



# ParisTech



## **PARISTECH – CSC PHD PROGRAM**

NOVEMBER 14, 2024

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**Excellence in research**

**Research domains**

**Arts et Métiers Sciences et Technologies**

**Chimie ParisTech – PSL**

**ESPCI – PSL**

**Discussion in separate rooms**

# Webinar GUESTS



Arts et Métiers Sciences et Technologies – **Mohamed BEN BETTAIEB**, scientific advisor.

Arts et Métiers Sciences et Technologies points of contact (topics) - Marie BEDEL, Meriem BEN SAADA, Mohamed EL MANSOURI , Alaa HASSAN , Kenza AMZIL ,Nicolas MARANZANA, José HIDALGO , Tommaso CAPURSO, Samir GARBAYA, Mohamed JEBAH, Jean Camille.



Chimie ParisTech – PSL – **Ilaria CIOFINI**, VP Research –

**Note : Her presentation will start at 1pm in room 5.**

Chimie ParisTech- PSL point of contact (topics) Anne Varenne, Fanny d'Orlye, BT Doan, Cyrine Slim, Davide Avagliano



ESPCI Paris – PSL – Institut Langevin : **Xiaoping JIA**

ESPCI Paris – PSL – point of contact (topics) Sylvain Patinet



©Chimie ParisTech - PSL



©École des Ponts ParisTech

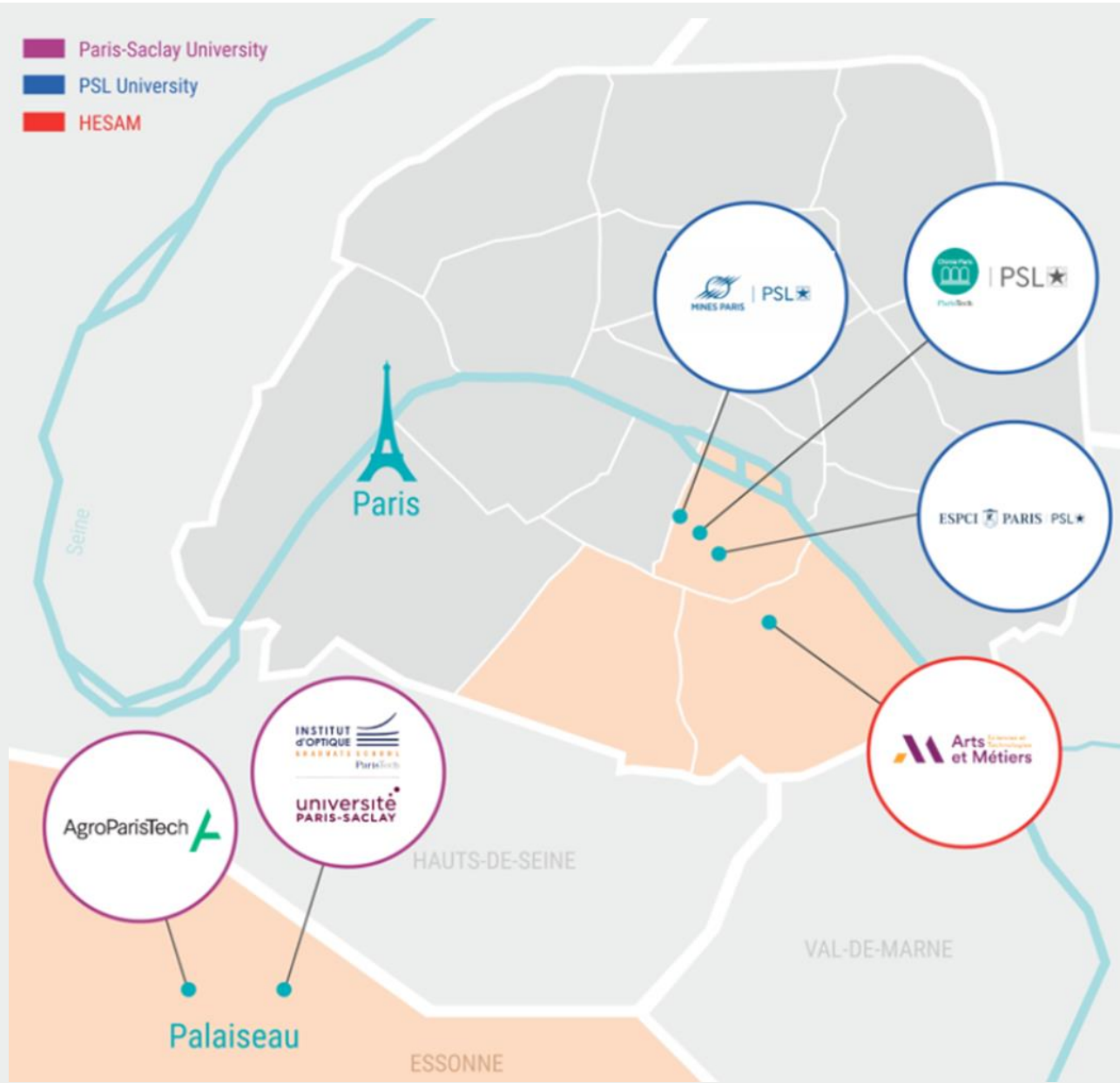
# 1. ParisTech introduction

# 6

## GRADUATE SCHOOLS IN PARIS

# 2

## CAMPUSES IN PARIS AREA



# ParisTech's network key figures



**11 000**  
students



**80**  
research laboratories



**70** international agreements



**1 550**  
PhD candidates



**39 %** of women



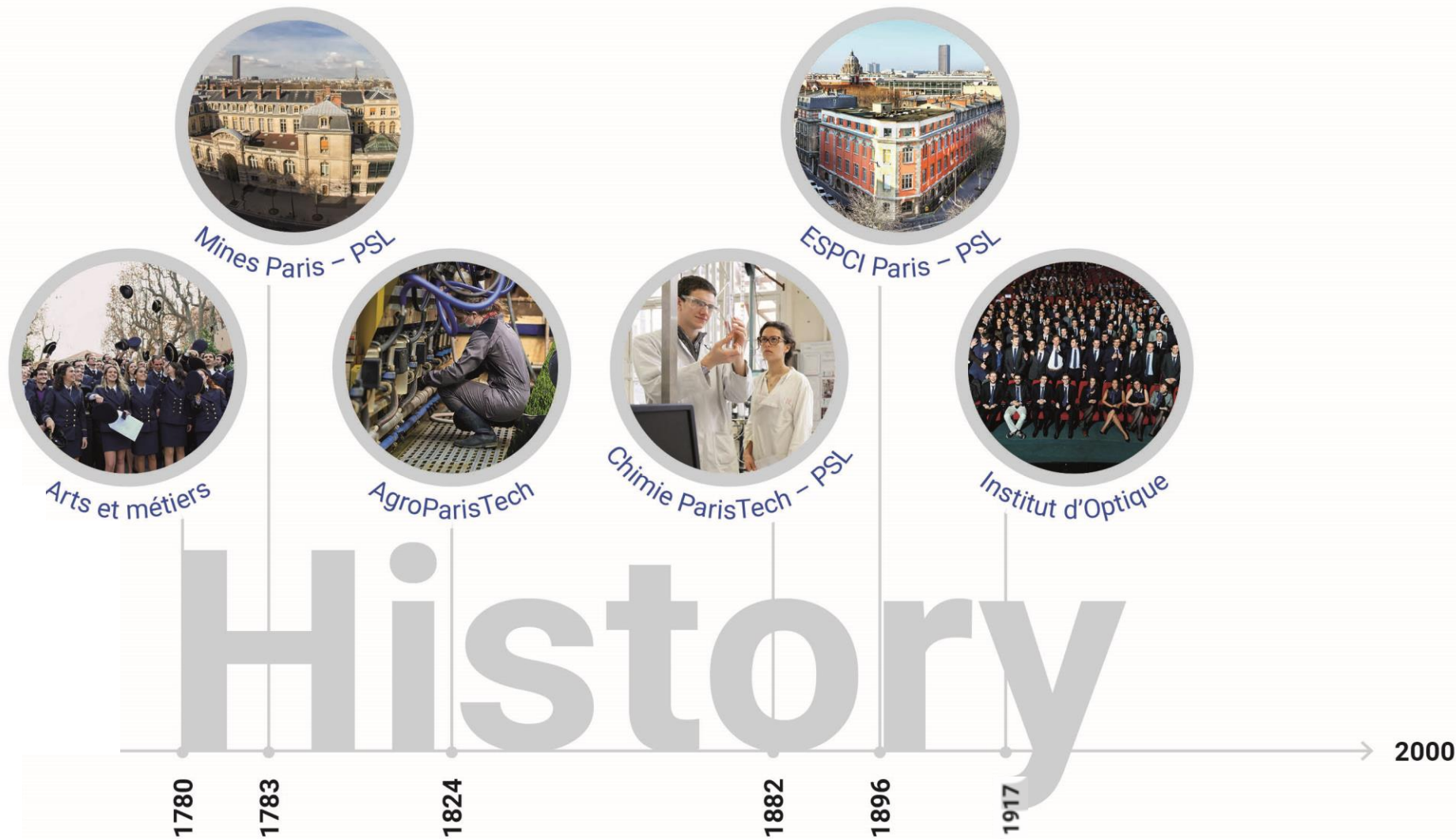
**8 800**  
student engineers



**34 %**  
of students  
accepted after a  
qualification-based selection



**100**  
entrepreneurs  
in the last 3 years





\*1 © Dominique Morisseau  
 \*2 © École polytechnique - J.Barande  
 \*3 © P. Renault/École des Ponts ParisTech



# Why choose France?

# Excellence in S&T and business



©Arnaud Bouissou / Terra



©Daniel Coutefer / Terra



©Arnaud Bouissou / Terra

- **7<sup>th</sup> 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**
  - 45<sup>th</sup> 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...)
  - Romanticism, 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 (5<sup>th</sup> in the world)
  - 3<sup>th</sup> 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 Bedoui

## 2. ParisTech – CSC PhD program

# 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 42 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.*

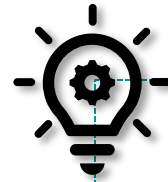
## WORKING

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).



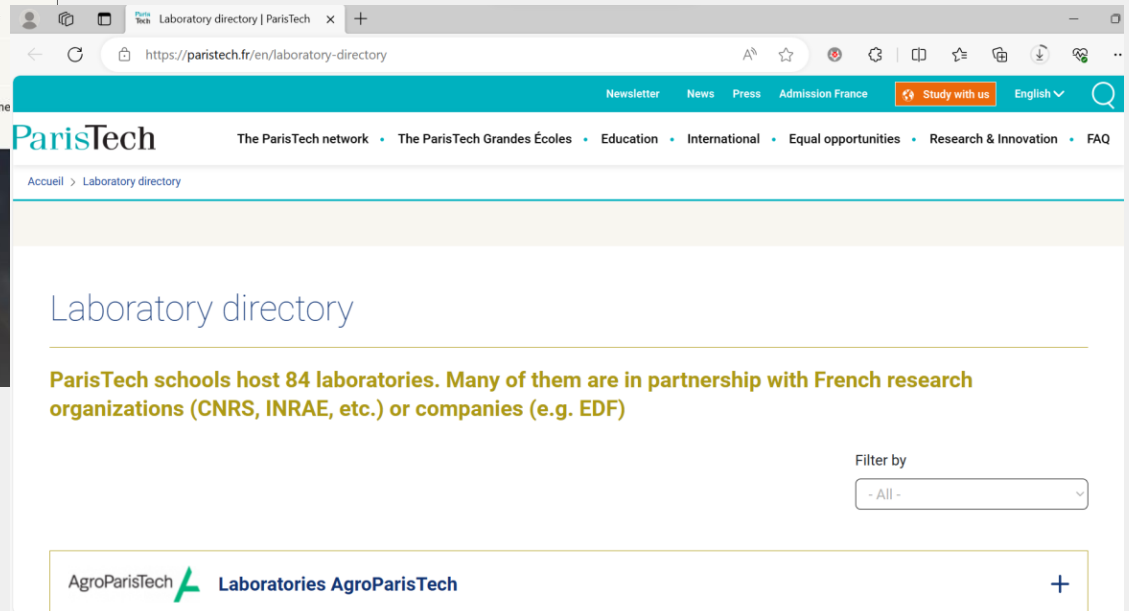
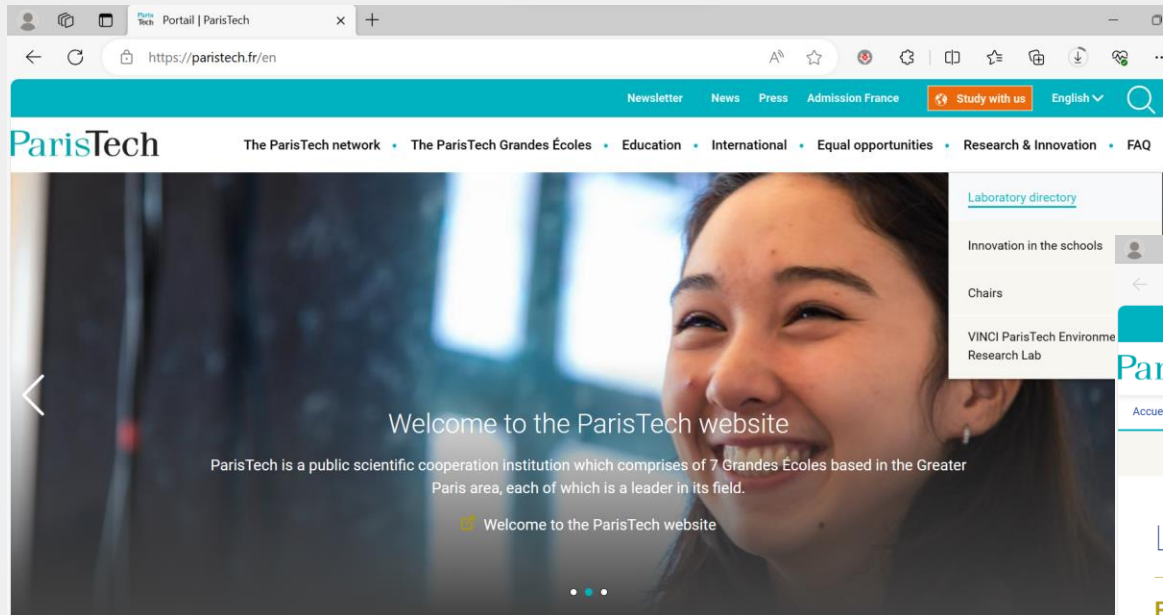
# Calendar & Steps

# 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.



# 2024-2025 Campaign

**16** RESEARCH LABS

**55** PHD PROPOSALS



**9** FIELDS OF ENGINEERING

**10** 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/ Eligibility

2/ Funding scheme

3/ Calendar for the 2024/2025 campaign

4/ List of PhD proposals

You can download here the

 [2025 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

October 28, 2024	(Publication of the Research proposals on Oct 16) <b>Start of online application process</b>
November 14, 2024	ParisTech-CSC PhD Program <b>Webinar</b> . <a href="#">Registration here</a>
<b>Midnight, December 8, 2024 (Paris time)</b>	<b>Application deadline</b>
December 20, 2024	Successful applicants will receive a notification to attend an interview.
<b>January 8-24, 2025</b>	<b>Online Interviews</b> with the ParisTech Admission Board
Late January to late February 2025	Online interviews with potential PhD advisors
<b>March 2025</b>	Admitted students will receive <b>a provisional admission letter to apply for the CSC scholarship.</b>
End of May / Early June 2025	Announcement of CSC scholarship results
June to September 2025	Awarded students will receive the official admission letter, and will be informed by the CSC about all the administrative procedures to follow before departure for France
September / October 2025	Arrival in France and beginning of the PhD

# Key points

## **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
- *ParisTech will guide through out the entire process, including the CSC application*

# 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	
ESPCI Paris - PSL	
Institut d'Optique Graduate School	
Mines Paris - PSL	

# Results

By the end of May 2025 – June 2025, the CSC will announce the list of successful candidates.

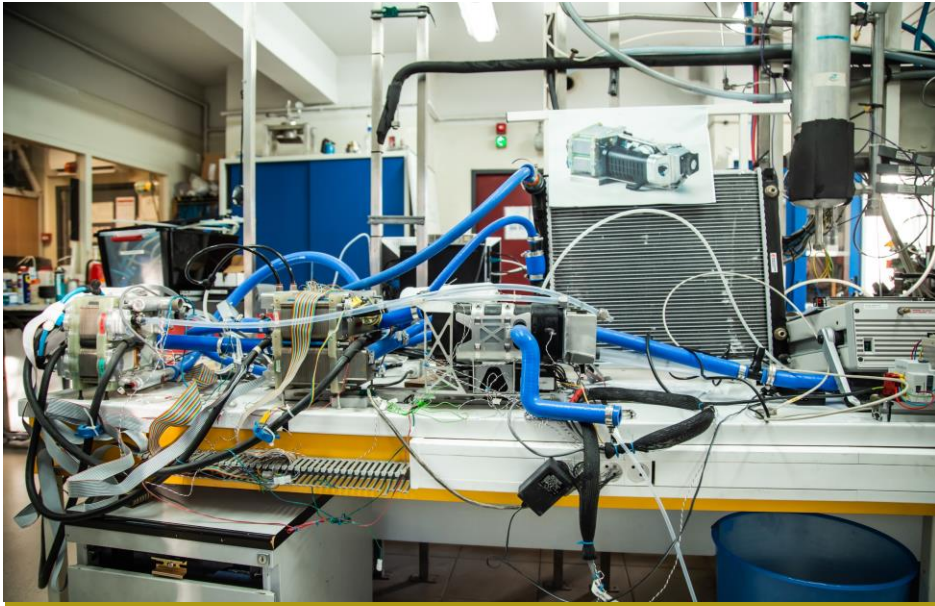
*Each year, over 100 candidates apply to this program, half get a proposal from a ParisTech school lab.*

*In 2024, 24 scholarships were granted by the CSC in our program.*

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 2025.





### 3. Research in ParisTech's Higher Education Institutions

# Excellence in Research

# Rankings



**University Paris-Saclay: 12<sup>th</sup> (1<sup>st</sup> 🇫🇷 )**  
**University PSL: 33<sup>rd</sup> (2<sup>nd</sup> 🇫🇷 )**  
**Arts et Métiers: 201-300 in Mechanical Engineering**

**2024**



**PSL: 24<sup>th</sup>**  
**University Paris-Saclay: 73<sup>rd</sup>**

**Engineering & Technology**  
 #35 UPSaclay  
 #55 PSL  
 #401-450 Arts et Métiers

**Natural sciences**  
 #15 PSL  
 #18 UPSaclay

**2025**



**PSL: 42<sup>nd</sup>**  
**Paris-Saclay University: 64<sup>th</sup>**  
**Arts et Métiers : 801-1000<sup>th</sup>**

**Engineering**  
 #72 PSL  
 #101-125 UPSaclay  
 #601-800 Arts et Métiers

**Physical Sciences**  
 #20 PSL  
 #32 UPSaclay

**Computer Science**  
 #35 PSL  
 #48 UPSaclay

**2025**

AgroParisTech

université  
PARIS-SACLAY

INSTITUT  
d'OPTIQUE  
GRADUATE SCHOOL  
ParisTech

université  
PARIS-SACLAY  
ParisTech

Chimie Paris  
ParisTech | PSL ★

ESPCI PARIS | PSL ★

MINES PARIS | PSL ★

PSL  
UNIVERSITÉ PARIS

Arts et Métiers  
Sciences et Technologies

# Partner national research institutes



Géosciences pour une Terre durable

**brgm**



**IFSTTAR**



**ParisTech**



*Inria*

**INRAE**



**Inserm**

# Research Domains

# Research Domains

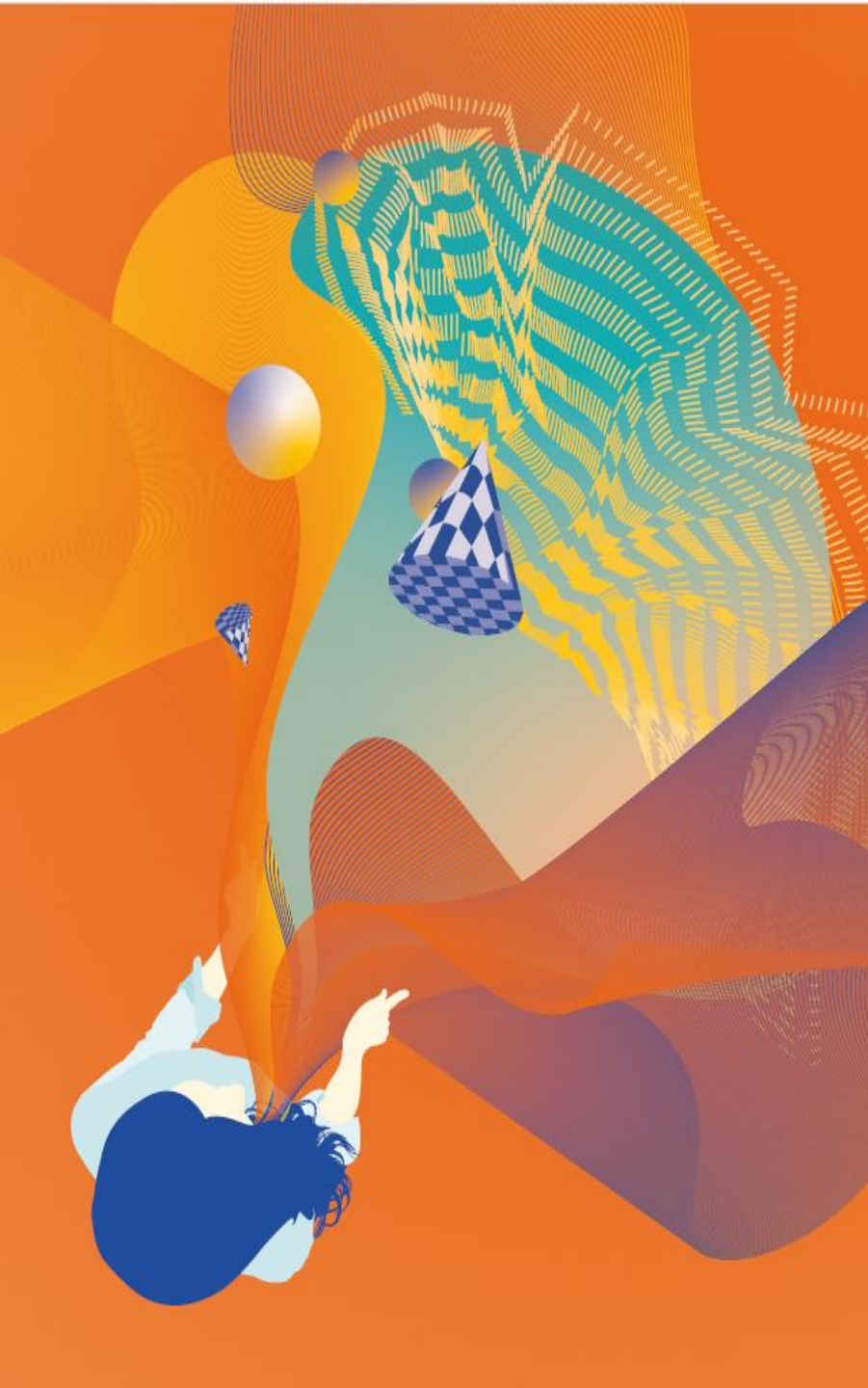
- Chemistry, physico-chemistry, mechanical engineering
- Design, industrialization
- Economics, management and social sciences
- Energy, process
- Environmental S&T, sustainable development, geosciences
- Information and communication S&T
- Life and health S&T
- Life science and engineering for agriculture, 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:



A screenshot of a web browser displaying the ParisTech Laboratory directory page. The browser's address bar shows the URL 'https://paristech.fr/en/laboratory-directory'. The page features a teal header with navigation links: 'Newsletter', 'News', 'Press', 'Admission France', 'Study with us', and 'English'. Below the header, the ParisTech logo is followed by a menu: 'The ParisTech network', 'The ParisTech Grandes Écoles', 'Education', 'International', 'Equal opportunities', 'Research &amp; Innovation', and 'FAQ'. The main content area is titled 'Laboratory directory' and includes a sub-header: 'ParisTech schools host 84 laboratories. Many of them are in partnership with French research organizations (CNRS, INRAE, etc.) or companies (e.g. EDF)'. A 'Filter by' dropdown menu is set to '- All -'. At the bottom, a card for 'AgroParisTech Laboratories AgroParisTech' is visible with a plus sign icon.



# **RESEARCH AT ARTS ET MÉTIERS INSTITUTE OF TECHNOLOGY**

**MOHAMED BENTTAIEB**





ParisTech



# PARISTECH – CSC PHD PROGRAM



**25** PhD proposals

**8** Fields of research

**9** Labs



# 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, Morocco

**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  
digitization**



**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

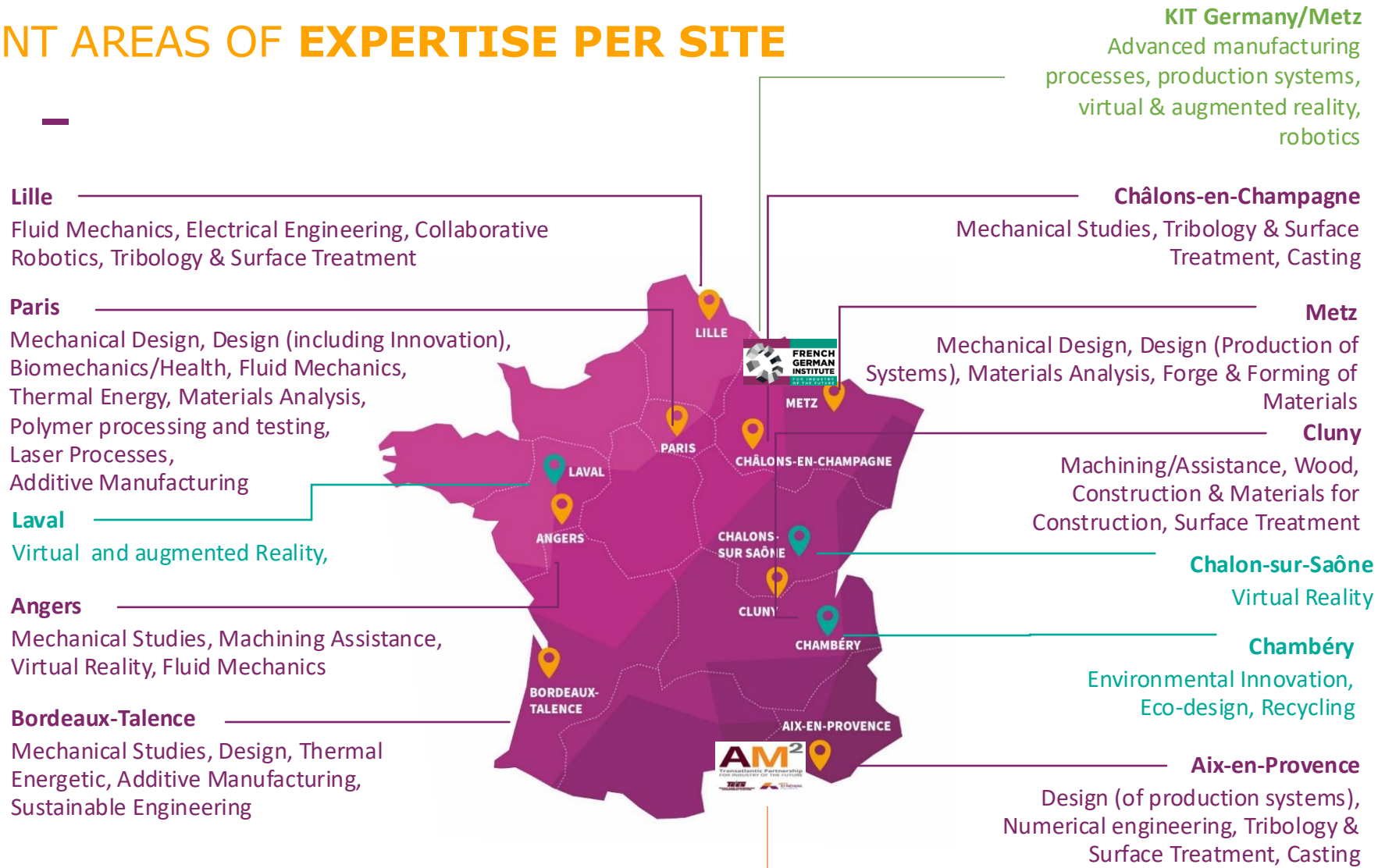
15 MILLION €

INCOME THROUGH INDUSTRY CONTRACTS



# RESEARCH & INNOVATION

## DIFFERENT AREAS OF EXPERTISE PER SITE



## RESEARCH INFRASTRUCTURES



# GLOBAL STRATEGIC PARTNERSHIPS



23 European funded projects

## 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



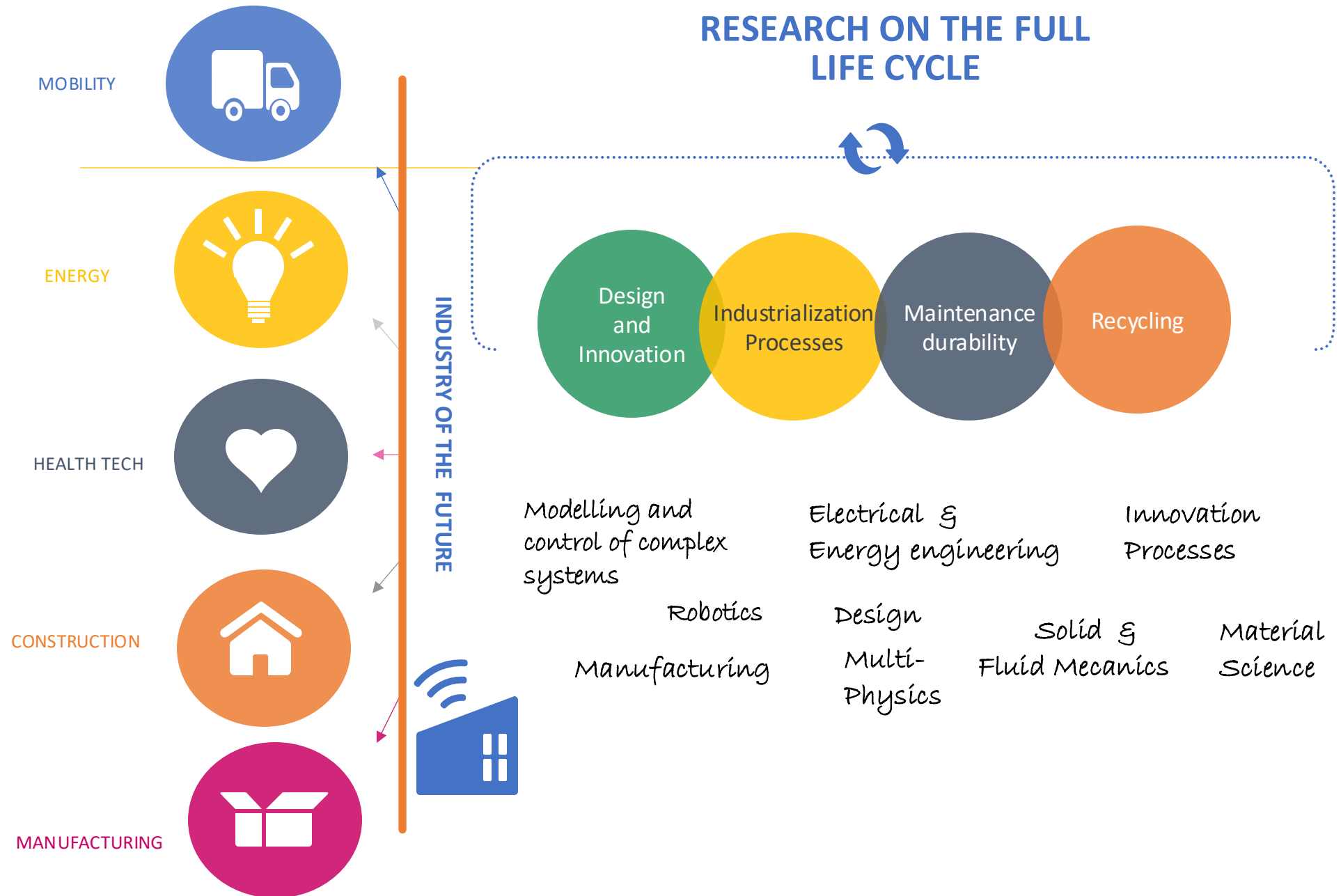


# RESEARCH AND INNOVATION

5 STRATEGIC FIELDS

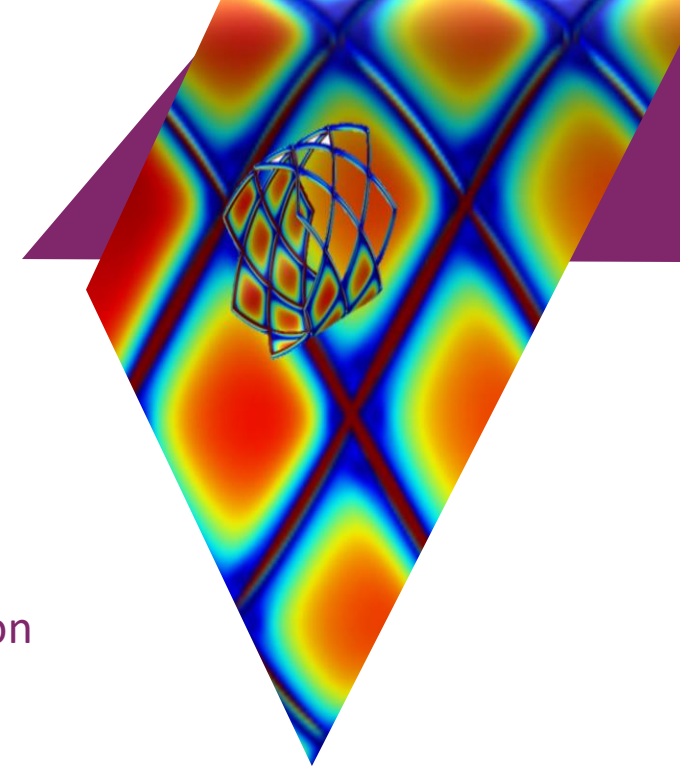


Excellence Label for research  
transfer to industry



# 7 INDUSTRIAL CHAIRS

Long term research partnership (>5 years)



Smart dynamical systems

DEVELOPPONS ENSEMBLE  
L'ESPRIT D'EQUIPE  SOCIÉTÉ GÉNÉRALE



Disabilities and Rehabilitation



Agile, Safe and Efficient  
Manufacturing system



RA/RV to reduce  
design time



Product Life Management



Physical Informed IA \*  
and Hybrid Twin



# 9 INNOVATION LABS

Joint industry-Academic lab



Virtual Immersive Lab



Modelisation of  
Electrical Devices



Materials and  
Processes



Thermal System for  
Ground Mobility



Metrology 4.0



Stamping 4.0



High performance  
polymers and composites



Human Centered  
Safety and Security



High T° material behavior  
Under O<sub>2</sub> environment.



# Arts et Métiers Partnership s in China

## **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

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



# RESEARCH AT ESPCI PARIS - PSL



XIAOPING JIA  
COSTANTINO CRETON

# PARISTECH – CSC PHD PROGRAM

ESPCI  PARIS | PSL 

**9** PhD proposals

**4** Fields of research

**5** Research units

**C** CHIMIE  
**B** BIOLOGIE  
**I** INNOVATION



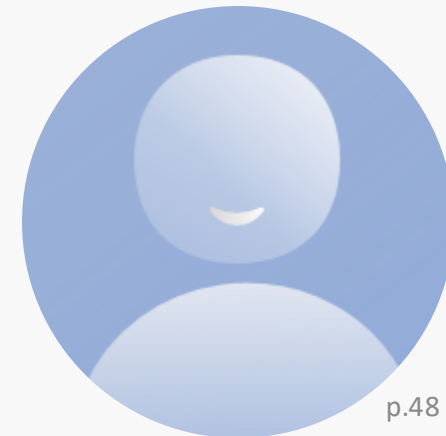
**LP**EM

Physique et Mécanique  
des Milieux Hétérogènes  
UMR 7636



Institut **Langevin**  
ONDES ET IMAGES

Find the video on ParisTech China Bilibili account!



Research domains at ESPCI Paris – PSL:

Biology

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

Chemistry

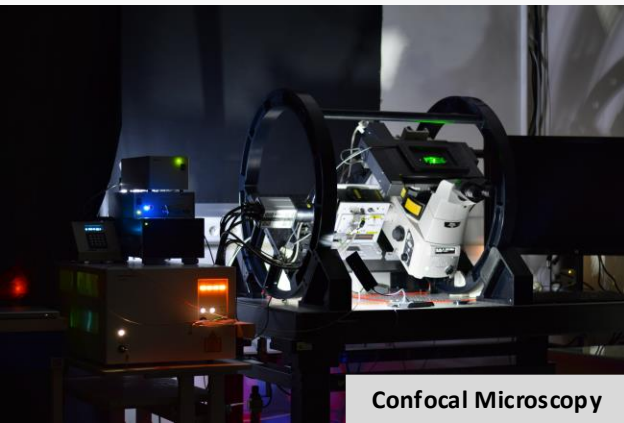
- **Chemistry of Molecules and Materials** – chemistry of molecules and materials
- **Soft Matter Science and Engineering, Institute of Porous Materials (IPM)** – Soft Matter, Materials Science & Complex Fluids
- **CBI** – microfluidics for physical chemistry and pharmaceuticals

Physics

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



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)

KEY FACTS / FIGURES



ca. 500 researchers / teacher-researchers  
ca. 300 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 Medals, UNESCO-L'Oréal For Women in Science awardees Young Researchers

# 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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# Information & Contact

# ParisTech Office in Asia



## Contacts in China:

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[minhua.yang@paristech.fr](mailto:minhua.yang@paristech.fr)  
Tel: +86 21 65 98 23 36

WECHAT



WEIBO



BILIBILI





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## 4. Labs and PhD proposals



## ROOMS / THEMES

ROOM 1

→ Chemistry, Physical chemistry and Chemical Engineering and Physics, Optics

ROOM 2

→ Life and Health science + Environmental 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

→ Dr. Ilaria CIOFINI, Chimie ParisTech-PSL presentation