ParisTech

PARISTECH – CSC PHD PROGRAM

NOVEMBER 7, 2023

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Presentation – table of content 2/2

Webinar GUESTS

Arts et Métiers Sciences et Technologies – Ali Siadat, scientific advisor for China at Arts et Métiers
Arts et Métiers Sciences et Technologies – LIFSE : Mathieu Specklin, Alessandro Biancalani
Arts et Métiers Sciences et Technologies – LISPEN Lab : Camille Jean, Ruding Lou, Frédéric Segonds
Arts et Métiers Sciences et Technologies – LCFC : Paul Stief, Lazhar Homri
Arts et Métiers Sciences et Technologies – PIMM : Nazih Mechbal
Arts et Métiers Sciences et Technologies – I2M : Antonio Rodriguez De Castro

Chimie ParisTech – PSL – Ilaria Ciofini, VP Research
Chimie ParisTech – PSL - Chemical Theory and Modelling Group : Thijs Stuyver
Chimie ParisTech – PSL – IRCP : Dimitri Mercier

Ecole des Ponts ParisTech – Virginie Ehrlacher
Ecole des Ponts ParisTech – Laboratoire NAVIER : Olivier Pitois
Ecole des Ponts ParisTech – LEESU : Marie-Christine Gromaire

ESPCI Paris – PSL – Costantino Creton
ESPCI Paris – PSL – Institut Langevin : Anne Louchet-Chauvet, Valentina Krachmalnicoff, Romain Pierrat
ESPCI Paris – PSL – GULLIVER : Olivier Rivoire, Clément Nizak

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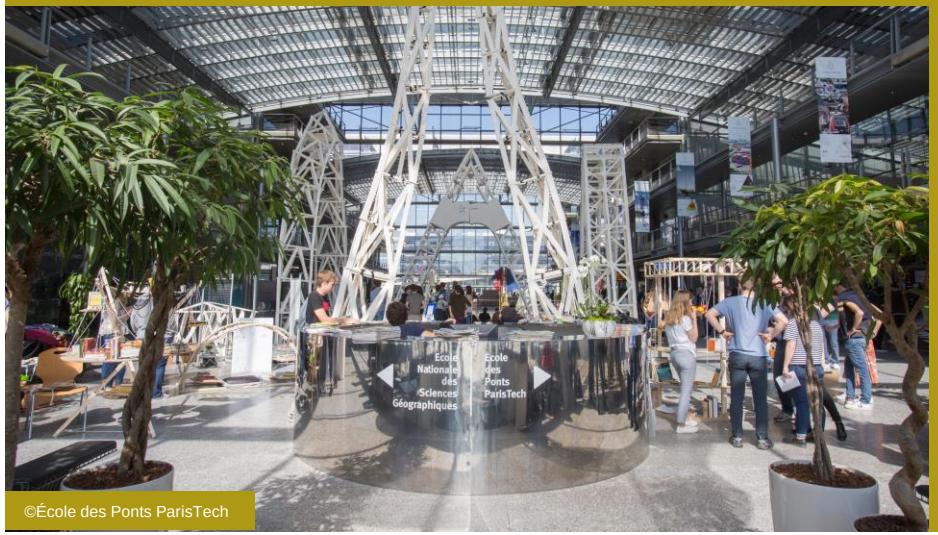

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1. ParisTech introduction

ParisTech
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ParisTech schools

7 « **Grandes Écoles** »
In Engineering & Science

AgroParisTech

Arts et Métiers Sciences et Technologies

Chimie Paris | PSL
ParisTech

École des Ponts
ParisTech

ESPCI PARIS | PSL
EDUCATION SCIENCE INNOVATION

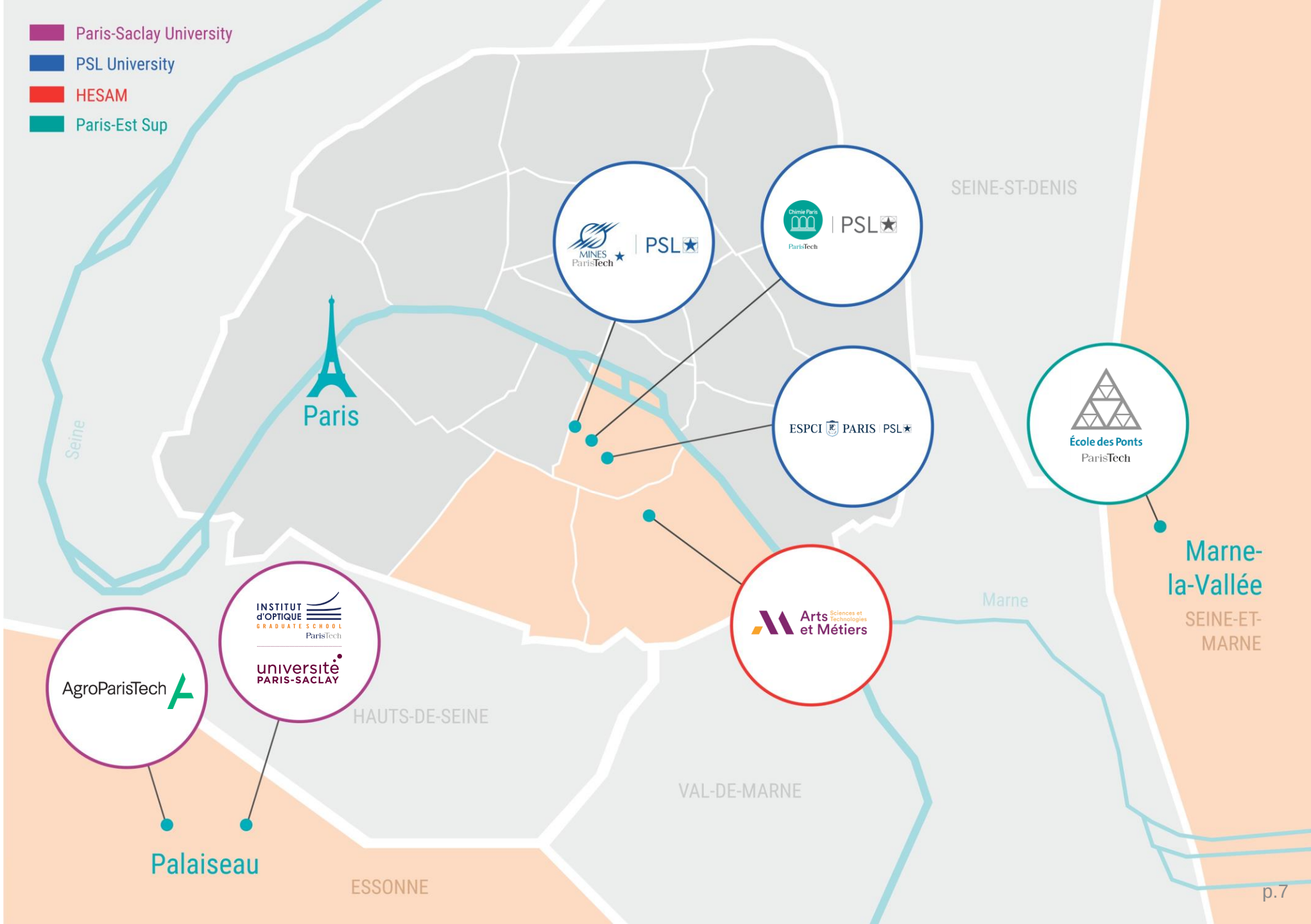
INSTITUT d'OPTIQUE GRADUATE SCHOOL
ParisTech

université PARIS-SACLAY

MINES PARIS | PSL

7

3



ParisTech
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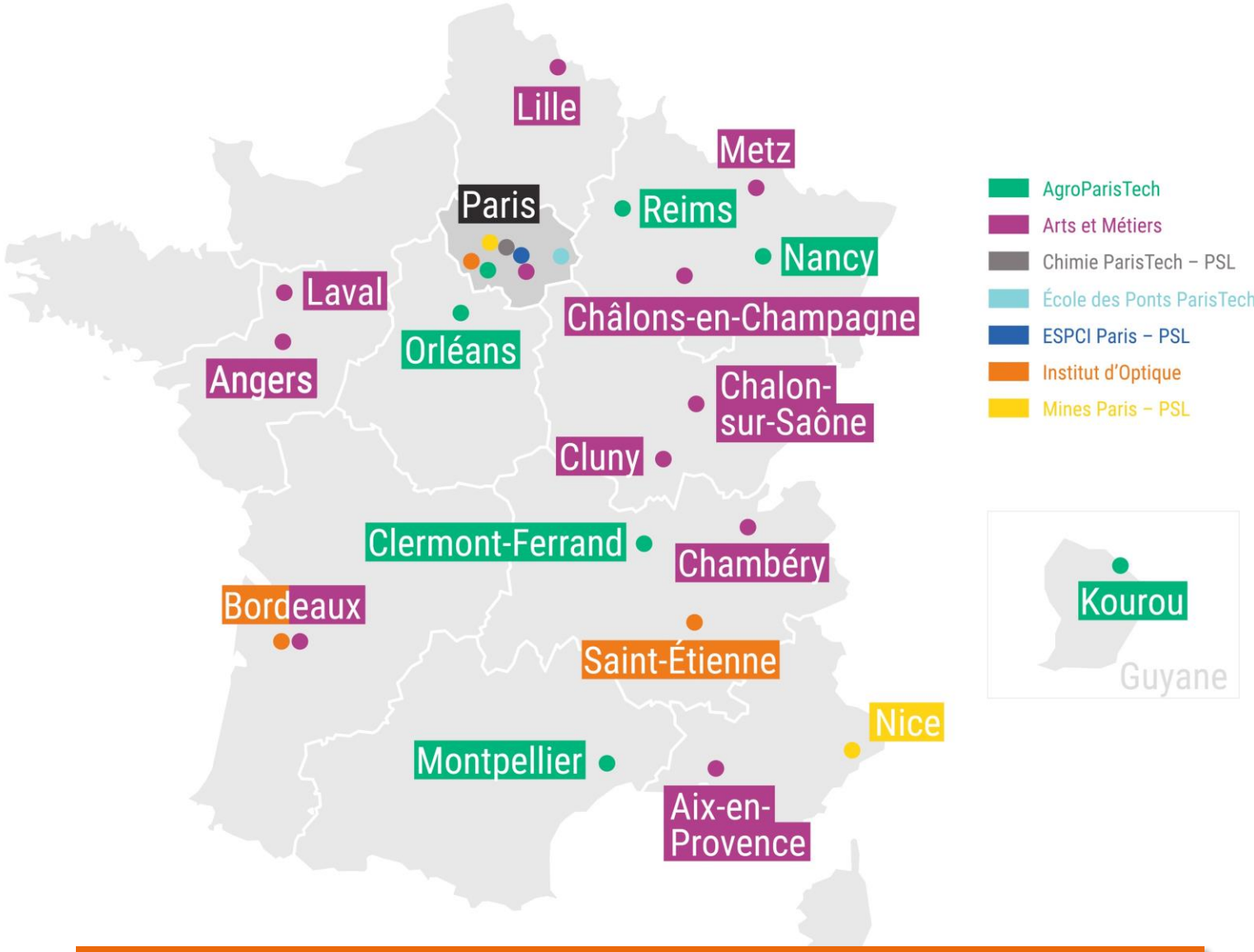
ParisTech – a brand for excellence in France



The 7 schools' laboratories are located all around France, not only in Paris.

ParisTech
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ParisTech’s consortium key numbers

12 500
students

1 700
PhD candidates

70
international agreements

85
laboratories

1 500
professors

30%
international students

90 000
alumni

History

Mines Paris – PSL

ESPCI Paris – PSL

Arts et métiers

AgroParisTech

Chimie ParisTech – PSL

Institut d'Optique

École des Ponts ParisTech

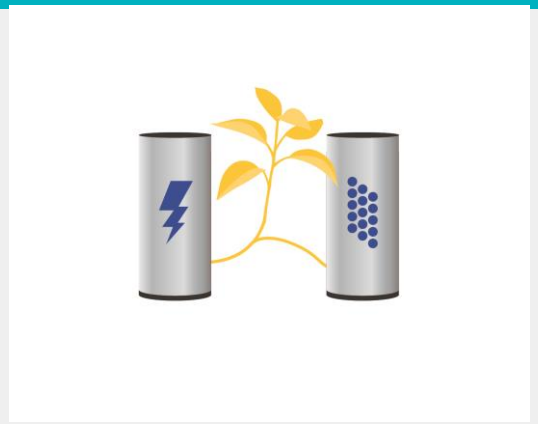
1747 1780 1783 1824 1882 1896 1917 2000


Henri Moissan • Chemistry
Henri Becquerel • Physics
Marie Curie • Chemistry
Pierre & Marie Curie • Physics
Frédéric & Irène Joliot-Curie • Chemistry
Maurice Allais • Economics
Georges Charpak • Physics
Pierre-Gilles de Gennes • Physics *1
Jean Tirole • Economics *3
Alain Aspect • Physics (Wolf prize) *2
Nobel Prizes
1903
1906
1911
1935
1988
1991
1992
2010
2014
*1 © Dominique Morisseau
*2 © École polytechnique - J.Barande
*3 © P. Renault/École des Ponts ParisTech

Leaving a mark in history…

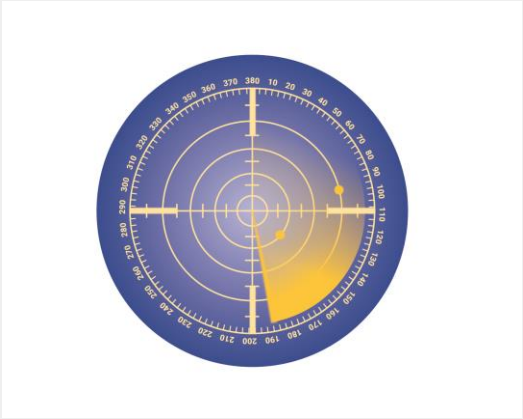
Molecular cuisine
Hervé This & Nicholas Kurti (1988)
AgroParisTech

Quartz clock
Marius Lavet (1949)
Arts et Métiers



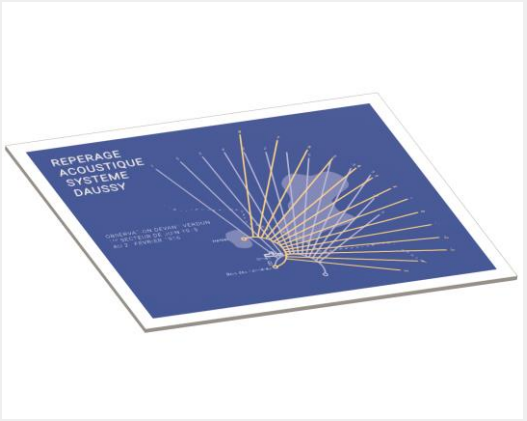
Catalytic methanation reactor
Vincent Piepiora (2018)
Chimie ParisTech - PSL

Lenticular device for video projectors, headlights lighting and some photovoltaic cells
Augustin Fresnel (1822)
École des Ponts ParisTech



Sonar
Paul Langevin (1915)
ESPCI Paris - PSL

Progressive lenses for visual correction
Bernard Maitenaz (1959)
Institut d'Optique Graduate School



Sound-based tracking system
Ferdinand Daussy (1915)
MINES Paris - PSL

Permament connections with companies

ParisTech alumni – key players of the economic world

Philippe Knoche
MINES Paris - PSL

Estelle Brachlianoff
École des Ponts ParisTech

Benoît de Ruffray
École des Ponts ParisTech

Christel Heydemann
École des Ponts ParisTech

Béatrice Foucher
AgroParisTech

Éric Carreel
ESPCI Paris - PSL

Nicolas Brusson
Institut d'Optique Graduate School

Patrice Caine
MINES Paris- PSL

Xavier Huillard
École des Ponts ParisTech

Jean-Marc Chéry
Arts et Métiers

Éric Niedziela
Arts et Métiers

Marion Dewagenaere
École des Ponts ParisTech

Jean-Laurent Bonnafé
MINES Paris - PSL

Anne Rigail
MINES Paris - PSL

Mostafa Terrab
École des Ponts ParisTech

Laurence Piketty
Chimie ParisTech - PSL

Jean-Philippe Puig
Chimie ParisTech - PSL

… or to create your start-up

Ynsect

[Breeding and processing insects](#) to contribute to the major challenges of our time: feeding the world's population, preserving resources and biodiversity, and fighting global warming

ZOZIO

[Zozio](#) turns a factory into a connected factory with its Robin.Connect service. Robin.Connect makes your data speak through its collection, structuring, storage and protection.

AZA Electrically Rechargeable Zinc-Air Batteries

[Aza Battery](#) is developing new systems by improving all components (bi-functional air electrodes, separating membrane and zinc electrode)

URBAN CANOPEE

[Canopy solutions](#) to cover the city's landscape with a modular, reversible, natural and light-weight vegetation mesh

HOLOGIC SUPERSONIC imagine

[Ultrasound medical imaging](#)
An innovative medical technology company primarily focused on improving women's health and well-being through early detection and treatment

effiLux Efficient Led Lighting

[EFFILUX](#)
specializes in designing, manufacturing and selling powerful, flexible and easy-to-use LED lighting solutions for machine vision, quality control, scientific imaging, biomedical, optical measuring devices, and many other applications.

legalstart.fr

[Legalstart](#) is leader in online legal and administrative services for start-ups, SMEs and associations

AgroParisTech

Arts et Métiers Sciences et Technologies

Chimie Paris ParisTech | PSL

École des Ponts ParisTech

ESPCI PARIS | PSL

INSTITUT d'OPTIQUE GRADUATE SCHOOL ParisTech

université PARIS-SACLAY

MINES PARIS | PSL

Why choose France?

Excellence in S&T and business

©Arnaud Bouissou / Terra


©Daniel Coutelier / Terra


©Arnaud Bouissou / Terra

- **7th economic power in the world**
  - R&D spending = 2.35% of GDP
  - International company leaders in their sector (materials, building, cosmetics, energy, transport…)
  - Paris area: a dynamic region (a lot of companies, high employability rate, numerous R&D centers)
  - A nation of entrepreneurs: 3.5 days to create a business in France

- **Excellence of the Higher Education system**
  - 45th destination in the world for international students
  - Scholarships and support for international mobility
  - A lot of international academic partners
  - Tuition fees lower than in most of the Western countries

- **A S&T leader worldwide**
  - The country of mathematicians (Viète, Laplace, Cauchy, Poincaré, Louis Bachelier…)
  - Excellence in a lot of domains, e.g. chemistry, civil engineering, physics (Marie & Pierre Curie, Ampère, Laplace, Freyssinet, Coriolis, Fourier…)
  - 75 Nobel prizes and 13 Fields Medals
  - World famous research organizations (CNRS, INRAE, INSERM, CEA…)

A country of culture

- **Tradition / Art & History / Quality of Life**
  - Arts (museums, movies, literature, philosophy…)
  - Romantism, impressionism, surrealism…
  - Food
- **Values**
  - Freedom, equality, brotherhood
  - Inclusion
  - Cosmopolitanism
  - Critical thinking, strong attachment to sciences and innovation
- **A key role in ecological transition and climate change**
- **French language**
  - Official language of more than 300 million people (5th in the world)
  - 3th most important language for business in the world after English and Mandarin Chinese

What international students are saying

- *9 out of 10 international students recommend France as first study destination*
- *93 % believe that studying in France has been a self-enrichment*
- *86 % believe that studying in France have highlighted their university curriculum*

©Fethi Bedioui

2. ParisTech – CSC PhD program

ParisTech
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Applicant’s Profile

Prerequisites

Find all relevant information on:

Applicants must be citizens of the People's Republic of China at the time of application.
Applicants should not hold a foreign permanent residence permit.
Applicants should be at least 18 years old at the time of application.

Studying in China

- At final year of Master degree
- In the 1st PhD year, recommended by your home university (for co-supervised PhD)

Studying in France (or in one of the 43 partner countries of the CSC)

- Second/Last year Master's (M2) students or students graduated within less than a year at the time of application for the CSC scholarship.

- *Applicants who have studied for a "Diplôme d'ingénieur" in France, and especially those who have received funding from the CSC - ParisTech "9+9" Program project are also encouraged to apply to this PhD program.*

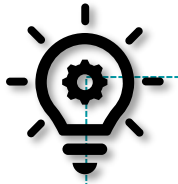
Working

You are **a master holder** and you work in a company that agrees with your PhD project

Prerequisites:

Excellence, for a highly-selective competition

- You have **excellent academic records, especially in the relevant discipline.**
- You should have **good command of written and spoken English.**
- **You should have a coherent personal and professional plan.**
- You are willing to learn minimal French for basic communication.



Tips

- *Learn as much as you can about the labs, the PhD advisors, their past and present work.*
- *Carefully select PhD proposals that are relevant with your personal profile.*
- *Then build a coherent, clear professional plan around the information you gather.*

The CSC scholarship – funding scheme

- 1350€ / month (for the duration specified on your admission letter, starting when you arrive in France) + one-time round-trip international travel expenses by the most economical route

- Duration :
  - 36-48 months for full PhD
  - 6-24 months for co-supervised PhD

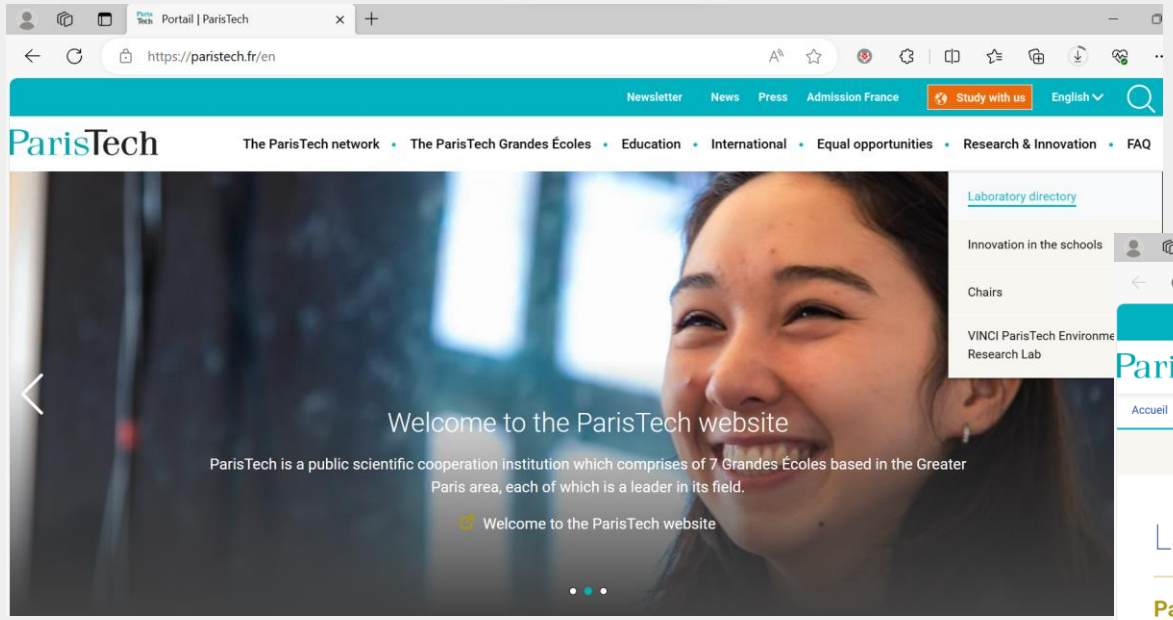
- You are committed to go back to China at then end of your PhD (exceptions to be found on the CSC website).

Calendar & Steps

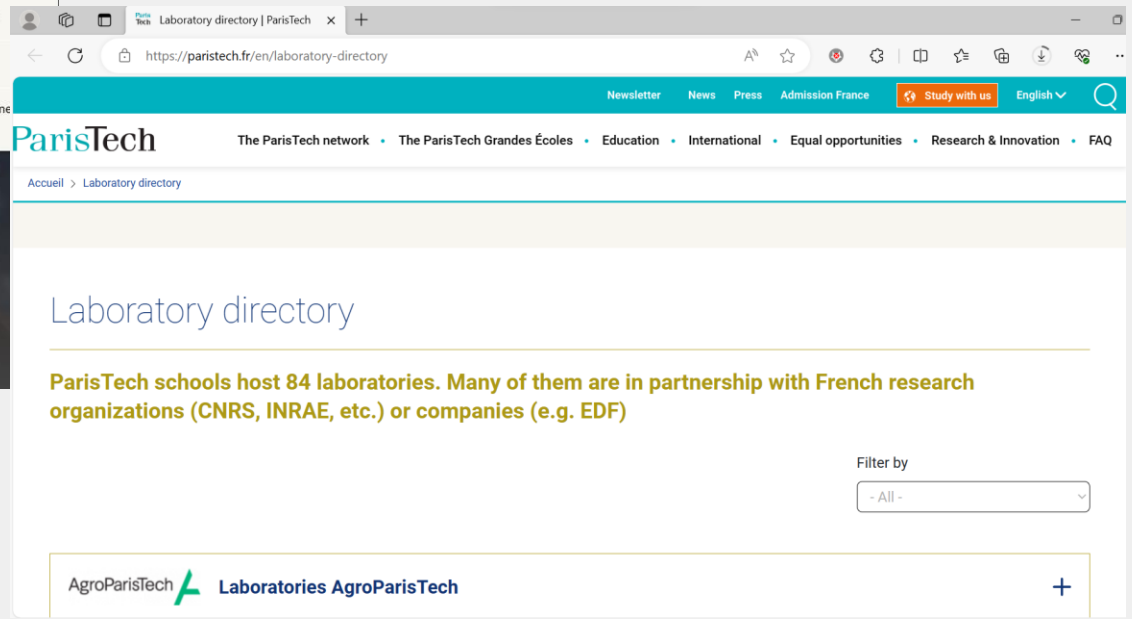
Where to find relevant information?

PARISTECH WEBSITES

https://paristech.fr/en



To learn more about the ParisTech – CSC PhD program, about the ParisTech labs, etc.



2023-2024 Campaign

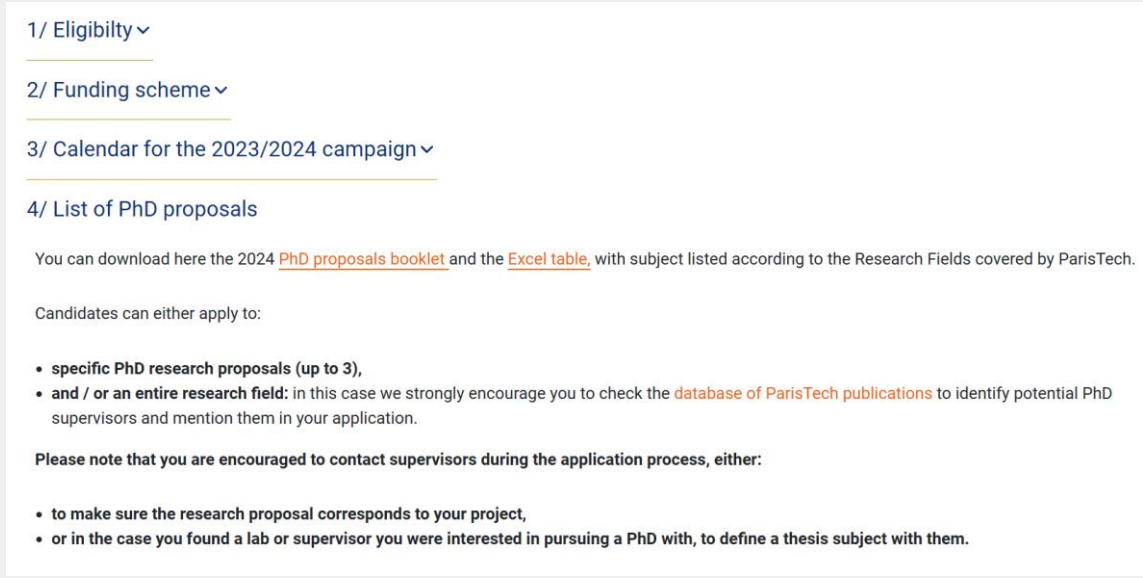
4 SCHOOLS

64 PHD PROPOSALS

9 *in* FIELDS OF ENGINEERING

+9 CITIES IN FRANCE

You can check them on the excel table, or download them all here: https://paristech.fr/fr/paristech-csc-phd-program-how-apply



1/ Eligibilty

2/ Funding scheme

3/ Calendar for the 2023/2024 campaign

4/ List of PhD proposals

You can download here the 2024 PhD proposals booklet and the Excel table, with subject listed according to the Research Fields covered by ParisTech.

Candidates can either apply to:

- **specific PhD research proposals (up to 3),**
- **and / or an entire research field:** in this case we strongly encourage you to check the database of ParisTech publications to identify potential PhD supervisors and mention them in your application.

Please note that you are encouraged to contact supervisors during the application process, either:

- **to make sure the research proposal corresponds to your project,**
- **or in the case you found a lab or supervisor you were interested in pursuing a PhD with, to define a thesis subject with them.**

Where to get relevant information?

PARISTECH SOCIAL MEDIA ACCOUNTS

For videos, information on research and innovation in ParisTech schools…

GLOBAL ACCOUNTS

LinkedIn	Instagram	Twitter	Facebook	YouTube

CHINESE ACCOUNTS

LinkedIn	Wechat	Twitter	Weibo	Bilibili

International admission process

16 October 2023: Publication of the PhD proposals

October 16, 2023 – December 10, 2023 (23.59 Paris Time) : Application

December 22, 2023: Invitation to the interview

January 08 – 19, 2024: Interview with ParisTech

Late January – February 2024: Interview with the PhD supervisor(s)

Conditional Admission letter

March 2024: CSC scholarship application

Application

Step 1- Publication of the PhD proposals on ParisTech website on October 16, 2023

Step 2- Online application from October 16 to December 10 (23:59 Paris Time), 2023

DOCUMENTS TO BE UPLOADED (*ARE MANDATORY)	
2 recommendation forms*	Student ranking certificates (at bachelor and master level)*
Academic transcripts (at bachelor and master level)*	English certificate (IELTS, TOEFL, CET-6/4, etc.)*
A personal statement including motivation and rough research plan (1-2 pages)*	A scan of your passport or resident ID card*
An ID photo*	An English summary of your master thesis
French certificate	Any further document proving your academic or scientific achievement / excellence (ex. university prize, published work, previously awarded scholarship)

Step 4- Selection based on the application files and if selected, invitation to an interview (December 22, 2023)

Step 5- Online interviews from January 08 to 19, 2024

Step 6- Interview with the potential PhD supervisor(s) from end of January to end of February 2024

Step 7- Conditional admission letter provided to the selected applicants by the PhD supervisors (conditions: obtention of master degree and CSC scholarship) (before March 2024)

Step 8- Application for the CSC scholarship by the student (March 2024)

Step 9- Results of the CSC process (May-June 2024)

ParisTech Asia will ensure a follow-up process of the CSC scholars till the arrival in France, in relation with the ParisTech schools.

How will your application be evaluated?

In your application file

- **The file you submit should be complete**
- Excellence of academic transcripts
- Ranking: personal ranking and ranking of your university at national and international level
- Referrals

During the interview

- Your capacity to communicate in English, and even in French if you are able to
- Your capacity to present and explain clearly your personal and professional project

During the interview with the potential PhD supervisor

- The relevance of your profile with the lab's requirements and the thesis
- Your scientific level in relevant fields

Tuition Fees

The doctoral training program total cost in France is between 100k & 150k Euros per year.

PhD candidates are only asked for tuition fees:

Admitted students may benefit from a partial or full tuition fee waiver for the duration of their studies at their host ParisTech Grande École.

ParisTech Schools	Tuition fees
AgroParisTech	380€ + 100€ CVEC* each year
Arts et Métiers Institute of Technology	
Chimie ParisTech - PSL	
Ecole des Ponts ParisTech	
ESPCI Paris - PSL	
Institut d'Optique Graduate School	
Mines Paris - PSL	

**CVEC : access to health and social services, sport facilities etc. in the schools.*
Learn more about it: https://www.campusfrance.org/en/10-things-you-need-to-know-about-the-student-and-campus-life-contribution-cvec

Results

By the end of May 2024 – June 2024, the CSC will announce the list of successful candidates.

Each year, over 100 candidates apply to this program, half get a proposal from a ParisTech school lab.
In 2023, 28 scholarships were granted by the CSC.

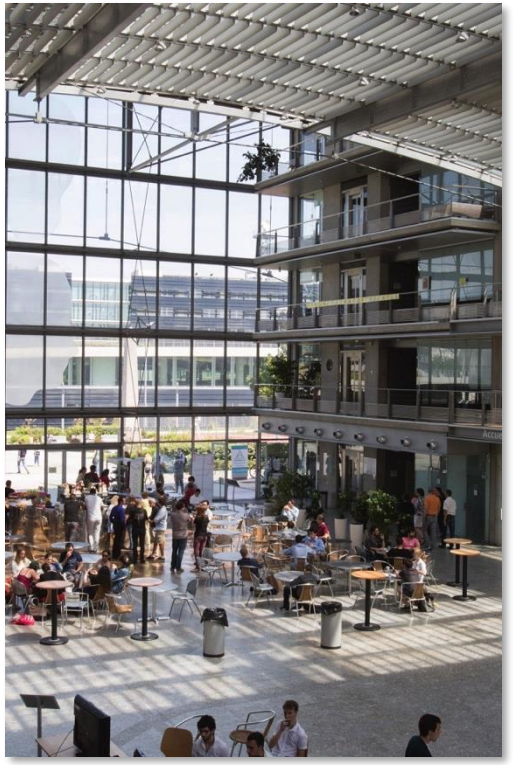
Successful applicants will then receive their official admission letters, and be informed by the CSC about all the administrative procedures to follow before departure for France.

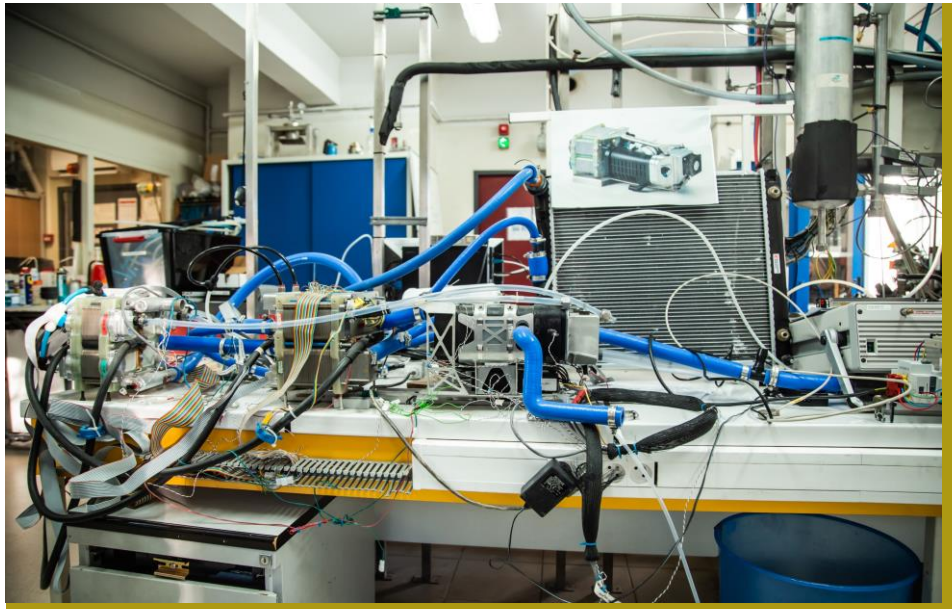
Once all administrative procedures over, and their visas obtained, PhD candidates will be expected to arrive in France in September – October 2024.

Studying at ParisTech:

INTERNATIONAL STUDENTS SERVICES

- Accommodations
  - Help to find accommodation
  - Possibility of accommodation allowance
  - Average living costs in Paris: ~ 800 € /month
- Assistance with visa procedure





3. Research in ParisTech's Higher Education Institutions

ParisTech
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Excellence in Research

Rankings

AgroParisTech

INSTITUT d'OPTIQUE GRADUATE SCHOOL ParisTech | université PARIS-SACLAY

université PARIS-SACLAY

Chimie Paris ParisTech | PSL

ESPCI PARIS | PSL

MINES PARIS | PSL

PSL UNIVERSITÉ PARIS

Arts et Métiers Sciences et Technologies

École des Ponts ParisTech

are ranked on their own

ACADEMIC RANKING OF WORLD UNIVERSITIES SINCE 2003

2023

University Paris-Saclay: 15rd (1st)
University PSL: 41th (2rd)
École des Ponts PT: 76-100 in Atmospheric sciences
Arts et Métiers: 101-150 in Mechanical engineering

TOPUNIVERSITIES

2024

PSL: 24th
University Paris-Saclay: 71th
École des Ponts ParisPT: 192th

Engineering & Technology
#22 UPSaclay
#41 PSL
#177 École des Ponts PT
#366 Arts et Métiers

Natural sciences
#14 PSL
#19 UPSaclay

THE WORLD UNIVERSITY RANKINGS

2024

PSL: 40th
Paris-Saclay University: 58th
École des Ponts ParisTech: 401-500
Arts et Métiers : 1001-1200

Engineering
#72 PSL
#101-125 UPSaclay
#401-500 École des Ponts ParisTech
#601-800 Arts et Métiers

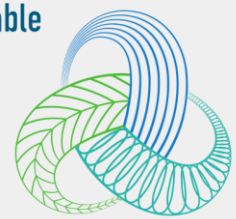
Physical Sciences
#20 PSL
#32 UPSaclay
#501-600 École des Ponts ParisTech

Computer Science
#35 PSL
#48 UPSaclay
#201-250 École des Ponts ParisTech

Business & Economics
#151-175 PSL
#251-300 UPSaclay
#301-400 Ecole des Ponts ParisTech

Partner national research institutes

Géosciences pour une Terre durable
brgm



IFSTTAR

ifp Energies nouvelles

cea

ParisTech

cirad
LA RECHERCHE AGRONOMIQUE POUR LE DÉVELOPPEMENT

Inria

INRAE

cnrs

Inserm

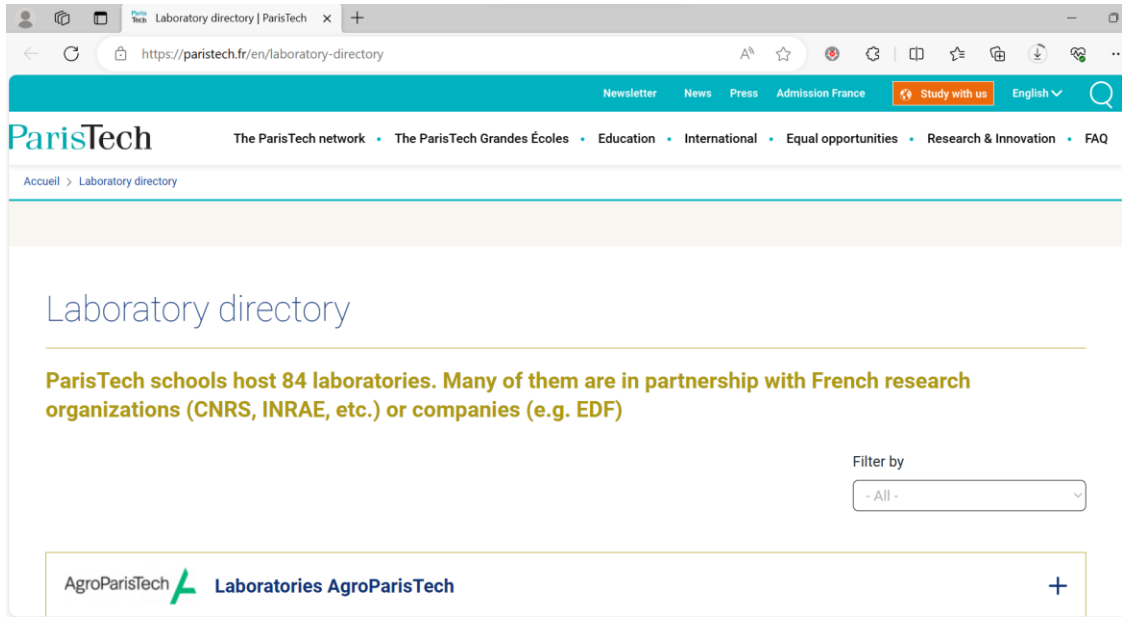
Research Domains

Research Domains

- Chemistry, physico-chemistry, mechanical engineering
- Design, industrialization
- Economics, management and social sciences
- Energy, process
- Environmental S&T, sustainable development, geosciences
- Information and communication S&T
- Life and health S&T
- Life science and engineering for agriculture, food and environment
- Mathematics and applications
- Material sciences, mechanics and fluids
- Physics, optics
- Urban planning, transport

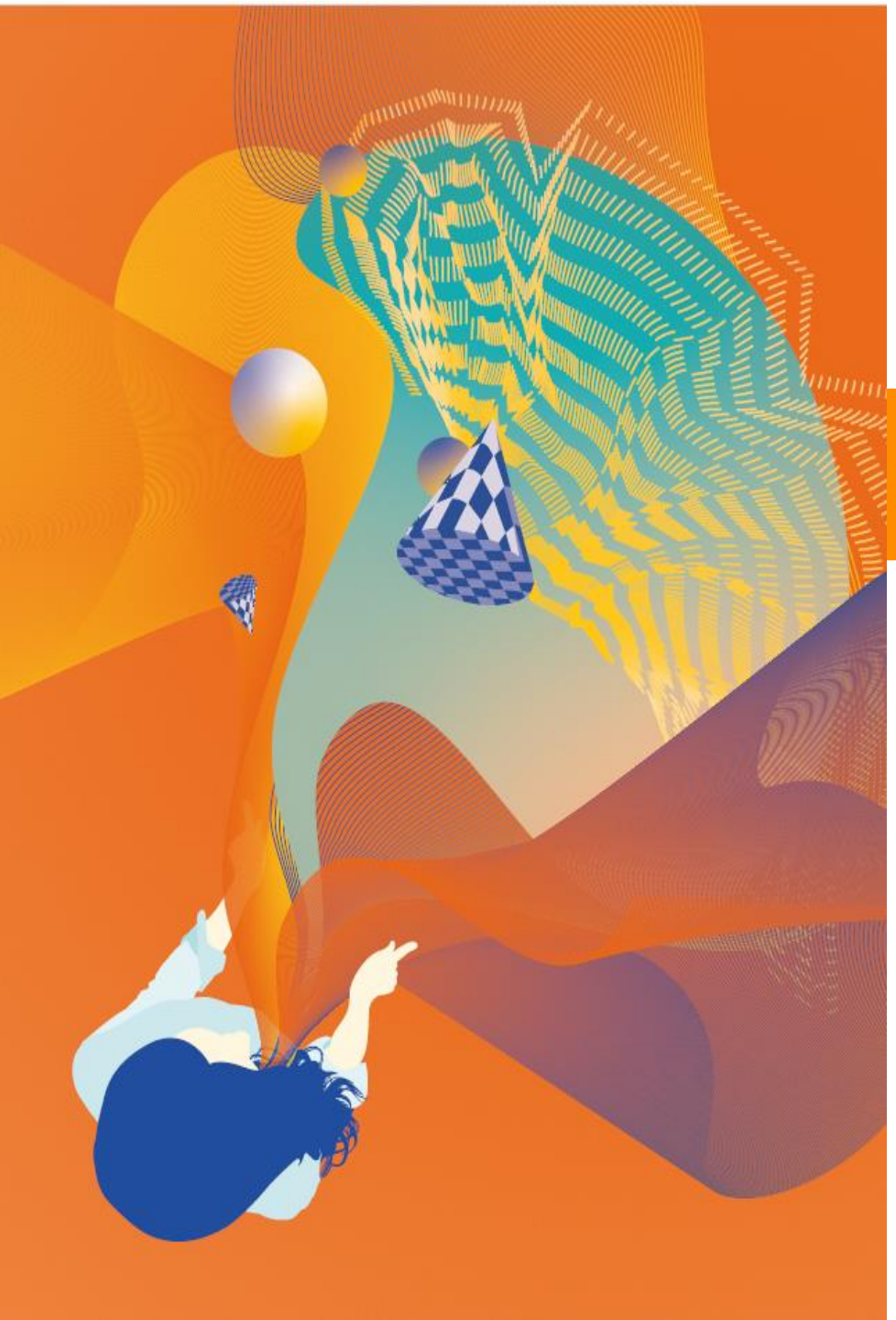
ParisTech's Labs

Learn more about the labs in each school:



RESEARCH AT ARTS ET MÉTIERS INSTITUTE OF TECHNOLOGY

ALI SIADAT



ParisTech

PARISTECH – CSC PHD PROGRAM

Arts et Métiers Institute of Technology

25 PhD proposals

8 Fields of research

9 Labs

LEM3 – Laboratoire d'Étude des Microstructures et de Mécanique des Matériaux

LAMPA – Laboratoire Angevin de Mécanique, Procédés et innovAtion

PIMM – Procédés et Ingénierie en Mécanique et Matériaux

LCFC

Laboratoire Conception Produits Innovation

LaBoMaP

LIFSE Laboratory – Fluids Engineering Energy Systems

Arts et Métiers Sciences et Technologies / lispen

MSMP – Mechanics, Surfaces and Materials Processing

AM² – Transatlantic Partnership for Industry of the Future

I2M Bordeaux – Institut de Mécanique et d'Ingénierie

DynFluid Laboratory

ARTS ET METIERS
INSTITUTE OF TECHNOLOGY

The school was founded by the Duke of Rochefoucault-Liancourt

8 *campuses*

3 *satellite locations*

15 *research laboratories*

1 *campus Rabat, Morrocco*

6300 *students*

1100 *faculty & staff*

130 M € *annual budget*

34 000 *alumni*

(the biggest engineering alumni association in Europe)

Mechanical, industrial, energy engineering

3 strategic themes

Lifecycle digitilization

Sustainable Engineering at low carbon impact

Cyberphysical systems

RESEARCH & INNOVATION

Shaping tomorrow's technology

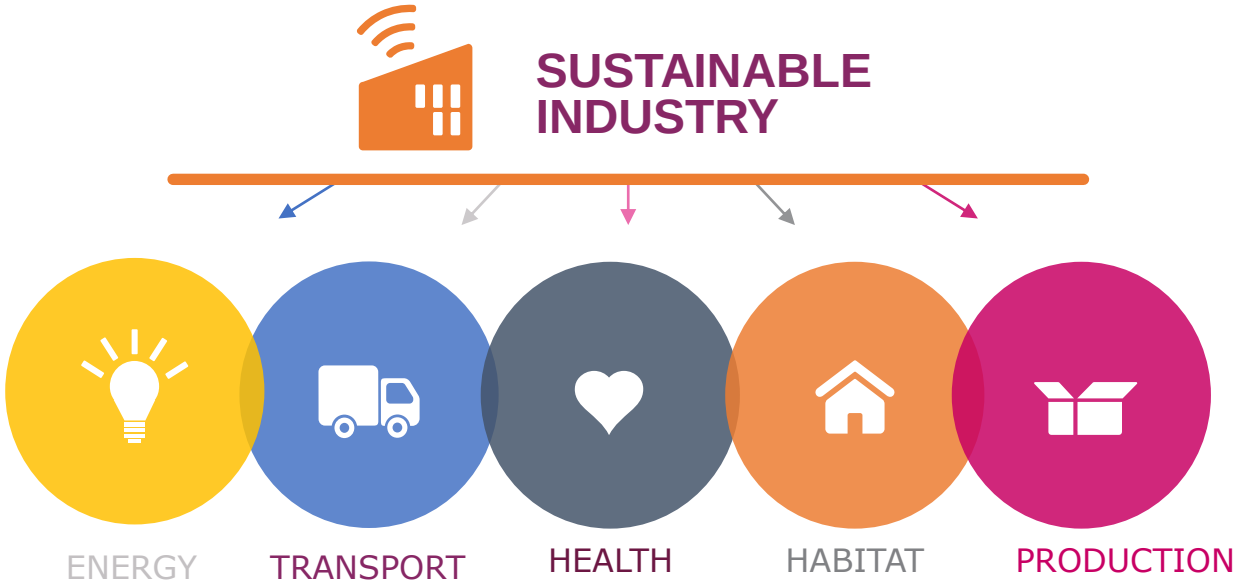
15 LABORATORIES

9 INNOVATIVE LABS WITH INDUSTRY

7 INDUSTRIAL RESEARCH CHAIRS

17 PATENTS FILED 2019

15 MILLION € INCOME THROUGH INDUSTRY CONTRACTS



RESEARCH & INNOVATION

DIFFERENT AREAS OF **EXPERTISE PER SITE**

KIT Germany/Metz
Advanced manufacturing processes, production systems, virtual & augmented reality, robotics

Lille
Fluid Mechanics, Electrical Engineering, Collaborative Robotics, Tribology & Surface Treatment

Châlons-en-Champagne
Mechanical Studies, Tribology & Surface Treatment, Casting

Paris
Mechanical Design, Design (including Innovation), Biomechanics/Health, Fluid Mechanics, Thermal Energy, Materials Analysis, Polymer processing and testing, Laser Processes, Additive Manufacturing

Metz
Mechanical Design, Design (Production of Systems), Materials Analysis, Forge & Forming of Materials

Cluny
Machining/Assistance, Wood, Construction & Materials for Construction, Surface Treatment

Laval
Virtual and augmented Reality,

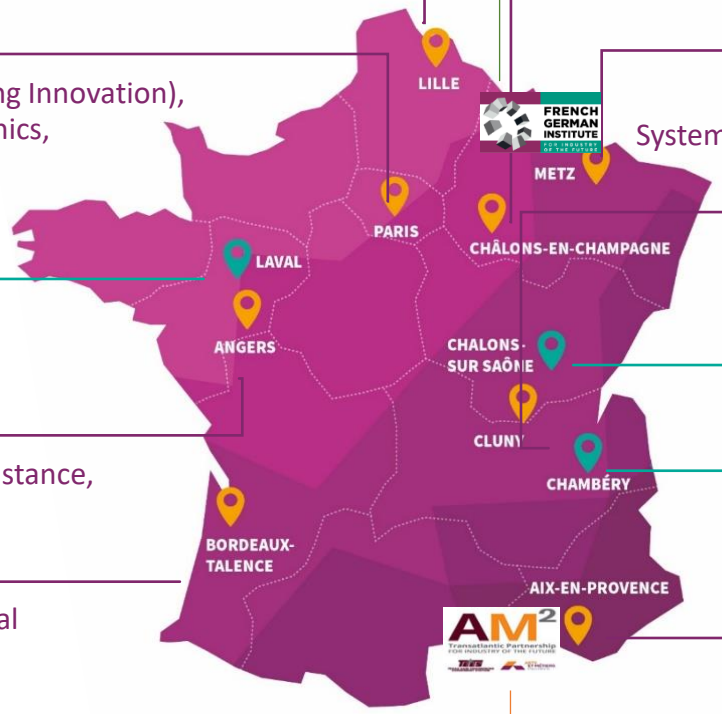
Chalon-sur-Saône
Virtual Reality

Angers
Mechanical Studies, Machining Assistance, Virtual Reality, Fluid Mechanics

Chambéry
Environmental Innovation, Eco-design, Recycling

Bordeaux-Talence
Mechanical Studies, Design, Thermal Energetic, Additive Manufacturing, Sustainable Engineering

Aix-en-Provence
Design (of production systems), Numerical engineering, Tribology & Surface Treatment, Casting



Campus

Satellite location

TEES/Aix-en-Provence
Advanced manufacturing & materials

Arts et Métiers Institute of Technology

RESEARCH INFRASTRUCTURES


VULCAIN platform, LCFC, Metz


Virtual reality, Angers

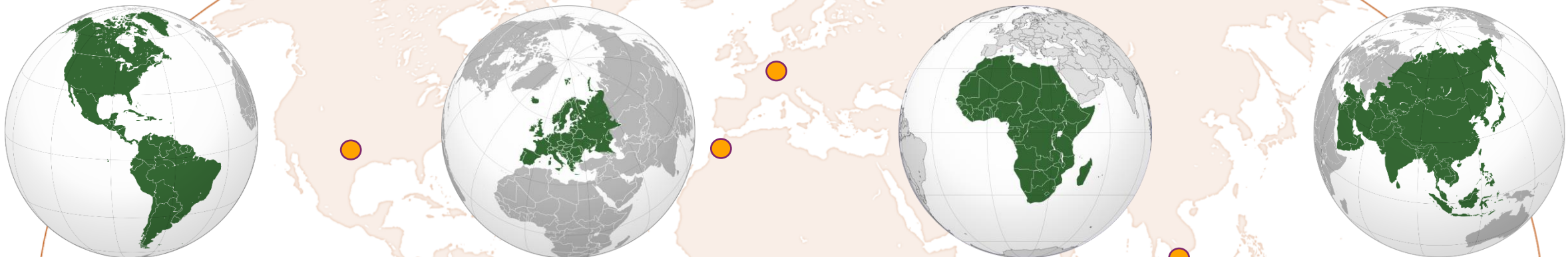

Gait analysis, Paris


Drop tower


LIFSE, Paris


Multiaxial fatigue testing machine

GLOBAL STRATEGIC PARTNERSHIPS



AM² Transatlantic Partnership FOR INDUSTRY OF THE FUTURE

TEES TEXAS A&M ENGINEERING EXPERIMENT STATION

FULBRIGHT

FRENCH GERMAN INSTITUTE FOR INDUSTRY OF THE FUTURE

KIT Karlsruher Institut für Technologie

ENHANCE

eit Manufacturing

Horizon Europe
THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021–2027)

Arts Institute of Technology et Métiers
Campus of Rabat

DesCartes
cnrs @CREATE Singapore
Center of Excellence for a Sustainable Industry

UTP UNIVERSITI TEKNOLOGI PETRONAS

23 European funded projects

Arts Institute of Technology et Métiers

RESEARCH AT ARTS ET MÉTIERS

KEY FACTS / FIGURES

380 teacher-researchers
220 PhD candidates

532 publications in 2019 including
187 international co-publications

17 patents

6 Research Chairs

Prestigious partnerships and with:

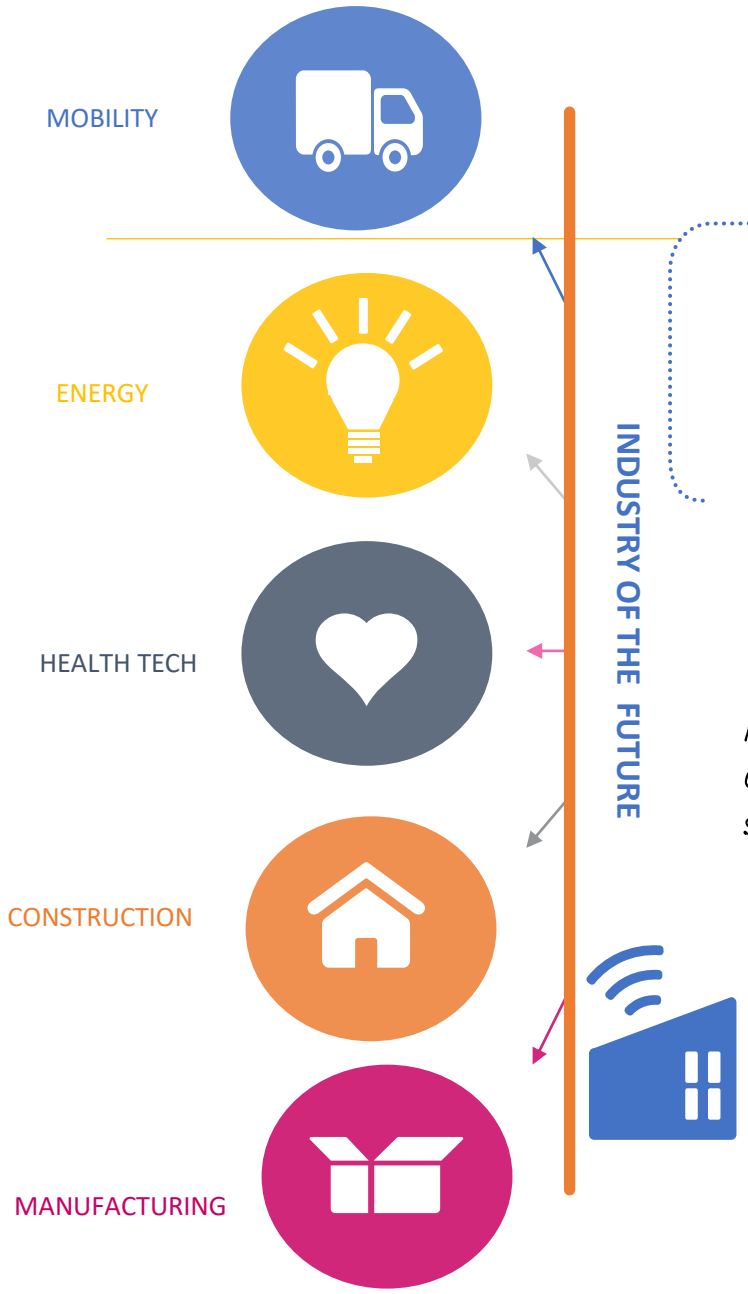
17 current EU H2020 projects including
1 MSCA ITN (European Training Network) and 1 MSCA RISE
1 CNRS silver medal

RESEARCH AND INNOVATION

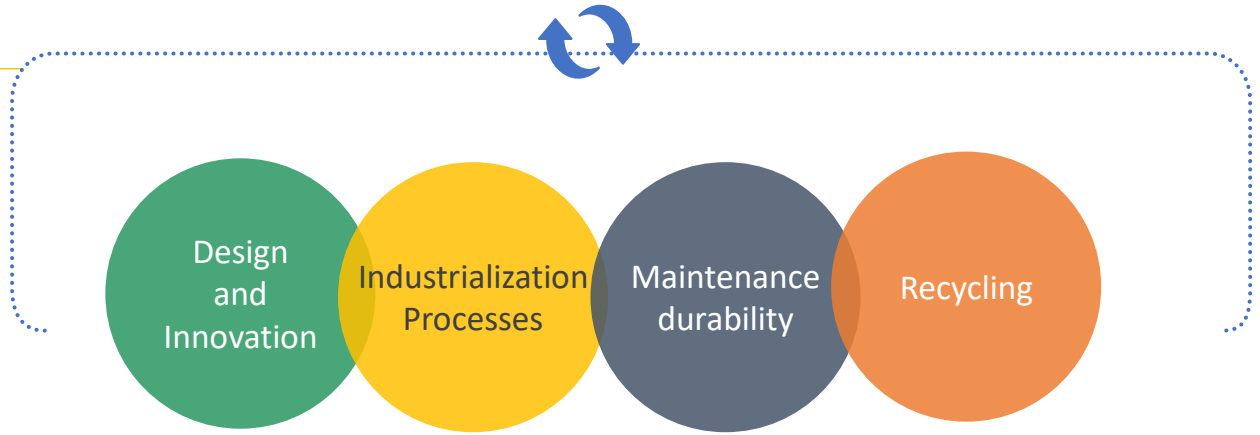
5 STRATEGIC FIELDS

INSTITUT CARNOT ARTS

Excellence Label for research transfer to industry



RESEARCH ON THE FULL LIFE CYCLE



Modelling and control of complex systems

Electrical & Energy engineering

Innovation Processes

Robotics

Design

Solid & Fluid Mecanics

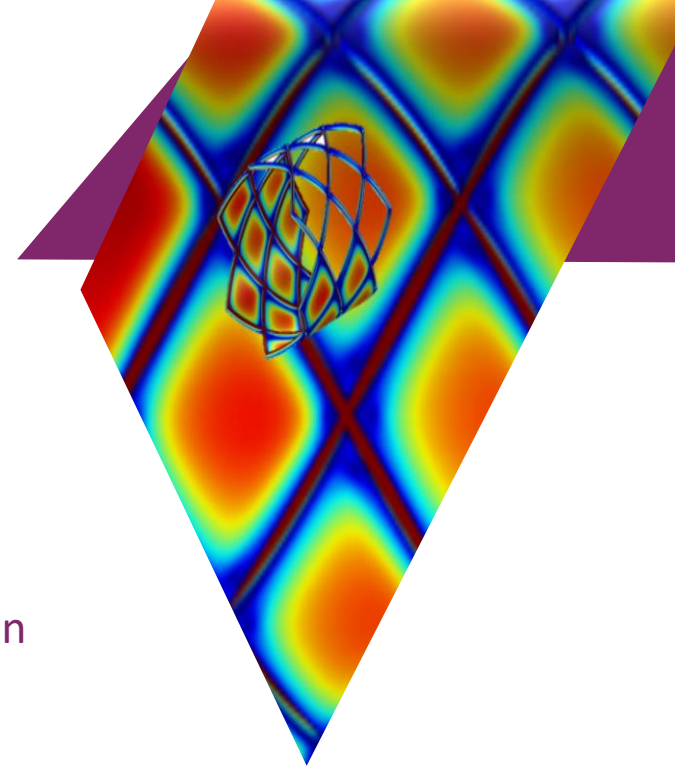
Material Science

Manufacturing

Multi-Physics

7 INDUSTRIAL CHAIRS

Long term research partnership (>5 years)



ecosystem

WEEE recycling

Valeo

Smart dynamical systems

DEVELOPPONS ENSEMBLE
L'ESPRIT D'EQUIPE SOCIETE GENERALE
PROTEOR Covea

Disabilities and Rehabilitation

thyssenkrupp

Agile, Safe and Efficient Manufacturing system

MANN+HUMMEL

RA/RV to reduce design time

Capgemini

Product Life Managment

esi get it right®

Physical Informed IA * and Hybrid Twin

Arts et Métiers Institute of Technology

9 INNOVATION LABS

Joint industry-Academic lab

RENAULT

Virtual Immersive Lab

EDF

Modelisation of
Electrical Devices

STELLANTIS

Marerials and
Processes

INRS
Institut National de Recherche et de Sécurité

Human Centered
Safety and Security

Valeo

Thermal System for
Ground Mobility

cetim

Metrology 4.0

cetim

Stamping 4.0

ARKEMA
INNOVATIVE CHEMISTRY

High performance
polymers and composites

Air Liquide

High T° material behavior
Under O_2 environment.

Arts et Métiers Institute of Technology

Arts et Metiers Partnerships in China

In 2018, Arts et Métiers and Beihang University celebrated 30 years of collaboration

IN BEIJING
Beihang University
Tsinghua University

IN SHANGHAI
Tongji University
Shanghai Jiao Tong University

IN NANJING
Nanjing University of Aeronautics and Astronautics
Southeast University

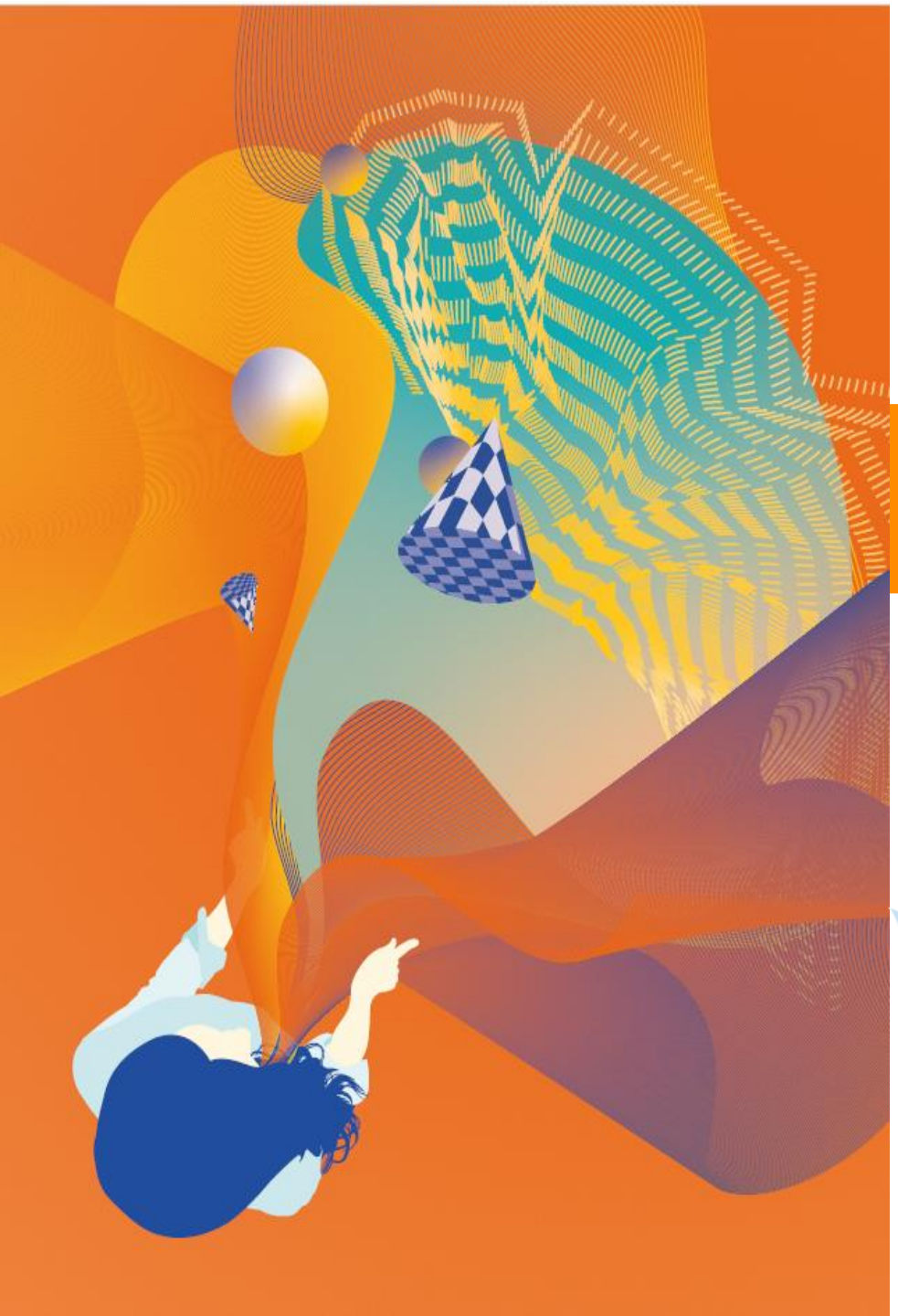
IN HARBIN
Harbin Institute of Technology

IN XI'AN
Xi'an Jiaotong University

IN CHONGQING
Chongqing University

RESEARCH AT ESPCI PARIS - PSL

COSTANTINO CRETON



ParisTech

ParisTech – CSC PhD Program

ESPCI PARIS | PSL

18 PhD proposals **7** Fields of research **7** Labs

Physique et Mécanique des Milieux Hétérogènes UMR 7636

Chimie Moléculaire, Macromoléculaire, Matériaux

Institut Langevin ONDES ET IMAGES

CBI CHIMIE BIOLOGIE INNOVATION

Laboratoire de Physique et d'Étude des Matériaux

SIMM

UMR 7083 Gulliver

Find the video on ParisTech China Bilibili account!

RESEARCH UNITS / INSTITUTES

Research domains at ESPCI Paris – PSL:

Biology

- **Brain Plasticity Lab** – neurosciences + proteomics
- **Physics for Medicine** – wave physics for medicine

Chemistry

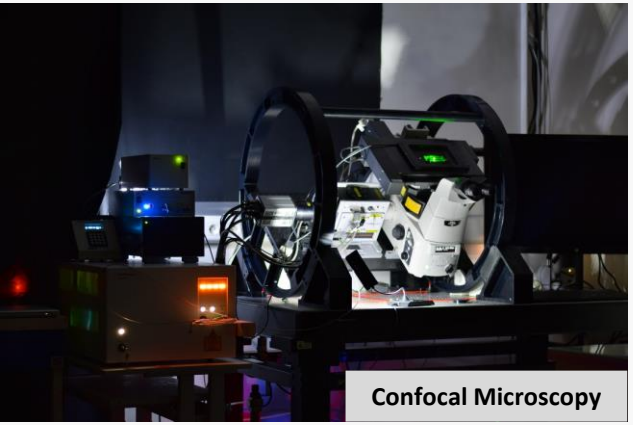
- **Chemistry of Molecules and Materials** – chemistry of molecules and materials
- **Soft Matter Science and Engineering, Institute of Porous Materials (IPM)** – Soft Matter, Materials Science & Complex Fluids
- **CBI** – microfluidics for physical chemistry and pharmaceutics

Physics

- **Institut Langevin, Physics for Medicine** – wave physics and applications
- **Physics & Materials Lab** – solid state physics, nanosciences
- **PMMH** – hydrodynamics and solid mechanics
- **Gulliver** – Soft Matter Physics

RESEARCH UNITS / INSTITUTES

RESEARCH INFRASTRUCTURES


Confocal Microscopy


3D Printing


Microfluidic

SOME KEY RESEARCHERS ESPCI PARIS - PSL


MATHIAS FINK
ULTRASOUNDS (ERC)


MICKAEL TANTER
IMAGERY FOR MEDICINE (ERC)


CHRISTIAN SERRE
METAL ORGANIC FRAMEWORKS


ANKE LINDNER
COMPLEX FLUIDS
CNRS SILVER MEDAL


ANDREW GRIFFITHS
MICROFLUIDICS FOR PHARMA (ERC)


SANDRINE ITHURRIA
QUANTUM DOTS (ERC)

Name

Name

RESEARCH UNITS / INSTITUTES

KEY FACTS / FIGURES

522 researchers / teacher-researchers
267 PhD candidates

Prestigious partnerships with academic laboratories and companies

About 500 publications per year including
10-15% in journals with impact factor > 10

30 patents per year
3 startups created each year

6 Nobel Prizes, 17 ERC grants, CNRS Silver Medal, UNESCO-L'Oréal For Women in Science awardees Young Researchers

ParisTech
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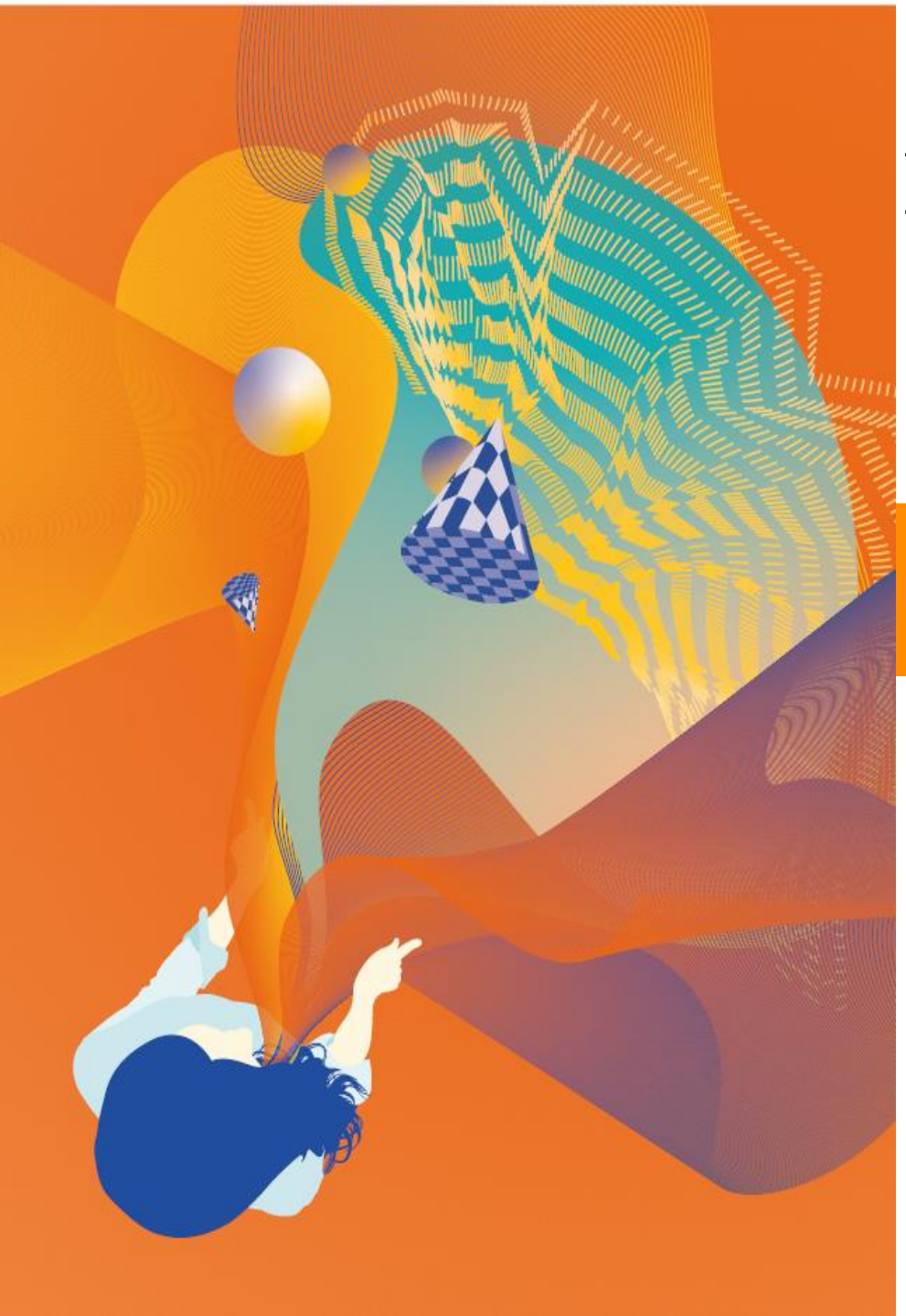
RESEARCH AT CHIMIE PARISTECH - PSL

ILARIA CIOFINI



ParisTech

ParisTech – CSC PhD Program

Chimie Paris ParisTech | PSL

16 PhD proposals **5** Fields of research **2** Labs

I-CLeHS

IRCP Institut de Recherche de Chimie Paris

ParisTech
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ChimieParisTech-PSL

Chimie Paris | PSL
ParisTech

3 Laboratoires

IRCP | Institut de Recherche de Chimie Paris

i-CLeHS — Institute of Chemistry for Health and Life Sciences

IPVF — Institut Photovoltaïque d'Ile de France

ChimieParisTech-PSL key figures

KEY FACTS / FIGURES

115 researchers and teacher-researchers
93 PhD >60 % of international doctoral students
Roughly 50% of PhD funded by companies

Average of 25 publications per month
more than 30% with international collaborators

Average of 7 patents a year

Lab's or staff's' Awards

6 ERC grants (3Adv, 2 CoG, 1 StG)
1 ERC POC; 1 Pathfinder; 2 FET-Open
Participation to several ITN projects

CNRS Bronze medal 2023
CNRS Silver medal 2022
1 IUF senior

Several international prices (France-Berkeley Funds Award, Swiss National Science Foundation, L'Oréal Unesco, Dalton division ....)

Partnerships with academic laboratories and companies.

1 industrial chair

INSTITUTE OF CHEMISTRY FOR LIFE AND HEALTH SCIENCES

Research domain(s): Chemistry for Health and Life Sciences (from theoretical and physical chemistry to organic and bio-inorganic chemistry)

Director : Pr. Carlo Adamo

Catalysis, Synthesis of Biomolecules and Sustainable Development
CSB2D

Dr. Virginie VIDAL

Theoretical and Computational Chemistry
TCM

Dr. Ilaria CIOFINI

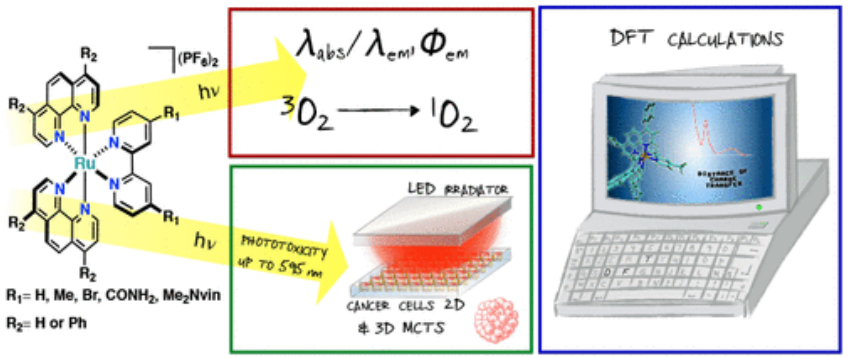
Inorganic Chemical Biology
ICB

Pr. Gilles GASSER

Synthesis, Electrochemistry, Imaging and Analytical Systems for Diagnosis
SEISAD

Pr. Anne VARENNE

Design and Optimization of novel PDT compounds



JACS (2020)

nature COMMUNICATIONS

ARTICLE

Check for updates

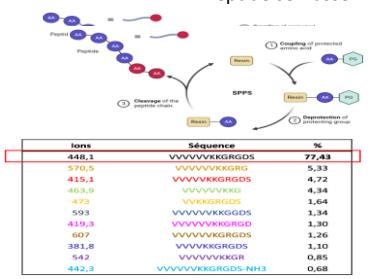
https://doi.org/10.1038/s41467-020-16993-0 OPEN

Rationally designed ruthenium complexes for 1- and 2-photon photodynamic therapy

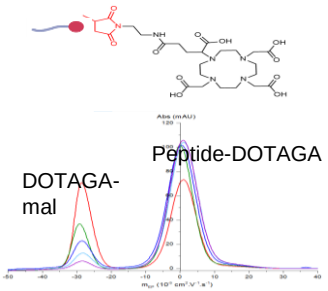
Johannes Karges[1], Shi Kuang[2], Federica Maschietto[3], Olivier Blacque[4], Ilaria Ciofini[3], Hui Chao[2✉] & Gilles Gasser[1✉]

Peptide-based nano-architectures for theranostics

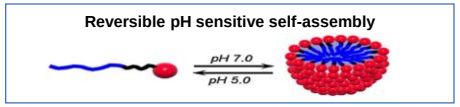
- Solid phase peptide synthesis in continuous flow
- Peptide functionalization for MRI
- Peptide characterization by CE-MS
- Peptide self-assembly for therapeutic delivery



Ions	Séquence	%
448,1	VVVVVVVKKGRGDS	77,43
570,5	VVVVVVVKKGRG	5,33
415,1	VVVVVVKKGRGDS	4,72
463,9	VVVVVVVKKG	4,34
473	VVKKGRGDS	1,64
593	VVVVVVKKGGDS	1,34
419,3	VVVVVVKKGRGD	1,30
607	VVVVVVKGRGDS	1,26
381,8	VVVVKKGRGDS	1,10
542	VVVVVVKKGR	0,85
442,3	VVVVVVKKGRGDS-NH3	0,68

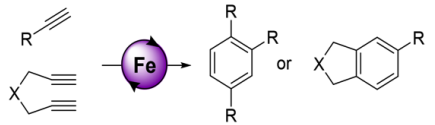


A.Am et al. J. Chromatogr. A (2023, under minor revision)
F. d'Orlyé et al, Molecules (2021) 26, 4587



Cycloadditions ACS Catal (2023); Org Lett (2022)

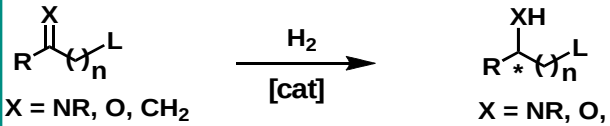
- ***[2+2+2] cycloaddition***
- ***functional tolerance***
- ***mechanistic studies***



erc European Research Council

Asymmetric Reductions: Hydrogenation and Transfer Hydrogenation

Chem Comm (2018); Nature Comm (2022)



SEQENS pcas more than chemistry XORGAPHARM Active for your synthesis

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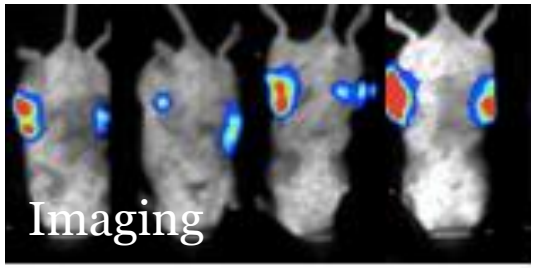
INSTITUTE OF CHEMISTRY FOR LIFE AND HEALTH SCIENCES

RESEARCH INFRASTRUCTURES



Strong industrial partnerships

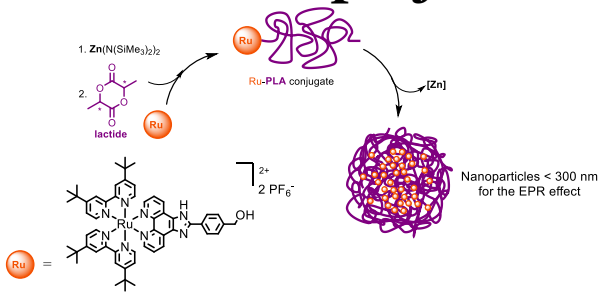
SELECTED PROJECTS

4 ERC projects

2 in theoretical chemistry:
Ilaria Ciofini (CoG) & Carlo Adamo (AdG)
1 Organic chemistry / Catalysis
Guillaume Lefevre (StG)
1 bioinorganic chemistry /anticancer drugs
Gilles Gasser

European Research Council
Established by the European Commission

1 ERC POC project



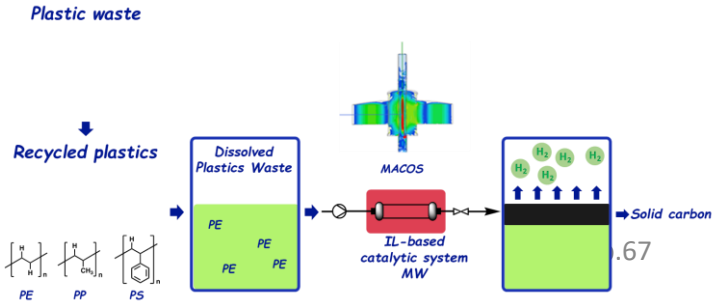
Ruthenium-containing Polymers against Ovarian Cancers

RuCoPOC

European Innovation Council

Pathfinder Open

WASTE2H2



List of subjects (8) for this year

- Towards Cancer-Cell Selective, Near-Infrared-Absorbing Bimetallic Photosensitizers for Photodynamic Therapy in Hypoxia (G. Gasser/K. Cariou, ICB)
- Engineering of Multimodal Magnetic Resonance and optical Imaging using activable theranostic nanoparticles for PDT and PTT against cancer (BT Doan, SEISAD)
- Analysis of patient language, heterogeneous data using automated Artificial Intelligence methods for quality of life in oncology (BT Doan, SEISAD)
- New class of electrochemicalAptasensors for early disease diagnosis (C. Slim, S. Griveau, SEISAD)
- Following excited states evolution using Density Based methods (I. Ciofini, TCM)
- Improving the data efficiency of machine learning models with descriptors derived from quantum chemistry (T. Stuver, TCM)
- Asymmetric Catalysis toward BioRelevant Architecturally Novel Natural and Unnatural Products (V. Vidal, P Phansavath CSB2D)
- Multicomponent transformations involving Acetylenic Compounds mediated by new Low-Valent Iron Catalysts (G. Lefevre, CSB2D)

INSTITUT DE RECHERCHE DE CHIMIE PARIS

IRCP Institut de Recherche de Chimie Paris

Research domain(s): Chemistry of Materials, Energy Production and Storage, Chemical Engineering

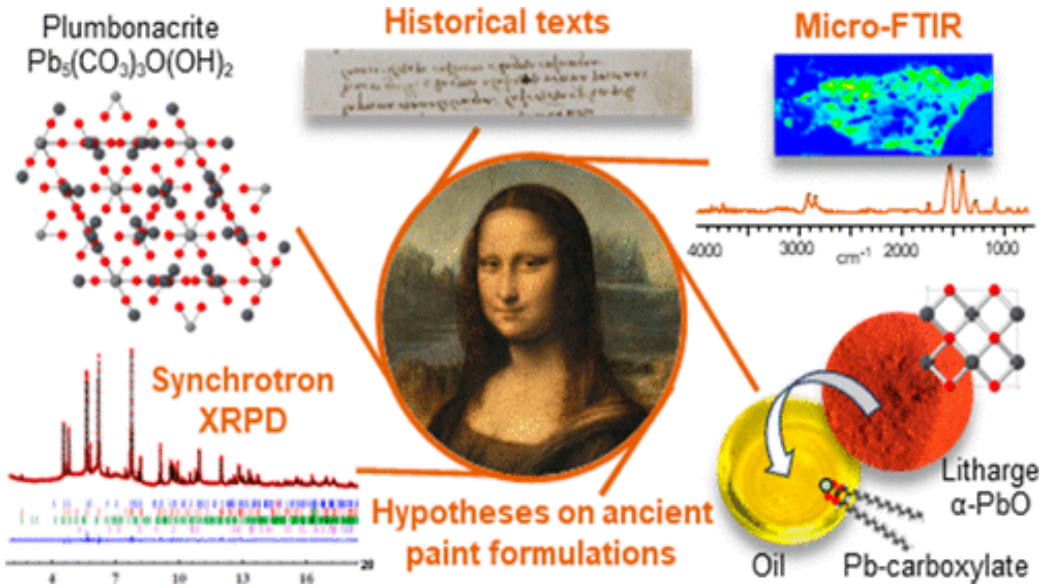
Director : Dr. Michel Mortier

- Procédés Plasmas, Microsystèmes (2PM)
  Resp. Pr Michael Tatoulian
- Interfaces, Electrochimie-Energie (I2E)
  Resp. Dr Armelle Ringuedé
- Matériaux pour la Photonique et l'Optoélectronique (MPOE)
  Resp. Pr Gérard Aka
- Métallurgie Structurale (MS)
  Resp. Pr Frédéric Prima
- Chimie Organométallique et Catalyse de Polymérisation (COCP)
  Resp. Pr Christophe Thomas
- Matériaux, Interfaces et Matière Molle(MIM2)
  Resp. Dr Min-Hui Li
- Physico-Chimie des Surfaces (PCS)
  Resp. Philippe Marcus
- Physico-Chimie des Matériaux Témoin de l'Histoire (PCMTH)
  Resp. Pr Gilles Wallez

X-ray and Infrared Microanalyses of *Mona Lisa*'s Ground Layer and Significance Regarding Leonardo da Vinci's Palette

Victor Gonzalez*, Gilles Wallez, Elisabeth Ravaud, Myriam Eveno, Ida Fazlic, Tiphaine Fabris, Austin Nevin, Thomas Calligaro, Michel Menu, Vincent Delieuvin, and Marine Cotte

Cite this: *J. Am. Chem. Soc.* 2023, 145, 42, 23205–23213

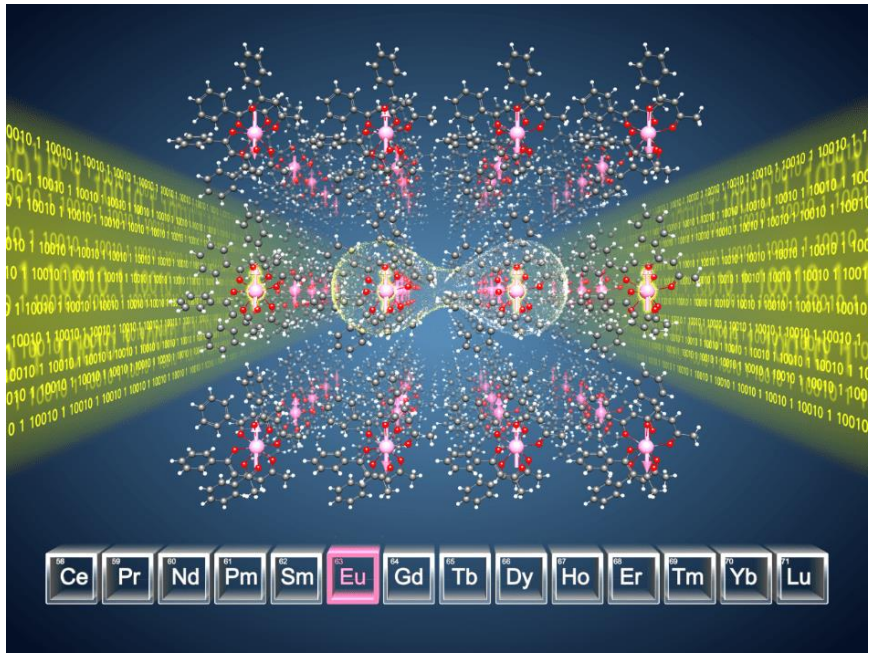


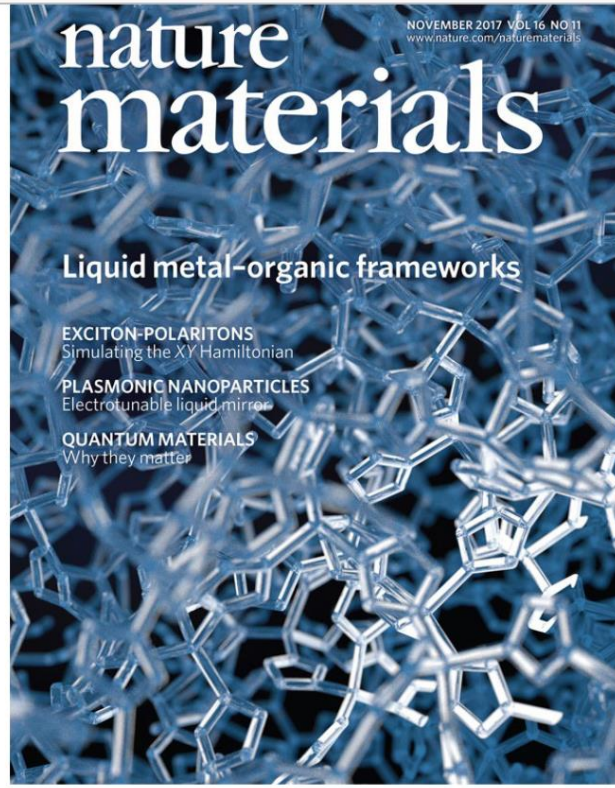
Article | Published: 09 March 2022

Ultra-narrow optical linewidths in rare-earth molecular crystals

Diana Serrano, Senthil Kumar Kuppusamy, Benoît Heinrich, Olaf Fuhr, David Hunger, N & Philippe Goldner

Nature **603**, 241–246 (2022) | Cite this article

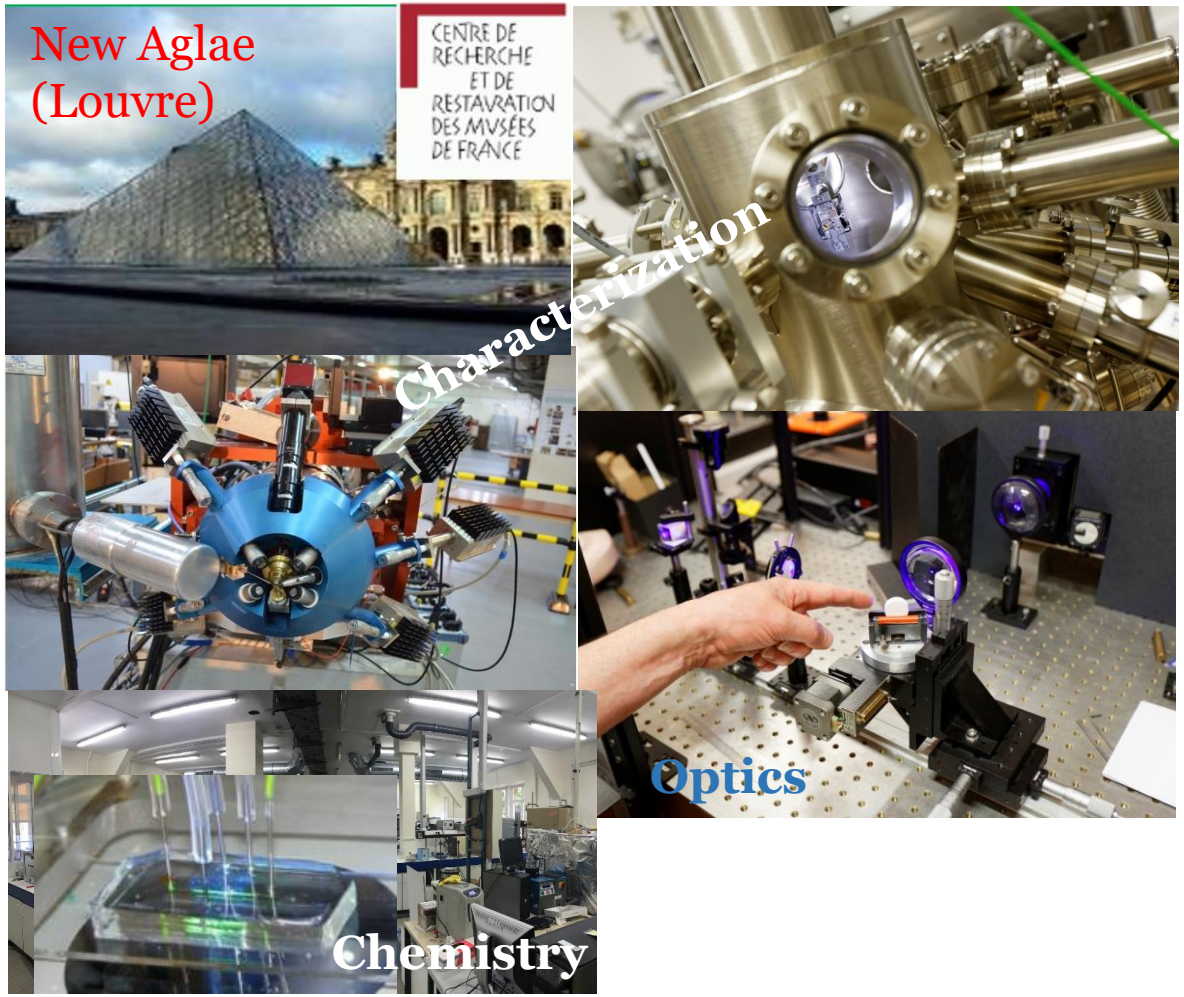




INSTITUT DE RECHERCHE DE CHIMIE PARIS

IRCP | Institut de Recherche de Chimie Paris

RESEARCH INFRASTRUCTURES



SELECTED PROJECTS

2 ERC projects
1 surface science:
Philippe Marcus (AdG)
1 quantum materials
Philippe Goldner (AdG)

erc
European Research Council
Established by the European Commission

FET open : NanoQTech & Square
H2020 European Project Bio-Based Industries Research and Innovation

PEPR Action H2

Strong industrial partnerships (Labcoms/collaborations)

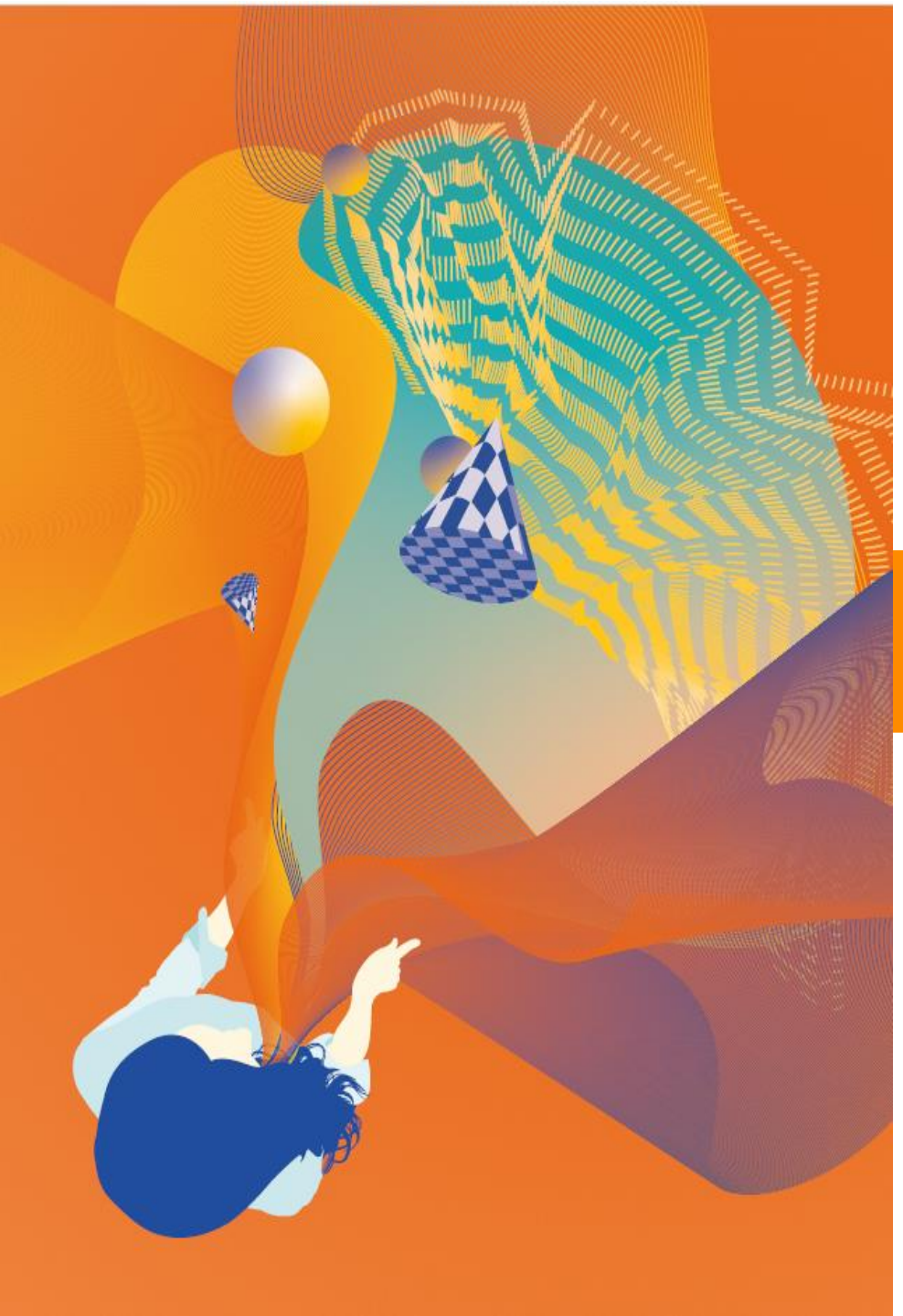
List of subjects (8) for this year

Institut de Recherche de Chimie Paris

- Studying Amorphous Solids and Liquids through Machine-Learned Potentials based on Ab initio DataSubject (FX Coudert, COCP)
- Harnessing Tandem Catalysis for the Synthesis of Biobased Polymers from Renewable Resources (C. Thomas, COCP)
- Eco-Efficient Processes for the Synthesis of Sustainable Polymers (R. Gauvin, C. Thomas, COCP)
- Design of Biocompatible and Biodegradable Polymer-Coated Nanoparticles as Vectorizing Agents (R. Gauvin, COCP)
- Investigating TWIP and TRIP Effects in Ti and Zr Metastable Alloys Via Advanced in-situ Methods (F. Sun, P. Vermaut, MS)
- Investigations of Mechanical Properties and Corrosion Dynamics of Zn-Based Bioresorbable Alloys (F. Sun, K.Ogle, MS)
- Enhanced Passivity and Corrosion Resistance of Multi Principal Element Alloys (D. Mercier, PCS)
- Functional Polymer Nanoparticles by ring-opening-induced self-assembly (ROPISA) for photobiocatalyst and anticancer theraphy (M-H Li MIM2)

Research at École des Ponts ParisTech

Virginie Ehrlacher



ParisTech

PARISTECH – CSC PHD PROGRAM

École des Ponts ParisTech

5 PhD proposals **6** Fields of research **4** Labs

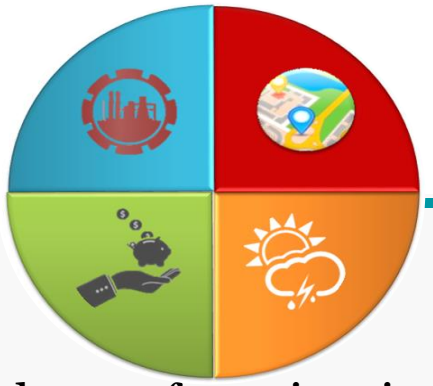
Navier

HM&C

Leesu
Laboratoire Eau Environnement et Systèmes Urbains

CERMICS
École des Ponts ParisTech

Research domains at Ecole des Ponts ParisTech



École des Ponts ParisTech

Industry of the future

NAVIER – ecomaterials, digital manufacturing, innovative structures, geomechanics
CERMICS – modelisation of uncertainty, digital simulation, systems optimisation
LIGM – data processing, 3D vision, big data

City and mobility systems

LVMT – sustainable mobility, territorial dynamics
LEESU – urban waters, alternative resources
CEREA – atmospheric environment, air quality, renewable energy

Management of risks, resources and milieus

HM&Co – hydro-meteorological risks, resilient cities
LMD – physics of atmosphere, climate
LHSV – renewable energy, natural risks

Economy, practices and society

LATTS – cities of future, infrastructures, policies
PjSE – public policies, environmental economy, markets and governance
CIRED – sustainable development, climate change

ParisTech
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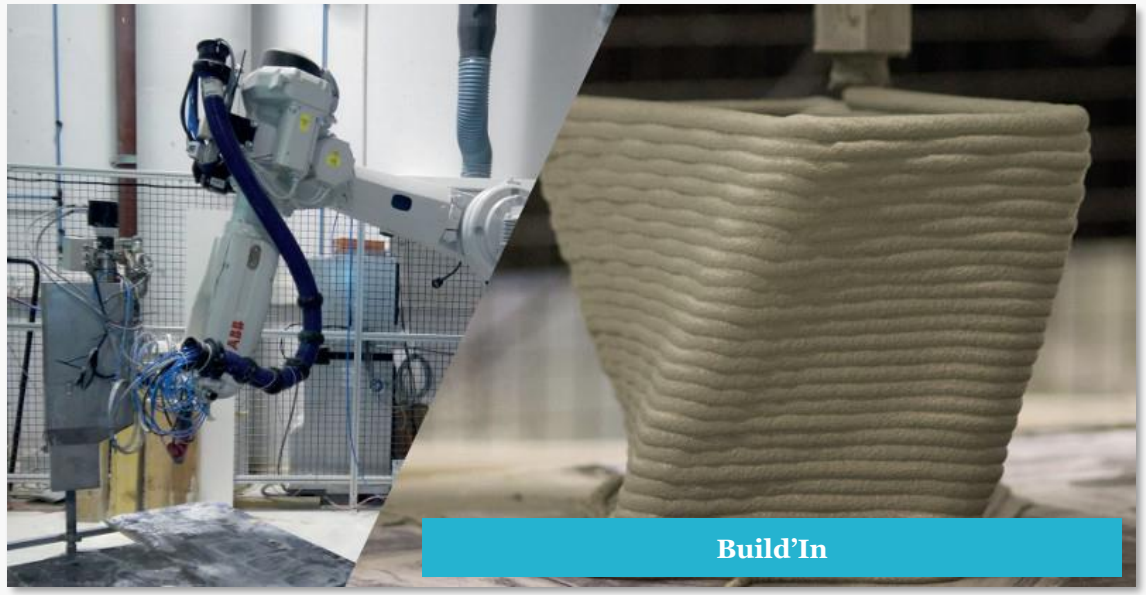
RESEARCH INFRASTRUCTURES

Fresnel

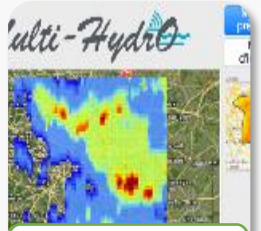


Build'In

X- band radar

Platform TARANIS

Blue-Green Wave



Multi-Hydro, RadX@HMo

EDF'lab Chatou

ParisTech
#Connect #Innovate #Share

RESEARCH AT ECOLE DES PONTS PARISTECH : KEY FACTS/FIGURES

465 researchers / teacher-researchers
540 PhD and post doctoral students including
46 % of international doctoral students

968 international publications in 2020
including 47% international co-publications

10 M€ contracts with companies

51% of research sponsored by industry

... and much more

3 ERC, a lot of PhD prizes, 1 For Women in science L'Oréal-UNESCO Young researcher etc.

Q&A

Q&A

- Question : Is there a specific English certificate I need to prepare to prove the English ability ?
- Answer : No, we accept all recognized English certificate (TOEIC, TOEFL,CET 4 or 6...)

- Question : I am in PhD 3rd years, can I apply this project?
- Answer :Yes, it's possible for co-supervised students.

- Question : Should I provide all my transcripts of bachelor and master?
- Answer :Yes.

- Question : How can I get the PPT and the video today?
- Answer : We will send the slides to all participants and you can watch the video on bilibili or our website.

- Question : Do the applicants need to use PPT to introduce ourselves at the beginning?
- Answer : You can prepare it if you want, but it is not necessary.

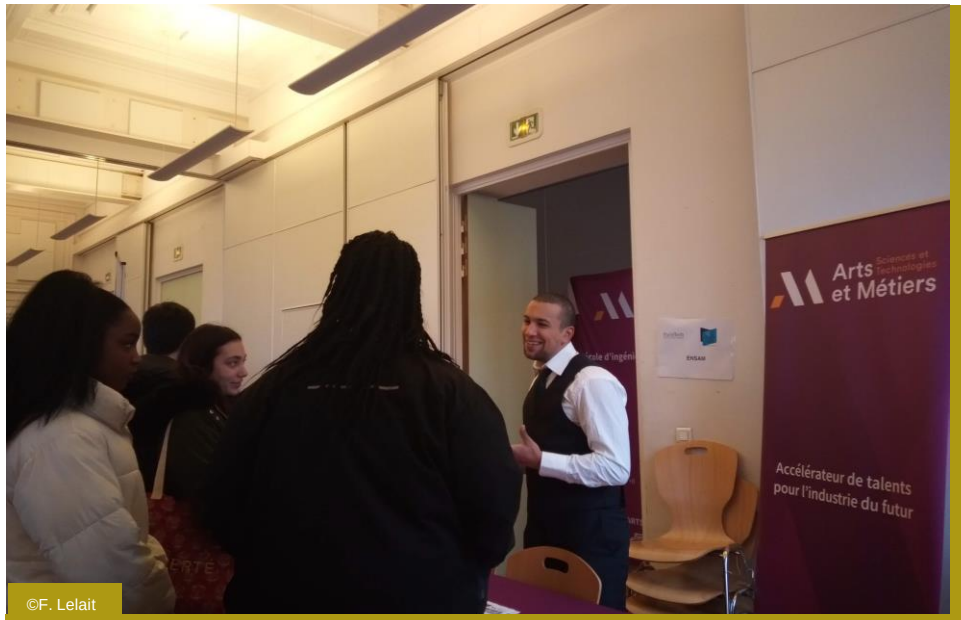
- Question : I am currently working now, can I apply this program if the company agrees?
- Answer : Yes.

- Question : Is the project just for students who apply for the CSC scholarship or it's also for the funding-supported study?
- Answer : This program is just for students with CSC scholarship.

Q&A

- Question : Do we need to contact professors before the application?
- Answer : We highly recommend you to contact the supervisors as soon as possible.

- Question : Can Visiting/Joint PhD students obtain the PhD degree from the French university they study?
- Answer :Yes.



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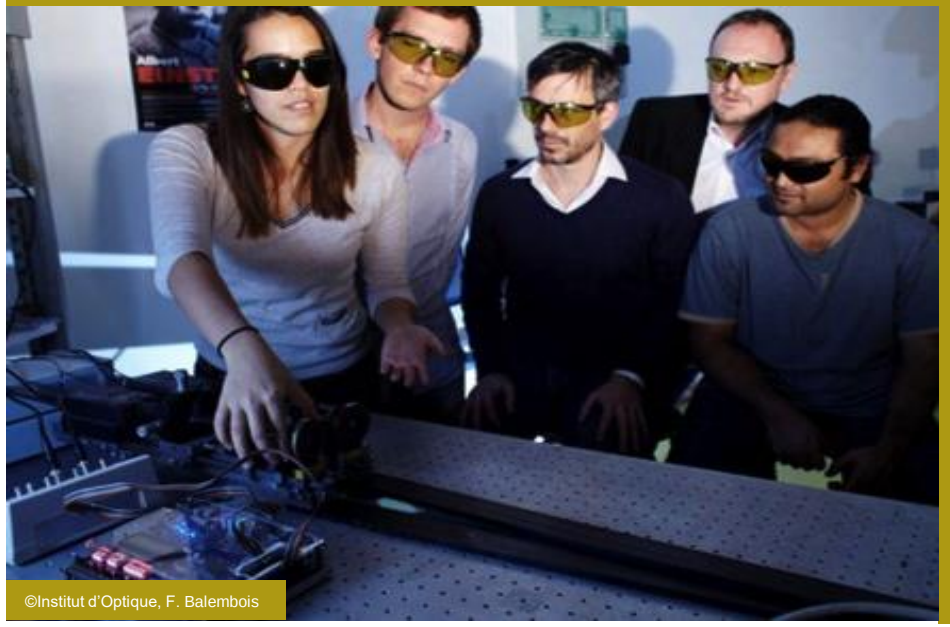

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4. Labs and PhD proposals

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ROOMS / THEMES

ROOM 1	Chemistry, Physical chemistry and Chemical Engineering
ROOM 2	Life and Health science + Environment Science and Technology, Sustainable Development, Geosciences
ROOM 3	Information and Communication Science and Technology + Mathematics and their applications + Energy, Processes + Design, Industrialization
ROOM 4	Material science, Mechanics and Fluids
ROOM 5	Physics, Optics

ROOM1 - Chemistry, Physical chemistry and Chemical Engineering

File number	School	Title	Advisors	Laboratoire
2023_069	Chimie ParisTech - PSL	New class of electrochemical Aptasensors for early disease diagnosis	Sophie GRIVEAU, Cyrine SLIM	I-CLEHS - Institute of chemistry for life and health
2023_065	ESPCI Paris - PSL	Probing solid/electrolyte interfaces with single-charge nanofluidics	Jean Comtet	SIMM - Sciences et ingénierie de la matière molle
2023_061	ESPCI Paris - PSL	Microfluidics for algae selection	Annie COLIN	CBI - Chimie, Biologie et Innovation
2023_060	Chimie ParisTech - PSL	Multicomponent transformations involving Acetylenic Compounds mediated by new Low-Valent Iron Catalysts	Guillaume LEFEVRE, Virginie VIDAL, Phannarath PHANSAVATH	I-CLEHS - Institute of chemistry for life and health
2023_048	Chimie ParisTech - PSL	Asymmetric Catalysis toward BioRelevant Architecturally Novel Natural and Unnatural Products	Virginie Vidal, Phannarath Phansavath	I-CLEHS - Institute of chemistry for life and health
2023_046	ESPCI Paris - PSL	Exploring New Concepts for Polymer Upcycling using Solvent-Free Processes	Renaud Nicolaÿ, Nathan Van Zee	C3M - Chimie Moléculaire, Macromoléculaire, et Matériaux
2023_045	ESPCI Paris - PSL	High-throughput selection and computational design of catalytic antibodies	Olivier Rivoire	GULLIVER - Voyages expérimentaux et théoriques en matière molle
2023_043	ESPCI Paris - PSL	Enhancing the mechanical properties of polyolefin blends by exploiting supramolecular coassembly	Nathan Van Zee	C3M - Chimie Moléculaire, Macromoléculaire, et Matériaux
2023_036	Chimie ParisTech - PSL	Design of Biocompatible and Biodegradable Polymer-Coated Nanoparticles as Vectorizing Agents	Regis Gauvin, Christophe Thomas	IRCP - Institut de Recherche de Chimie de Paris
2023_035	Chimie ParisTech - PSL	Eco-Efficient Processes for the Synthesis of Sustainable Polymers	Regis Gauvin, Christophe Thomas	IRCP - Institut de Recherche de Chimie de Paris
2023_034	Chimie ParisTech - PSL	Harnessing Tandem Catalysis for the Synthesis of Biobased Polymers from Renewable Resources	Christophe Thomas	IRCP - Institut de Recherche de Chimie de Paris
2023_030	Chimie ParisTech - PSL	Enhanced Passivity and Corrosion Resistance of Multi Principal Element Alloys	Dimitri mercier	IRCP - Institut de Recherche de Chimie de Paris
2023_029	Chimie ParisTech - PSL	Improving the data efficiency of machine learning models with descriptors derived from quantum chemistry	Thijs Stuyver	I-CLEHS - Institute of chemistry for life and health
2023_020	Chimie ParisTech - PSL	Following excited states evolution using Density Based methods	Ilaria Ciofini, Frederic Labat	I-CLEHS - Institute of chemistry for life and health
2023_019	ESPCI Paris - PSL	Synthesis of functionalized macrocycles using a ring-expansion strategy	Benjamin Laroche	C3M - Chimie Moléculaire, Macromoléculaire, et Matériaux
2023_016	Chimie ParisTech - PSL	Studying Amorphous Solids and Liquids through Machine-Learned Potentials based on Ab initio Data	François-Xavier Coudert	IRCP - Institut de Recherche de Chimie de Paris
2023_010	Chimie ParisTech - PSL	FUNCTIONAL POLYMER NANOPARTICLES BY RING-OPENING POLYMERIZATION-INDUCED SELF-ASSEMBLY (ROPISA) FOR PHOTOBIOCATALYST AND ANTICANCER PHOTOTHERAPY	Min-Hui Li	IRCP - Institut de Recherche de Chimie de Paris
2023_002	Chimie ParisTech - PSL	Towards Cancer-Cell Selective, Near-Infrared-Absorbing Bimetallic Photosensitizers for Photodynamic Therapy in Hypoxia	Gilles Gasser, Kevin Cariou	I-CLEHS - Institute of chemistry for life and health

ROOM2 - Life and Health science + Environment Science and Technology, Sustainable Development, Geosciences

File number	School	Title	Advisors	Laboratoire
2023_070	Arts et Métiers	Modeling control parameters for thrombosis formation in ventricular assist devices	SMAINE KOUIDRI, MATHIEU SPECKLIN	LIFSE - Laboratoire Ingénierie des Fluides Systèmes Energétiques
2023_066	Ecole des Ponts ParisTech	Multiscale extremes of long-range dependent geophysical data	Ioulia TCHIGUIRINSKAIA, Daniel SCHERTZER	HM & Co - Hydrologie Météorologie et Complexité
2023_059	Ecole des Ponts ParisTech	Biocides in urban runoff: measurement and modelling for emission and fate assessment at the neighbourhood level	Marie-Christine Gromaire, Adèle Bressy	LEESU - Laboratoire Eau environnement et systèmes urbains
2023_056	Ecole des Ponts ParisTech	Foam-MICP: Foam mediated Microbiologically Induced Calcite Precipitation	Olivier PITOIS, Anh-Minh TANG	Laboratoire NAVIER (mécanique, physique des matériaux et des structures, géotechnique)
2023_051	Ecole des Ponts ParisTech	PhD Research Position on Efficiency of performic acid (an oxidizing agent) on antibiotic resistance bacteria (ARB) and genes (ARGs)	Adèle Bressy, My Dung Jusselme, Régis Moilleron	LEESU - Laboratoire Eau environnement et systèmes urbains
2023_032	Arts et Métiers	Use of emulsified zerovalent iron for soil remediation : experimental investigation at the Darcy scale	Azita AHMADI-SENICHAULT, Antonio RODRIGUEZ DE CASTRO	I2M - Institut de Mécanique et d'ingénierie
2023_018	Chimie ParisTech - PSL	Analysis of patient language, heterogeneous data using automated Artificial Intelligence methods for quality of life in oncology	Bich-Thuy Doan, Bich-Lien Doan, Pierre André Buvet, #ERRORno	I-CLEHS - Institute of chemistry for life and health
2023_003	Chimie ParisTech - PSL	Engineering of Multimodal Magnetic Resonance and optical Imaging using activable theranostic nanoparticles for PDT and PTT against cancer in preclinics	Bich-Thuy Doan	I-CLEHS - Institute of chemistry for life and health

ROOM3 – Information and Communication Science and Technology + Mathematics and their applications + Energy, Processes + Design, Industrialization

File number	School	Title	Advisors	Laboratoire
2023_067	Arts et Métiers	Extended Realty for Real-Time Visualization of Intravenous Fluid Flow	Samir GARBAYA, Sofiane KHELLADI	LIFSE - Laboratoire Ingénierie des Fluides Systèmes Energétiques
2023_064	ESPCI Paris - PSL	Micro-objects in interaction with viscoelastic fluids	OLIVIA DU ROURE, ANKE LINDNER	PMMH - Physique et mécanique des Milieux Hétérogènes
2023_058	ESPCI Paris - PSL	Studying Cavitation of soft confined layers with force-sensitive molecules (mechanophores)	Costantino Creton, Etienne Barthel	SIMM - Sciences et ingénierie de la matière molle
2023_054	Chimie ParisTech - PSL	Investigations of Mechanical Properties and Corrosion Dynamics of Zn-Based Bioresorbable Alloys	Fan SUN, Kevin Ogle	IRCP - Institut de Recherche de Chimie de Paris
2023_053	Chimie ParisTech - PSL	Investigating TWIP and TRIP Effects in Ti and Zr Metastable Alloys Via Advanced in-situ Methods	Fan SUN, Philippe Vermaut	IRCP - Institut de Recherche de Chimie de Paris
2023_052	ESPCI Paris - PSL	Collective actuation of a colloidal elastic matrix	Olivier Dauchot	GULLIVER - Voyages expérimentaux et théoriques en matière molle
2023_042	ESPCI Paris - PSL	Diffusio-osmosis on heterogeneous surfaces for Blue Energy	Corentin Tregouet, Annie Colin	CBI - Chimie, Biologie et Innovation
2023_028	Arts et Métiers	Higher-order continuum mechanics theories to predict small scale effect on the vibration properties of nanostructures	Adil El Baroudi, Jean Yves Le Pommellec, Amine Ammar	LAMPA - Laboratoire angevin de mécanique, procédés et innovation
2023_027	Arts et Métiers	Dynamics, stability and transition to turbulence of separation bubbles in flows of varying density	Ismaïl BEN HASSAN SAÏDI, Jean-Christophe ROBINET	DynFluid
2023_013	Arts et Métiers	Failure modeling of cementitious composites in the framework of gradient damage approach	Amine Ammar, Saber EL AREM, karim Miled	LAMPA - Laboratoire angevin de mécanique, procédés et innovation
2023_012	Arts et Métiers	Seismic cycle characteristics and dependence on rock rheology and friction	Amine AMMAR, Saber EL AREM, Soumaya Latour	LAMPA - Laboratoire angevin de mécanique, procédés et innovation
2023_011	Arts et Métiers	Additive manufacturing of high-performance Al matrix composite with multi-functional reinforcements	Mohamed El Mansori, Pei WANG, Nan KANG	MSMP - Laboratoire Mécanique, Surface, Matériaux et Procédés

ROOM4 – Materia l science, Mechanics and Fluids

File number	School	Title	Advisors	Laboratoire
2023_067	Arts et Métiers	Extended Realty for Real-Time Visualization of Intravenous Fluid Flow	Samir GARBAYA, Sofiane KHELLADI	LIFSE - Laboratoire Ingénierie des Fluides Systèmes Energétiques
2023_064	ESPCI Paris - PSL	Micro-objects in interaction with viscoelastic fluids	OLIVIA DU ROURE, ANKE LINDNER	PMMH - Physique et mécanique des Milieux Hétérogènes
2023_058	ESPCI Paris - PSL	Studying Cavitation of soft confined layers with force-sensitive molecules (mechanophores)	Costantino Creton, Etienne Barthel	SIMM - Sciences et ingénierie de la matière molle
2023_054	Chimie ParisTech - PSL	Investigations of Mechanical Properties and Corrosion Dynamics of Zn-Based Bioresorbable Alloys	Fan SUN, Kevin Ogle	IRCP - Institut de Recherche de Chimie de Paris
2023_053	Chimie ParisTech - PSL	Investigating TWIP and TRIP Effects in Ti and Zr Metastable Alloys Via Advanced in-situ Methods	Fan SUN, Philippe Vermaut	IRCP - Institut de Recherche de Chimie de Paris
2023_052	ESPCI Paris - PSL	Collective actuation of a colloidal elastic matrix	Olivier Dauchot	GULLIVER - Voyages expérimentaux et théoriques en matière molle
2023_042	ESPCI Paris - PSL	Diffusio-osmosis on heterogeneous surfaces for Blue Energy	Corentin Tregouet, Annie Colin	CBI - Chimie, Biologie et Innovation
2023_028	Arts et Métiers	Higher-order continuum mechanics theories to predict small scale effect on the vibration properties of nanostructures	Adil El Baroudi, Jean Yves Le Pommellec, Amine Ammar	LAMPA - Laboratoire angevin de mécanique, procédés et innovation
2023_027	Arts et Métiers	Dynamics, stability and transition to turbulence of separation bubbles in flows of varying density	Ismaïl BEN HASSAN SAÏDI, Jean-Christophe ROBINET	DynFluid
2023_013	Arts et Métiers	Failure modeling of cementitious composites in the framework of gradient damage approach	Amine Ammar, Saber EL AREM, karim Miled	LAMPA - Laboratoire angevin de mécanique, procédés et innovation
2023_012	Arts et Métiers	Seismic cycle characteristics and dependence on rock rheology and friction	Amine AMMAR, Saber EL AREM, Soumaya Latour	LAMPA - Laboratoire angevin de mécanique, procédés et innovation
2023_011	Arts et Métiers	Additive manufacturing of high-performance Al matrix composite with multi-functional reinforcements	Mohamed El Mansori, Pei WANG, Nan KANG	MSMP - Laboratoire Mécanique, Surface, Matériaux et Procédés

ROOM5 - Physics, Optics

School	Title	Advisors	Laboratoire
ESPCI Paris - PSL	Neuromorphic devices using vanadium dioxide	Lionel AIGOUY, Alexandre ZIMMERS, Zhuoying CHEN	LPEM - Laboratoire Physique et d'études des matériaux
ESPCI Paris - PSL	Lattice dynamics and electron-phonon coupling in high dielectric constant quantum materials	Ricardo Lobo	LPEM - Laboratoire Physique et d'études des matériaux
ESPCI Paris - PSL	Photon thermalization in disordered scattering media	Valentina Krachmalnicoff, Romain Pierrat	Institut Langevin
Arts et Métiers	Zonal structures and turbulence in burning plasmas	Alessandro Biancalani, Ozgur Gurcan	LIFSE - Laboratoire Ingénierie des Fluides Systèmes Energétiques
ESPCI Paris - PSL	Biophysics of the cell cortex	Julien Heuvingh, OLIVIA DU ROURE	PMMH - Physique et mécanique des Milieux Hétérogènes
ESPCI Paris - PSL	Spin-lattice coupling in the quantum paraelectric EuTiO3	Benoît Fauqué	LPEM - Laboratoire Physique et d'études des matériaux
ESPCI Paris - PSL	Irreversible algorithms for physical modeling	Anthony Maggs	GULLIVER - Voyages expérimentaux et théoriques en matière molle
ESPCI Paris - PSL	Non-local Intelligent Metasurfaces for Microwave Applications	Abdelwaheb Ourir, Julien de Rosny	Institut Langevin
ESPCI Paris - PSL	Time reversal mirror for radiofrequency signals	Anne Louchet-Chauvet	Institut Langevin