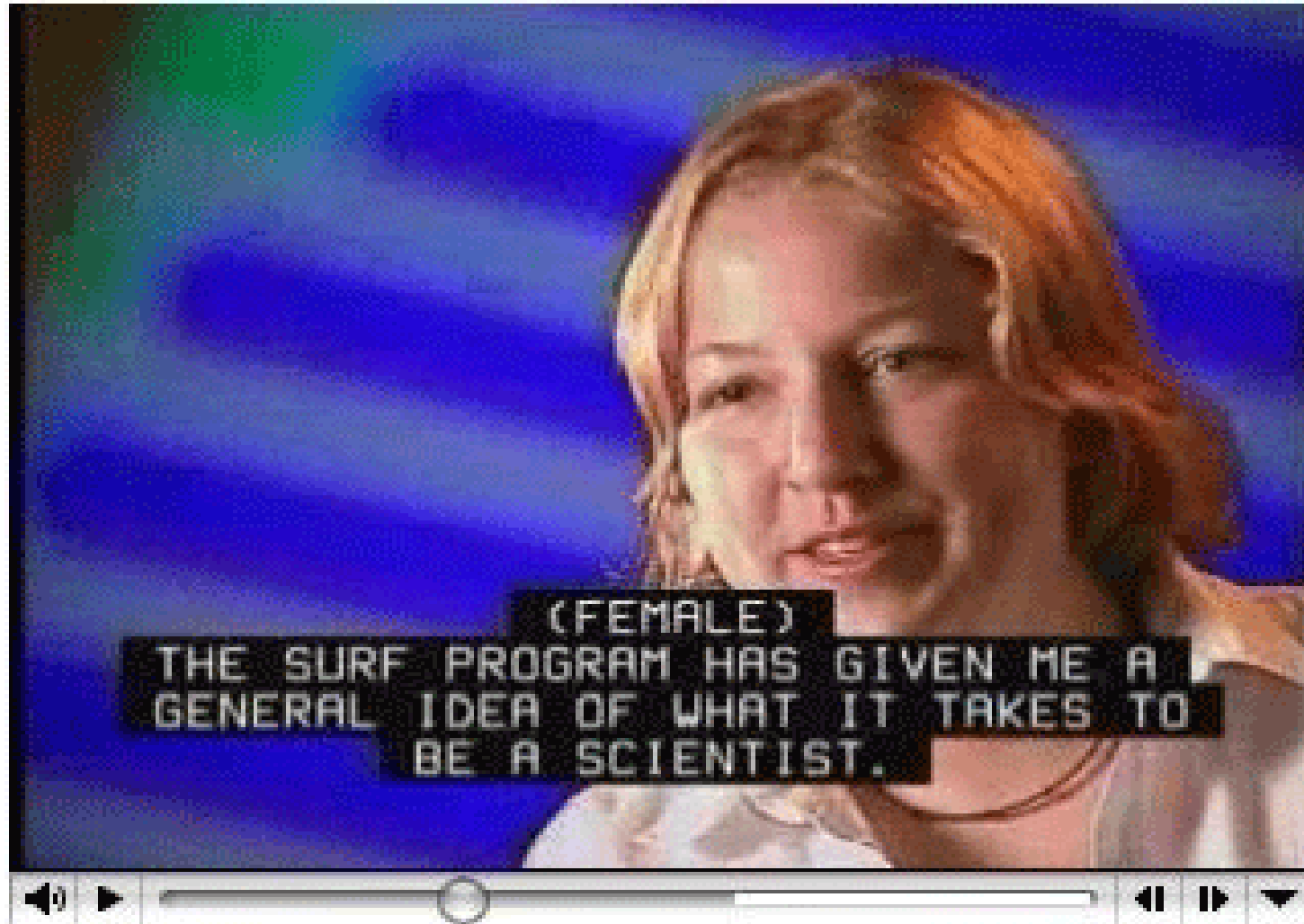CÔTE D'AZUR

When was the last time you...

Use curb cut?

Went through an automatic door?

Read closed-captioning?

Assistive technology, a few examples

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Accessibility and Universal Design

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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

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Accessibility and Universal Design

Marco Winckler

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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.

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Schedule Spring 2022

Date	Lecturer	Topics
Feb 24	Marco Winckler	Introduction to accessibility and situationally induced impairments and disabilities
March 3	Jérôme Dupire	Assistive technologies and video games accessibility
March 10	Mai-Anh Ngo and Pierre Thérouanne	Social issues and simulations of handicap situations
March 17	Mai-Anh NGO	Legal issues
March 24	Marco Winckler	Models of accessibility and universal design
March 31	Pierre Thérouanne	Visual, auditory, motor and cognitive impairments and resulting needs
April 7	Pierre Thérouanne	Making the Web accessible for all
April 14	Pierre Thérouanne, Mai-Anh Ngo, and Marco Winckler	Oral assessment

Sophia Tech Les Lucioles	videoconference	Saint Jean d'Angély

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Accessibility and Universal Design

Marco Winckler

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Contacts

Law

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

Ergonomics

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

Computer Sciences - Human-Computer Interaction

Marco Winckler <Marco.Winckler@univ-cotedazur.fr>

MINOR

Artificial Intelligence and Video Games

David-Olivier Saban

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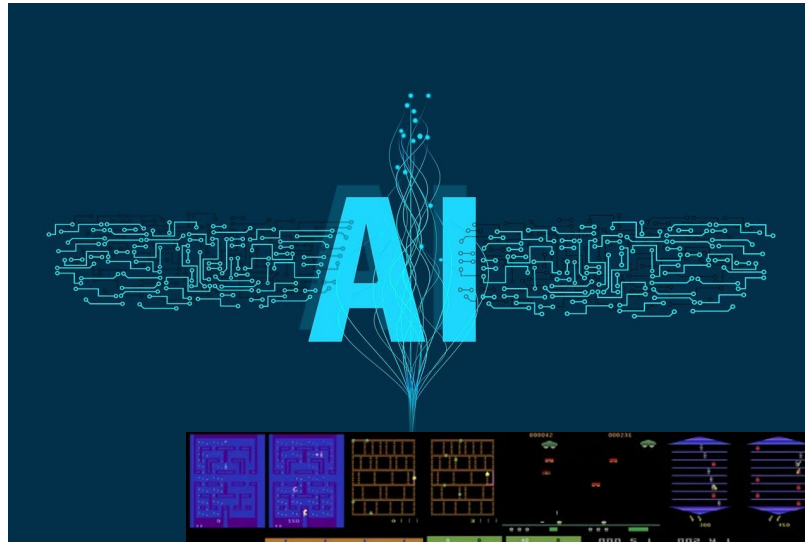
Objectifs

- Introduire la notion d'intelligence artificielle

- Montrer limites

- Dédramatiser l'intelligence artificielle de manière générale

Comment l'atteindre

Nous nous appliquerons à rattacher les notions que nous verrons au jeu vidéo et nous tenterons à plusieurs reprises de nous projeter a l'intérieur des IA des jeux vidéos qui vous intéressent.

Pour ce faire, vous étudierez dans ce cours

- Algorithmes

- Mathématiques et modélisation

- TPs, TDs

- Ressources sur MIRO

Ce cours n'est pas

- un cours approfondi en intelligence artificielle

- ni de mathématiques appliquées

Conclusion

Ce cours vous introduira les concepts le plus simplement possible et vous donnera les clés pour mieux comprendre des documents plus compliqués ou vous donnera envie d'aller plus loin dans d'autres cours.

09h55-10h00

Deeptech Entrepreneurship

https://ds4h.univ-cotedazur.eu/education/minor-deeptech-entrepreneurship-1

Speaker: Olga Pabion
olga.pabion@univ-cotedazur.fr

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Minor Deetech Entrepreneurship Objectives

Strengthening the links between research and entrepreneurship

Understand the challenges of disruptive innovations

Know how to communicate and finance your project

Raising awareness and training doctoral students in entrepreneurship

Knowing how to discern the economic potential of a scientific asset

Mastering the basics and the challenges of IP

Understanding the challenges of a territory in the development of its deeptech ecosystem

MINOR

Deeptech Entrepreneurship

Nicolas BRUNO

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Program

| Day	Session	Speaker	Hours
24/02	Deeptech Entrepreneurship Overview	Florent Genoux	9AM – 12PM
03/03	Intellectual Property Strategy	Michel Callois	9AM – 12PM
10/03	Identify the right market for your Innovation	Guillene Ribiere	9AM – 12PM
17/03	Developing relevant and innovative business model	Galena Pisoni	9AM – 12PM
24/03	Project Management for disruptive innovation	Melissa Michelet	11AM – 2PM
31/03	Production Challenges	Christophe Imbert	9AM – 12PM
07/04	Financing your Startup	Nicolas Riche	9AM – 12PM
14/04	Creating a Pitch	Sophie Monteil	9AM – 12PM

Minor Deetech Entrepreneurship More Details

Evaluation

Attendance + final quiz
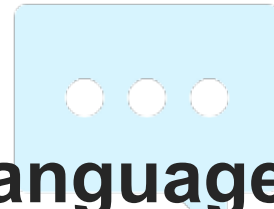
Language

English
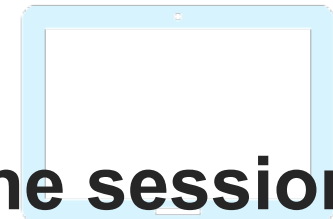
Online session

by Zoom (replay available)

10h00-10h05

Digital Intellectual Property and Law

https://ds4h.univ-cotedazur.eu/education/minor-digital-ip-and-law

Speaker: Anne-Laure Simonelli

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Brad Spitz   Jean-Sylvestre Bergé   Frédéric Mathy   Eva Thelisson

The team

The institutions

Personal data protection

Brad Spitz
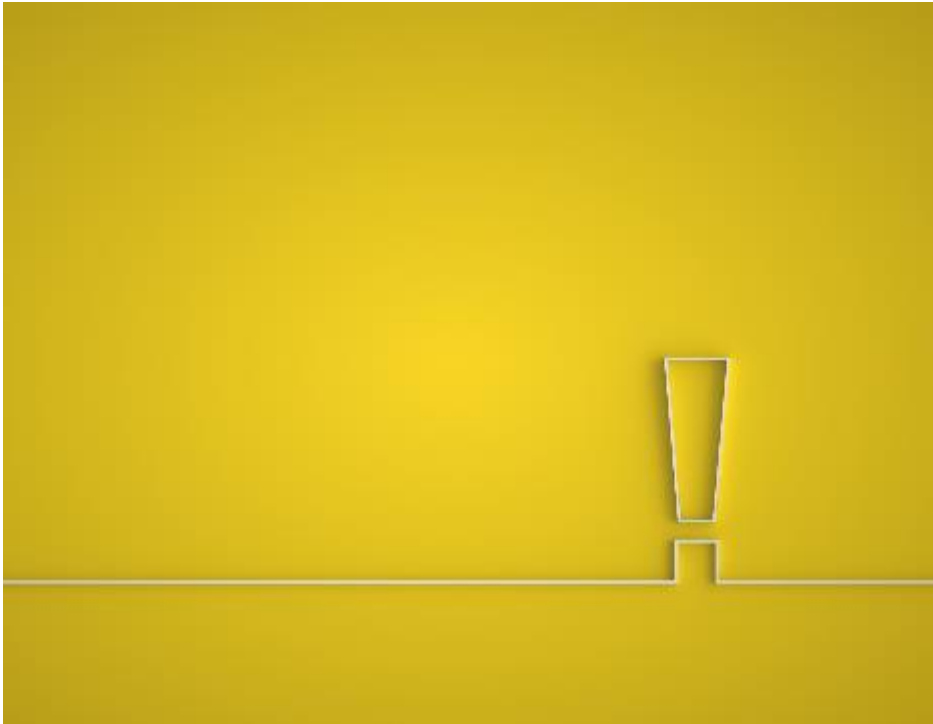
- The collection, processing and exploitation of data is at the heart of the digitalization of commercial and civil exchanges.

- 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.

Competition law applied to digital markets
Frédéric Marty

- 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

- 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)

Eva Thelisson

By Jean-Sylvestre BERGÉ
Law Professor
WWW.UNIVERSITATES.EU

A LAWYER IS PUZZLED

WE NEED NEW LAWS TO REGULATE THE WORLD'S NEWEST FRONTIER: THE DATASPHERE

THE SITUATION

The development and rise of information technologies

The digitalization of all (natural and human) activities

The quantity of data has increased exponentially

A HYPOTHESIS (I)

Data gave rise to a new space, the "datasphere"

Sort of image of the physical world, with traces of activities including our position at any given moment, our exchanges, the temperature of our homes, financial movements, trading of goods or road traffic, etc.

A HYPOTHESIS (II)

Flows of data beyond control

The control over data flows of the main actors of the digital sphere raises new challenges to governance

These flows have to be considered with scrutiny, under the assumption of total flow without control

In specific or temporary situations they escape all or part of the control of the actors, including those who lead them.

VARIOUS APPLICATIONS (CASE STUDIES)

- Platform activity

- The portability of digital content services in intellectual property law

- The right to be delisted

- The transatlantic transfer of personal data

10h05-10h10

Innovation and Creativity

https://ds4h.univ-cotedazur.eu/education/minor-innovation-and-creativity

Speaker: Cindy De Smet
cindy.de-smet@univ-cotedazur.fr

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Minor Innovation and Creativity

[Play the video]

MINOR

Innovation and creativity

Coordinator
Cindy De Smet

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The "**Innovation and creativity**" course aims to develop the creative competencies of the participants, learn them how to think out of the box or how to generate more qualitative ideas. We achieve this through a series of exercises and activities in which **individual** and **collaborative** approaches will be developed.

Students embark on a journey of both **self-introspection and collective effort** with their peers. They are invited to **leave their comfort-zone and to push their boundaries**.

Minor Innovation and Creativity

Course content

5 chapters:

- We discuss the link between innovation and creativity…
- You're invited to think like Leonardo da Vinci, to shut down your smartphone to discover your creative self and to enhance your creative abilities…
- You learn how to picture your ideas…
- You discover how collaboration leads to the generation of creative ideas…
- And you explore the link between creativity and critical thinking

Credits image: Arthur Lafrux
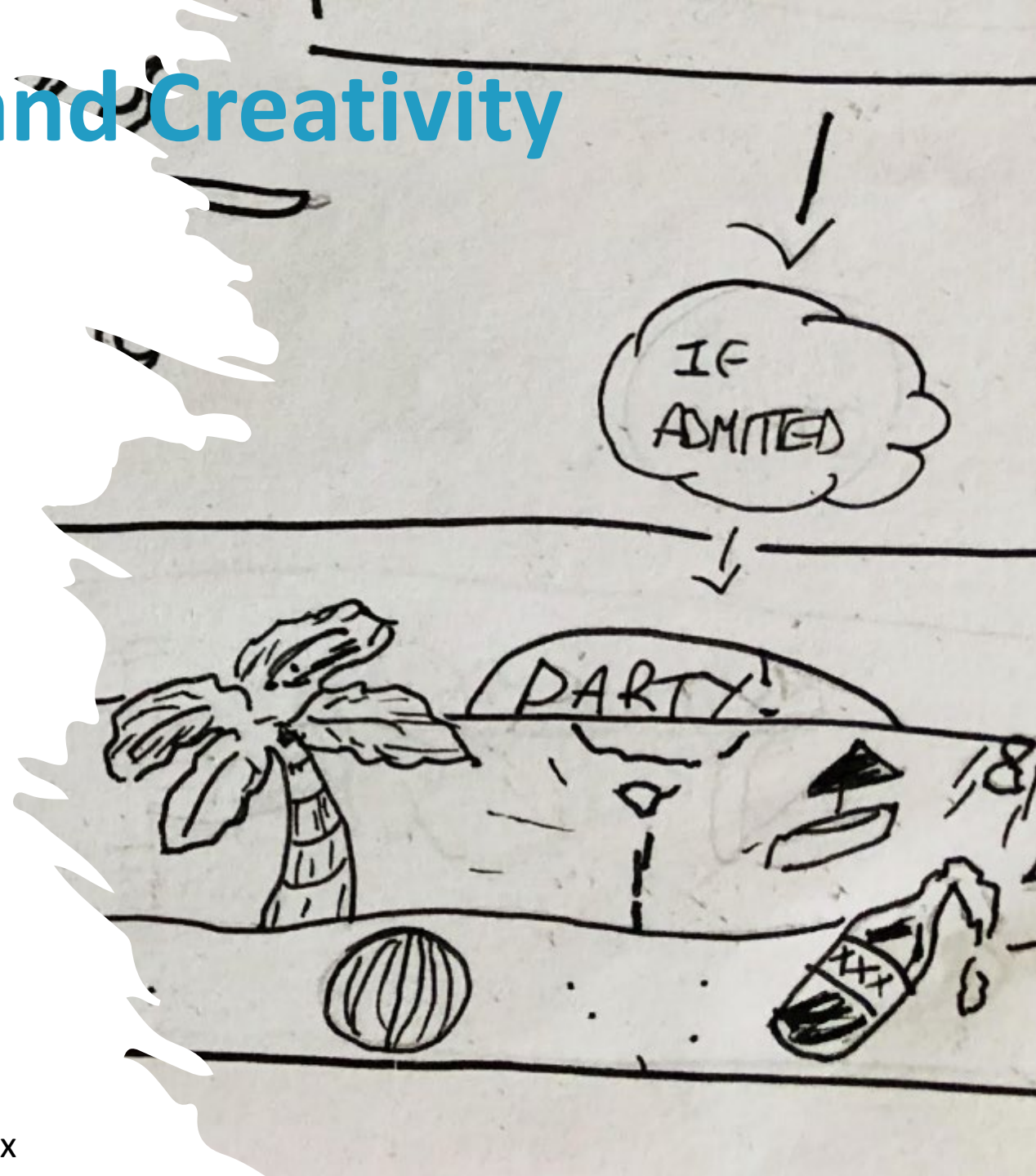
Minor Innovation and Creativity

Course Modalities

100% online course + 2 online tutoring sessions

Date:
24/02 18:30 PM
17/03 18:30 PM

Two tasks (assignment module LMS)

Since september 2019, 100 students passed this course as a DS4H minor

"This course has given me a lot of good things. All the knowledge you shared with us is really necessary and useful. It helps me a lot, not only for work but also for everyday life, in my "creative" life."

"I thank you for all your efforts and I am really happy to have passed this minor. It is not only a minor but also instructive because of the personal development included in the articles. I read Chris Lewis' book thanks to you."

Note: anonymised comments

MINOR

Innovation & Design Thinking

Nicolas BRUNO

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The Innovation & Design Thinking minor aims to train students in innovation, creativity, and 21st-century skills while proposing solutions to challenges faced by businesses and other organizations.

Choose **3 workshops** among the 4 below:

🟥	**Design Thinking**	🟩	**Game Design**
🟨	**Identify Your Talent**	🟧	**Ai For Business**

Each workshop will be evaluated and will constitute an independent grade.

📍 **Espace Vernassa**
Campus Saint-Jean d'Angely

MINOR

Innovation & Design Thinking

Nicolas BRUNO

Design Thinking

The Design Thinking is an innovation approach based on the notion that, to innovate, it is necessary to connect with people, understand the user's real needs, and explore the whole context of the project with a constant attitude of research.

Identify Your Talent

This workshop will provide an answers to questions such as: What am I naturally good at? What skills and career path would suit my superpower?

Game Design

The main objective of the "Game Based Learning. From design to the learner experience" course, is to develop competencies for the analysis, design, pedagogical integration and evaluation of serious games and digital game based learning activities in an educational setting

Ai For Business

The course aims to offer an introduction to the broad theme of Artificial Intelligence, with a focus on three major areas Robotics, Machine Learning, Natural Language Processing.

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Innovation &
Design Thinking

Nicolas BRUNO

Day	Session	Speaker	Hours	Time	Language	Places
24/02 03/03	Identify Your Talent	Nelly Farrugia	9h - 14h	10h	French	10
10/03 17/03	Design Thinking	Eric Guerci	9h - 13h	8h	English	35
10/03 24/03	Game Design	Margarida Romero	9h - 13h	8h	English	35
07/04 14/04	Ai For Business	Eric Guerci	9h - 13h	8h	English	35

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10h15-10h20

Introduction to Scientific Research

https://ds4h.univ-cotedazur.eu/education/minor-introduction-to-scientific-research-and-experiment

Speaker: Fabien Ferrero
fabien.ferrero@univ-cotedazur.fr

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Minor Introduction to Scientific Research
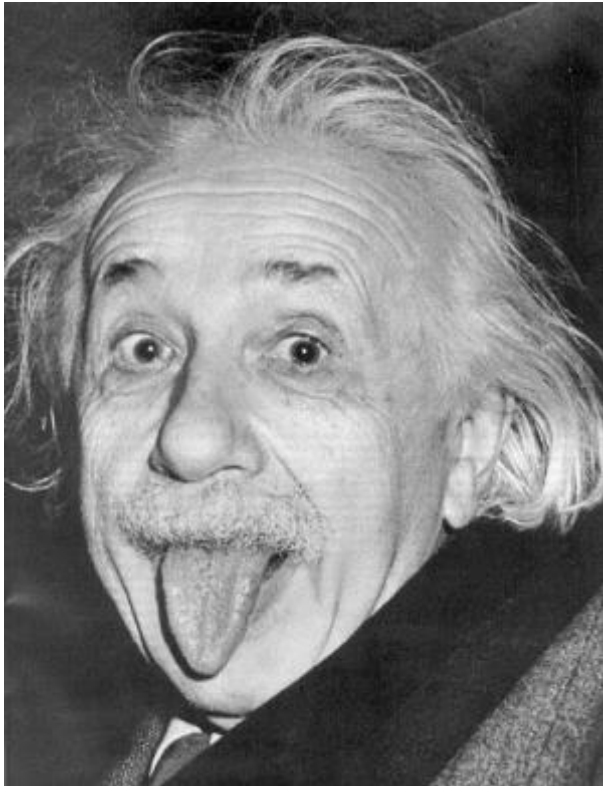
Being born
a genius…

… or not,

*under all
circumstances,*

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

Minor 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 !
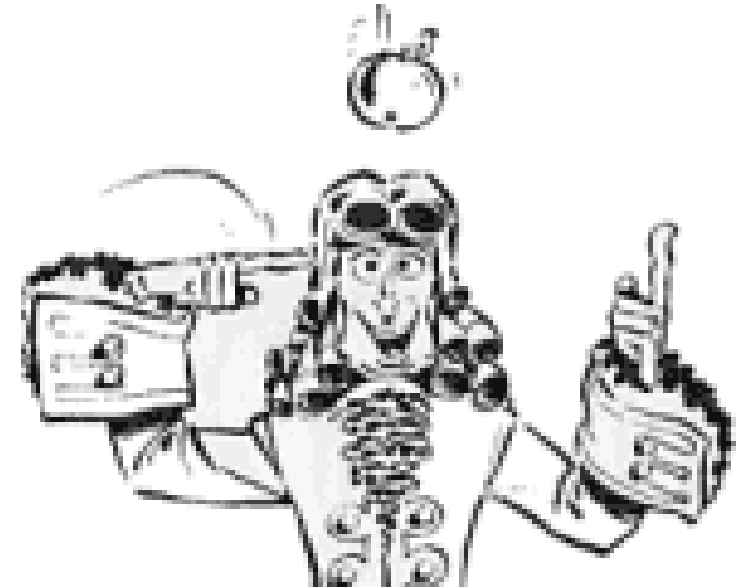
Minor Introduction to Scientific Research

Far beyond the film that made
Woody Allen famous …

Everything you always wanted to know about *science* **(But were afraid to ask)**

Minor Introduction to Scientific Research

Epistemology (*Eric Picholle, INPHYNI*)
Research : a vocation (*Anne-Laure Simonelli, DS4H*)
Method for research (*Marco Winckler, I3S*)
Bibliography (*Sid Touat*i, I3S/Inria)
Scientific writing (*Fabien Ferrero, LEAT*)
Hands-on workshop : experiments and statistics (*Sid Touat*i, I3S/Inria)
Hands-on workshop : antenna measurements (*Claire Migliaccio, LEAT*)
Deontology (*Anana Postoaca, GREDEG*)
PhD and opportunities (*Anne-Laure Simonelli, DS4H*)
Scientific collaborations (*Fabien Ferrero, LEAT*)
Article analysis (*Gilles Bernot, I3S*)
Oral evaluation : report on hands-on workshops and Article analysis

Minor Introduction to Scientific Research

Prerequisites:

Capacity:

24 students (including students from EUR SPECTRUM)

Evaluation:

- Bibliographic report
- Oral presentation of the hands on workshops

10h20-10h25

Tools 2 Communicate

https://ds4h.univ-cotedazur.eu/education/minor-tools-to-communicate

Speaker: Anne-Laure Simonelli
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)

Profil LinkedIn

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

NB! Professional photo shoot offered at the end of the session

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

How to prepare a job interview

Get ready to enter the workforce

The job market:
Parallel sessions organized

- 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:

15 students

Evaluation:

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

Minor Content:

Legal Advice on Real Life Case Studies

1. Designing a connected toy for children
2. Implementing a facial recognition tool for identification purposes

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Learning outcomes

You will learn:

. How a legal department in a commercial company operates;

. How to prepare, organise and provide legal advice;

. How to tackle complex and innovative projects from a legal perspective.

Legal issues tackled

We will get your hands and legal reasoning on subjects such as:

internet of things, protection of personal data, sensitive data, data storage, access and processing, processing of data through algorithms and artificial intelligence solutions, sensitive data, client identification, information and consent

and many more!

Organize your activity in project mode

MINOR

Organize your activity in project mode

Emmanuel Le Roy

What you will learn:

- How to formalize and idea in a project and make a first assessment about its feasibility

- How to define the initial scope of a project and why it is important

- How to manage risks and control quality of your project

- How to manage people and monitor cost, time and scope along your project

- Why communication is essential to the success of a project and how to do it properly

- How to introduce Agility in your practices and to maximize the value created by your projects

- **EVALUATION**

  - **Engagement / participation (15%)**

  - **Assignment: Project charter (50%)**

  - **Final exam (35%)**

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Programming 3D Games on the Web

Michel Buffa

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- You will learn
  - The basics of smooth 3D programming using a cutting edge library (BabylonJS)
  - Learn how to use : 3D character animation, physic engine, particle engine, etc.
  - Go further with JavaScript / TypeScript programming
  - Eventually practice Blender 3D

- Develop a complete 3D game at 60 frames / seconds

- Participate to the Games on Web 2022 challenge
  - The game developed for the challenge can be submitted to the challenge (11K euros of prizes!)
  - If you already started to develop something for the challenge, it will count for the course.

- The course is NOT online, but we will get support from BabylonJS developers

- Evaluation is in two steps
  1. Small TP to finish and submit - Submission deadline: March, 20nd
  2. Final Project - Submission deadline: April, 30th (compatible with the Games on Web 2022 challenge, can be done in team of 2-3 persons)

- Step 1 represent 20% of the final grade
- Step 2 represent 80% of the final grade

10h40-10h45

Website Creation Workshop

https://ds4h.univ-cotedazur.eu/education/minor-website-creation

Nicolas Fogliarini
nicolas@rr3films.com

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Website
Creation
Workshop

Nicolas
Fogliarini

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Introduction on various online portfolio's plateforms

Website / Online Portefolio creation from scratch:

Practical courses

MINOR

Website Creation Workshop

Nicolas Fogliarini

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Introduction on various online portfolio's plateforms
Video : Vimeo / Youtube / Smash
Graphic design : Behance
Sites : wordpress / wix
Selling your work on plateformes : behance / fiveer / 5euros / malt

Website / Online Portefolio creation from scratch:
Writing the specs of your future portfolio
Finding and buying a domain name + hosting plans (need a small investment for each students)
Choosing between Wix and Wordpress
Finding the right theme and plugins
Creating content using adobe suite or free services (canva, pixabay)
Uploading using FTP client
Security (backup / SSL)
Google my business creation
Working on your Linkedin page and your personal online presence.

Creating your own personal online portefolio
At the end of the minor, the students will be noted on their online portfolio creation.

10h45-10h50

Quantum Technologies

https://ds4h.univ-cotedazur.eu/education/minor-quantum-technologies

Speaker: Virginia D'Auria
virginia.dauria@univ-cotedazur.fr

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New needs and new professions

Some considerations :

- A growing interest for Q. Technos : research, governement, industry

In France :

quantum research labs in France
(cc) Olivier Ezratty, 2021

grandes entreprises
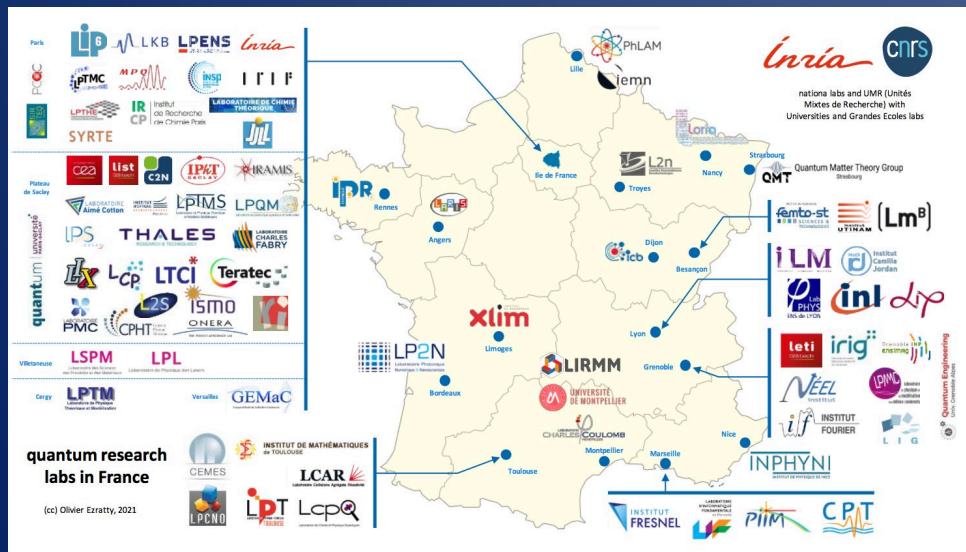
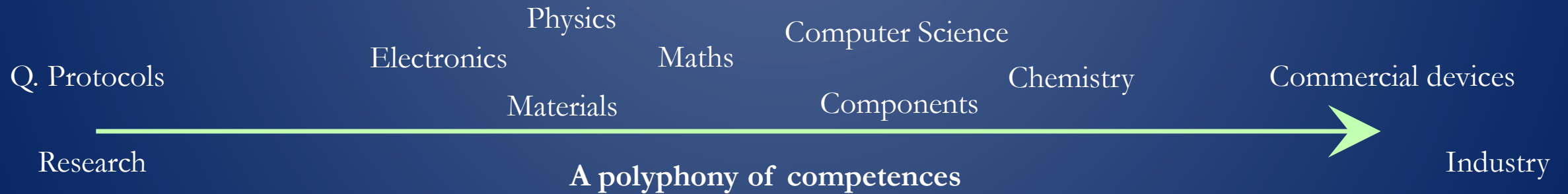*(Plan QUANTIQUE : 16 000 direct employments in 2030)*

⚠️ Anticipate the demand for technological and human resources

Nouveaux besoins et nouvelles professions

Some considerations :

- Operational Q. Technos and their exploitation

Physics

Electronics   Maths   Computer Science

Q. Protocols   Chemistry   Commercial devices

Materials   Components

Research   **A polyphony of competences**   Industry

INNOVATION by COOPERATION :
New « Polyglot » professional profiles

Quantum Awareness !

This minor : Quantum Technologies

Masters SPECTRUM & DS4H

Sciences

Technologie/ Ingénierie
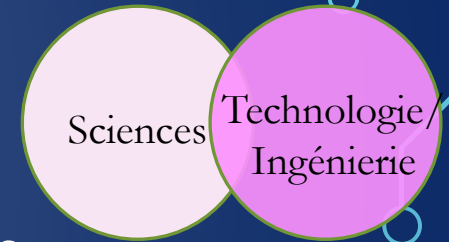
A <u>very</u> progressive approach, strongly oriented toward the applications

Some basic concepts (niveau débutant)

Motivation/Needs
(Ideas and key concepts)

Practical application
(from fundamental science to engineering)

Challenges
(conceptual et technological)
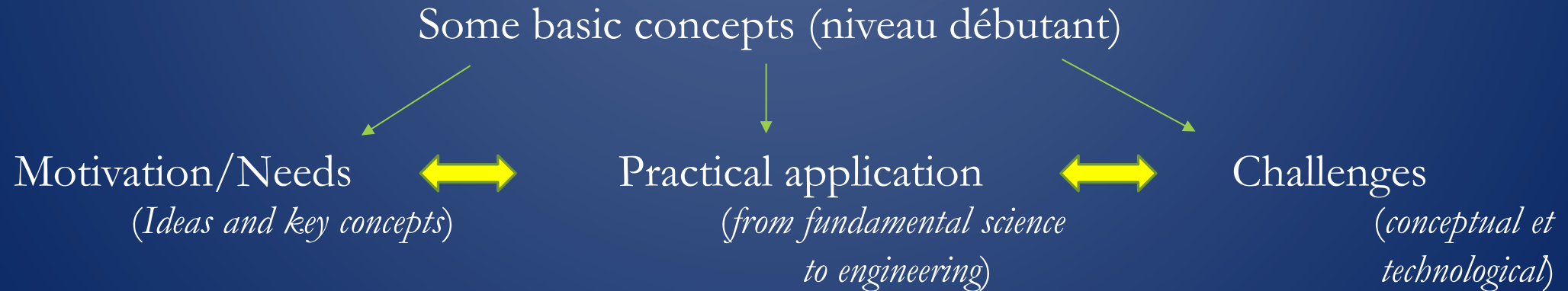
Transversal skills :

- Learn Q. techno language
- Understand the interest of Q. Technos
- Know Q. technos panorama *(research, industry…)*

Practical Organisation

8 sessions : 2 parts

- 5 sessions : CM at campus Valrose (possibility of hybride)

    (Basic of Q. Information, Q. Computing/Simulation, Q. Metrology, Q. Communication, Q. Engineering)

- 3 sessions : Workshop on chosen *case studies*

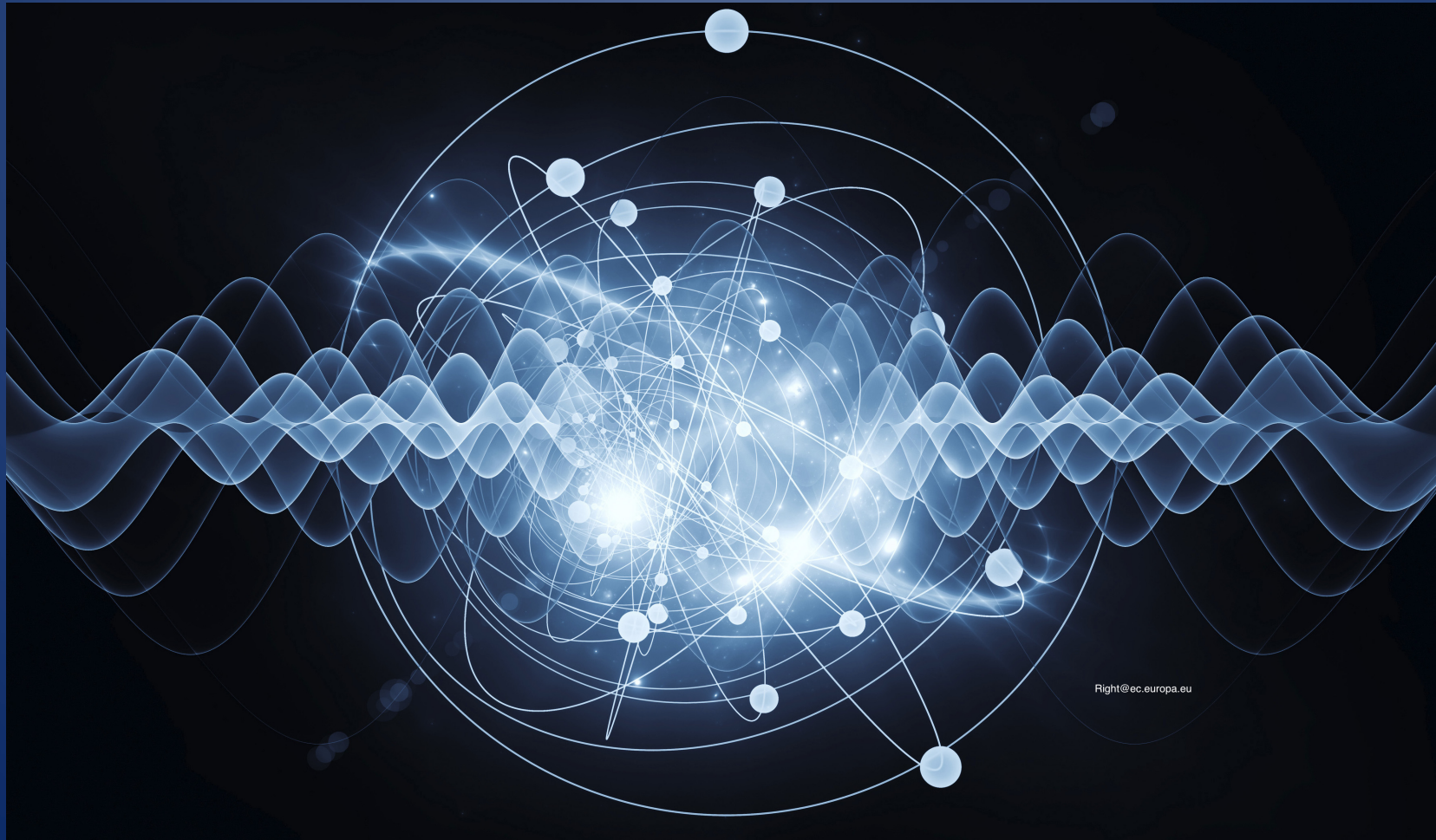   **Oral presentation with support (*vidéo, site web, poster…*)**

    Acquired competence evaluation

Precondition: linear algebra (niveau L1/L2, ajustable based on the class level)

Pedagogical team : INPHYNI, **pilot of the first quantum network of France here at UCA** !

Thank you for your attention

Virginia.DAURIA@univ-cotedazur.fr

Olivier.ALIBART@univ-cotedazur.fr