



ESPCI  PARIS | PSL 

A unique approach to teaching and scientific research

Education 

Science 

Innovation 

A circular inset image on the left side of the slide shows a student smiling while working on a lathe machine. The image is in a blue-tinted, semi-transparent style.

AN ORIGINAL APPROACH IN THE WORLD OF ENGINEERING SCHOOLS

Since 1882, ESPCI Paris – PSL has been training **multidisciplinary engineering students** who are ready to meet the challenges of tomorrow.

Boasting **6 Nobel Prizes** and more than 522 professors and researchers spread across 11 CNRS research units, **ESPCI creates innovation** by encouraging an interdisciplinary approach and a dialog between fundamental and applied sciences.



ESPCI PARIS-PSL IS A COMPONENT INSTITUTION OF PSL UNIVERSITY (PARIS SCIENCES ET LETTRES)

Located in the heart of Paris, PSL inspires dialog among and between all areas of knowledge, innovation, and creativity in **Sciences, Humanities and Social Sciences, Engineering and the Arts.**

Selective and committed to equal opportunity, it draws directly from current research to train researchers, entrepreneurs, artists and managers who are aware of their social responsibility, both individual and collective.

With **2,900 researchers, 17,000 students, 140 laboratories and 10 incubators, fab labs and co working spaces**, PSL is a human scale university. It ranks among the world's top 50 universities according to the THE (Times Higher Education) and QS (Quacquarelli Symonds) rankings.

Université PSL :

Conservatoire National Supérieur d'Art dramatique-PSL, Dauphine-PSL, École nationale des chartes-PSL, École nationale supérieure de Chimie de Paris-PSL, École nationale supérieure des Mines de Paris-PSL, École normale supérieure-PSL, École Pratique des Hautes Études-PSL, ESPCI Paris-PSL, Observatoire de Paris-PSL. Collège de France, Institut Curie. CNRS, Inserm, Inria.



6
NOBEL PRIZES



500
SCIENTIFIC PUBLICATIONS
EACH YEAR, OR MORE
THAN ONE PER DAY



85
ENGINEERING STUDENTS
PER GRADUATING CLASS



11
JOINT RESEARCH UNITS



522
PROFESSORS,
RESEARCHERS,
POST-DOCS AND
PHD STUDENTS



3
START-UPS
CREATED ANNUALLY



70%
ENGINEERING STUDENTS
CONTINUE WITH A PHD

A UNIQUE APPROACH TO TEACHING AND SCIENTIFIC RESEARCH

- ESPCI Paris – PSL is an engineering school run by the City of Paris, which trains 85 innovation engineers per year.
- These engineers work as R&D managers in large industrial corporations or participate in the creation of startups.
- 1 in 3 of our engineers is based abroad.
- Our teaching philosophy is based on:
 - a strong interplay between teaching and research
 - interdisciplinarity in Physics, Chemistry, Biology
 - lab classes, team science projects



Scientific topics

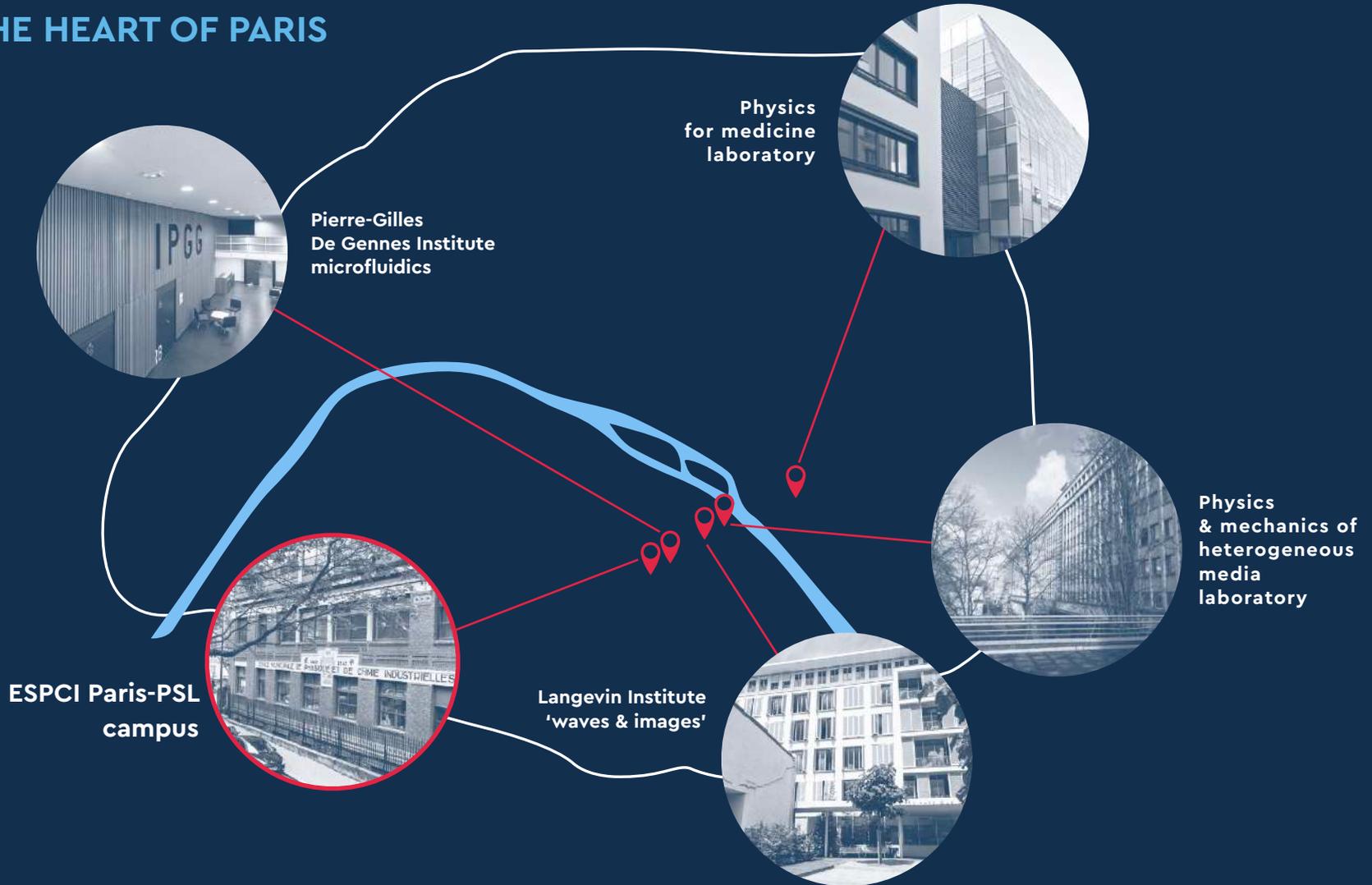
Organic Chemistry, Polymers, Soft Matter, Biotechnology, Neuroscience, Electronics, Optics, Acoustics, Business Knowledge



Top French university (THE rankings 2019 and 2020) with PSL

5 CAMPUS

DEDICATED TO TEACHING
AND RESEARCH
IN THE HEART OF PARIS



A RENOVATED AND UPGRADED CAMPUS FOR 2025



To maintain its ranking as a world class center for interdisciplinary research and training



An ambitious architectural project to build an urban campus adapted to the needs of professors, researchers and students



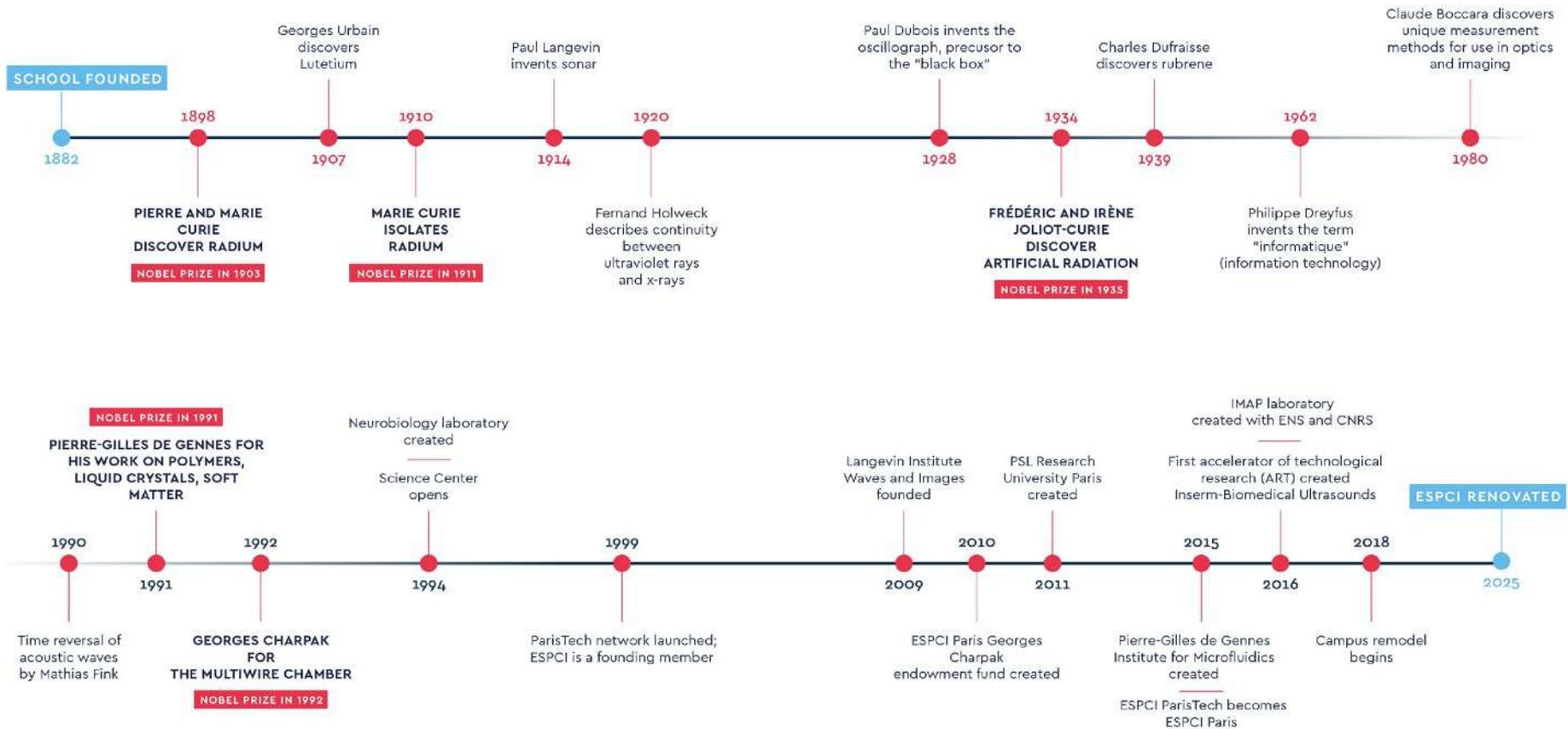
Connected to the city, to PSL University and to its neighborhood



An ever-evolving structure ideal for supporting excellence in research

EXCELLENCE, OPEN-MINDNESS AND SCIENTIFIC FREEDOM

6 NOBEL PRIZES
EXCELLENCE, OPEN-MINDEDNESS AND SCIENTIFIC FREEDOM



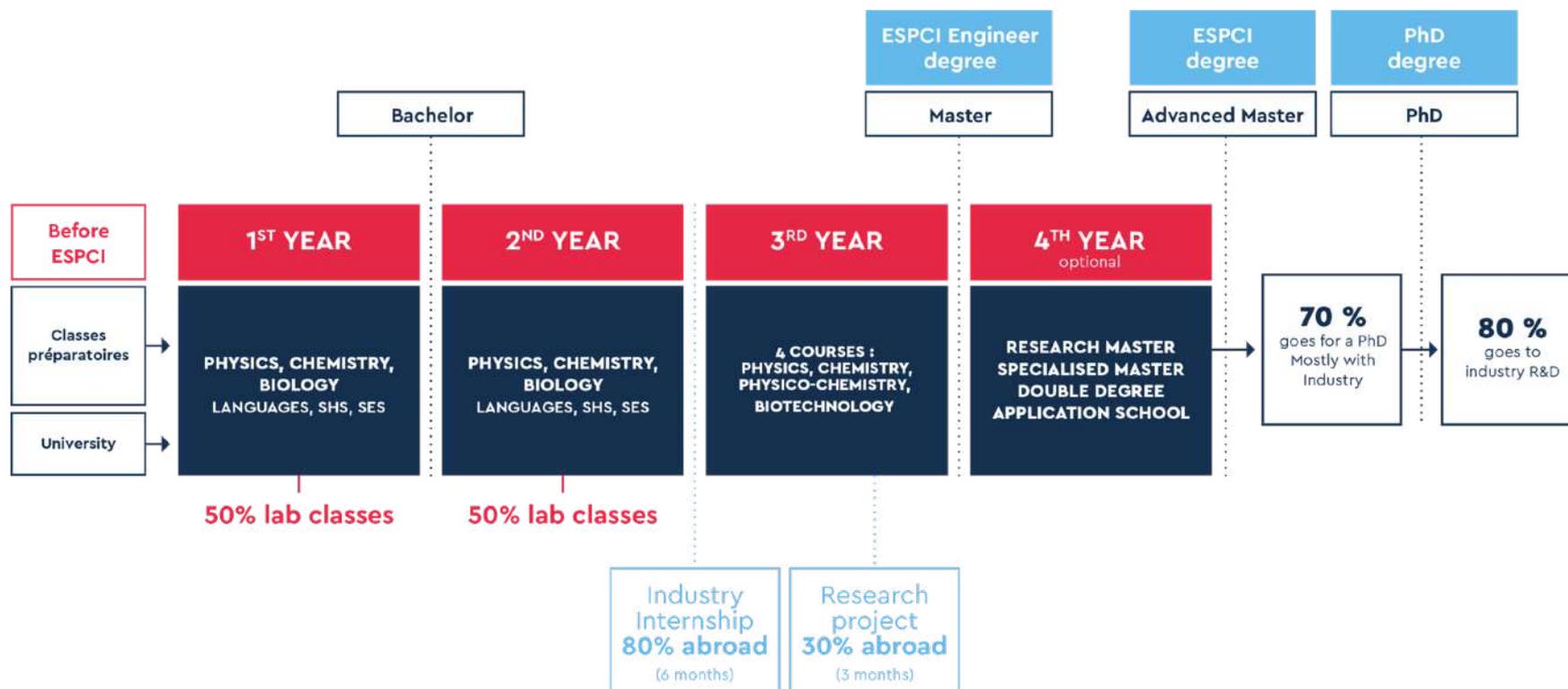


WHICH STUDENTS ?

2020, 139th graduating class :
85 students

- **39** women students, **10** international students
- **2/3** comes from a very selective national competition in Mathematics, Physics and Chemistry
- **1/3** are handpicked from the others Universities

EDUCATION THROUGH RESEARCH



RESEARCH-BASED EDUCATION

BALANCE BETWEEN THEORY
AND EXPERIMENTAL SESSIONS (IN HOURS)

	Lecture	Lab sessions	TA	Tutoring sessions
1st year	331	345	65	60
2nd year	361	420	65	60
3rd year	223	7 to 9 months (internships + project)		60



OUR VISIONS OUR COMMITMENTS



EXCELLENCE IN RESEARCH

- Hiring the best people in their fields
 - Collaborating with the most prestigious research centers in the world
- Supporting the young professors to start their research at the best international level



BEYOND BOUNDARIES

- Research in Physics, Chemistry, Biology
 - Interdisciplinary research
- A nimble organization to favor interactions, responsiveness and evolution



FROM FUNDAMENTAL RESEARCH TO INNOVATION

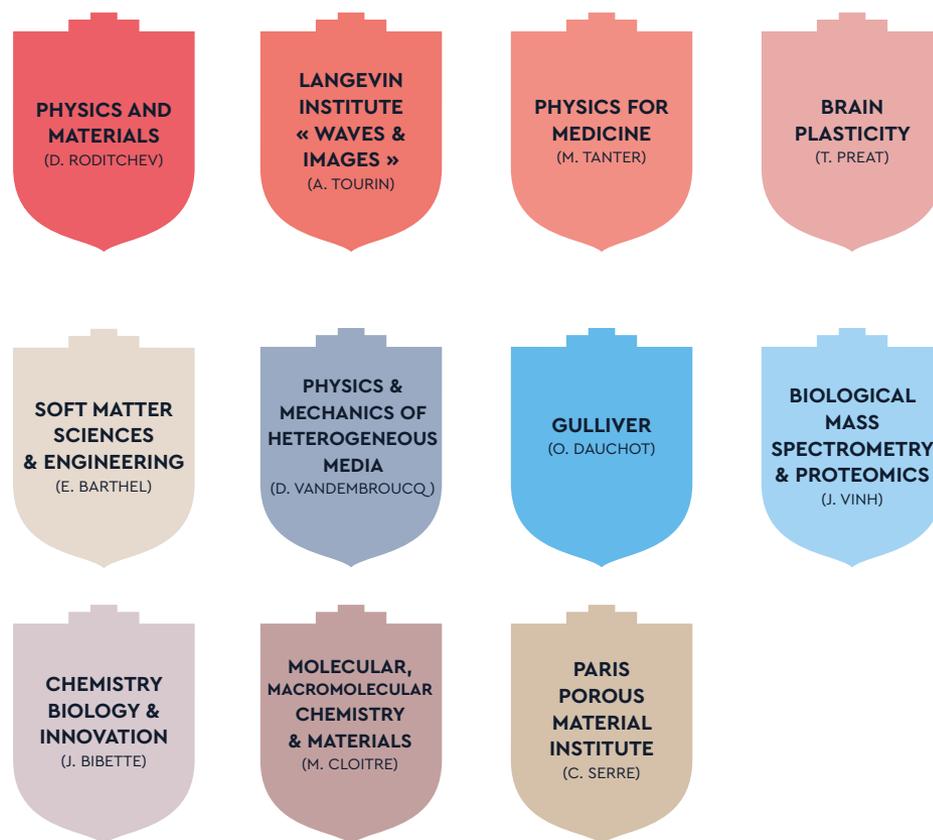
- The same people publish in the best journals, take patents and create start-ups
- Rules and practices to favor innovation
 - Very reactive "Innovation pool" at ESPCI Paris Fund

ORGANIZATION

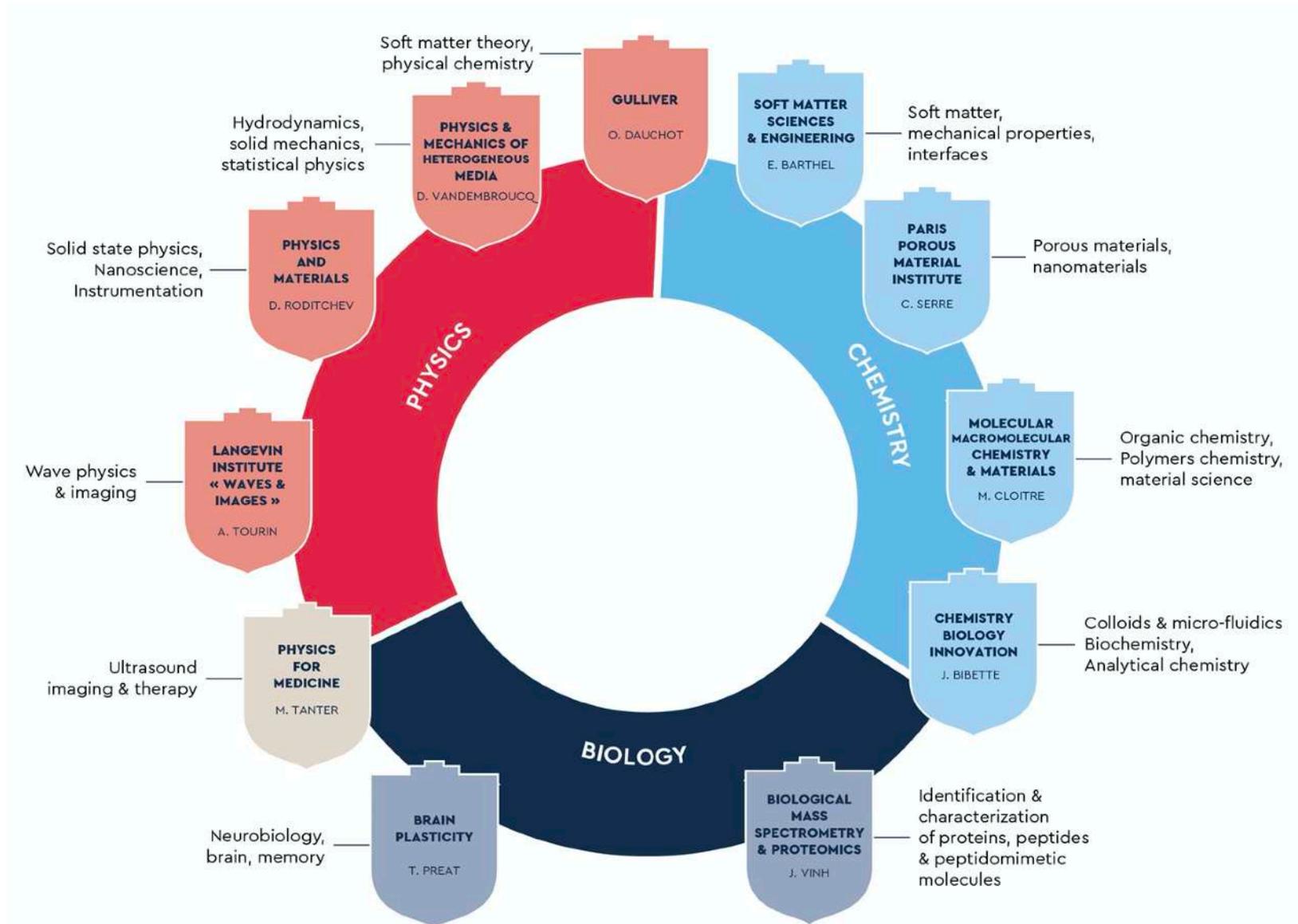
JOINT RESEARCH UNITS

In addition to its educational mission, the school welcomes research laboratories closely associated with CNRS, UPMC (Paris 6), the Université Paris Diderot (Paris 7) and Inserm.

60% of our research staff is employed by these partner institutions.



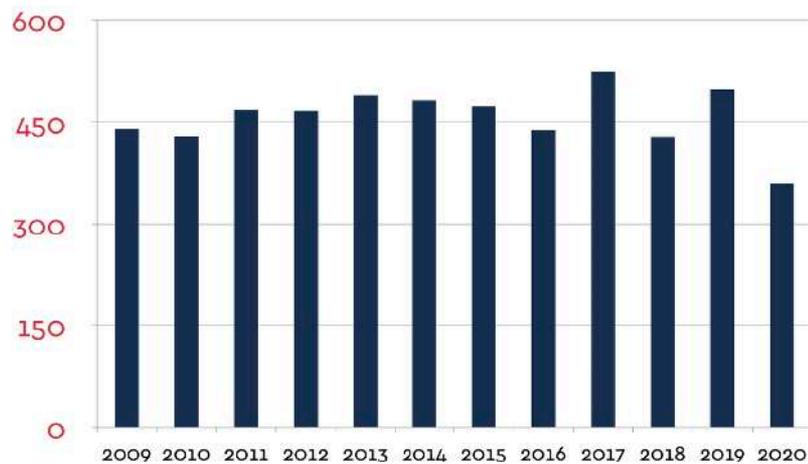
MULTIDISCIPLINARY



PUBLICATIONS AND CITATIONS

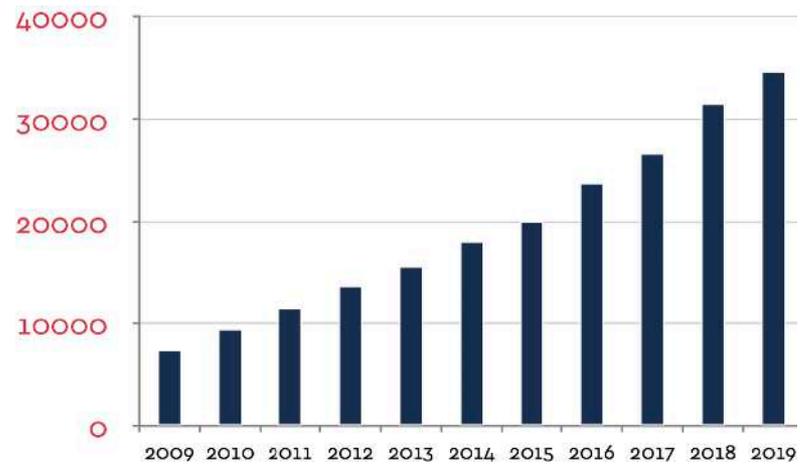
NUMBERS OF PUBLICATIONS PER YEAR

> 1 PUBLICATION PER DAY



NUMBERS OF CITATIONS PER YEAR

> 40 CITATIONS PER DAY



PUBLICATIONS

PER FIELD (2015-2019)



INDUSTRIAL RESEARCH CONTRACTS

Bilateral contracts: a laboratory or team +
one industrial partner
Dozens of contracts in all research areas

Research funding in 2019: **17,73 M€**

31 European projects

21 industrial partnerships

INDUSTRIAL CHAIRS (RESEARCH & EDUCATION)



EXAMPLE OF INDUSTRIALS PARTNERS



INNOVATION

Since ESPCI Paris – PSL was created, the School has been a key player in innovation in France. It promotes innovation with industry, encourages entrepreneurship and collaborations with companies.

+70 innovative high-tech companies have been created at ESPCI since the early 1990's

19 registered patent families

PC'up

ESPCI INCUBATOR

• OUR MISSION

Is to facilitate the creation of deeptech startup by offering unique ESPCI competences to entrepreneurs.

• OUR AMBITION

Is to create a pathway for deeptech companies, in synergy with ESPCI Paris Research and Teaching.

• OUR STARTUPS ARE IN VARIOUS FIELDS

Among others : biotech, sustainable agriculture, metasurfaces (antennas & radars), IA, medtech, diagnosis, etc.

SOME OF OUR STARTUPS

DNA Script,

Innovator under 35 2018 (MIT Tech Review), 81 M€ raised since the creation in 2014

HiFiBio,

102 M€ since the creation in 2013

LightOn,

IA Challenge of Paris 2018

Cyprio,

winner of the Women Startup Challenge Europe HealthTech 2019



22

COMPANIES
INCUBATED



204

JOBS
CREATED



83,4

MILLIONS EUROS
RAISED



106

PATENT APPLICATIONS &
PATENT LICENSES

PC'up ESPCI INCUBATOR

WHAT WE OFFER ?

- A dynamic community of scientists and entrepreneurs
- An efficient and flexible team to help in this journey
- And 2 coaching program's

PRE-INCUBATION PROGRAMME

(6 months)

Dedicated to researcher who have a promising technology and don't know how to start a company.

OUR GOAL : detect and support emerging projects, in particular from the School's research laboratories

INCLUDED IN THE PROGRAMME :

- 1 week bootcamp about IP, management, accounting, business strategy, shareholders agreement, communication, etc.
- Access to workshops & unformal events of incubation programme
- Access to the IPGG platform and ESPCI labs equipments
- Strategic and individual coaching by PC'up team
- Possibility of having 2 or 3 desks
- Close ties with ESPCI labs and students

INCUBATION PROGRAMME

(2 years)

Dedicated to deeptech companies (less than 1 y.o.) who wish to develop their activities in our School environnement

OUR GOAL : help them to develop the POC, refine the business plan & business model, structure the team, search for the first fund raising, secure the IP

INCLUDED IN THE PROGRAMME :

- Facilities for offices et lab activities
- Workshops & unformal events
- Access to the IPGG platform and ESPCI labs equipments
- Strategic and individual coaching by PC'up team
- Access to our expert network (scientists, mentors, funders, etc)
- Close ties with ESPCI labs and students

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espci.psl.eu

