



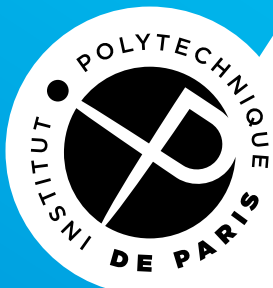
INSTITUT
POLYTECHNIQUE
DE PARIS



ANNUAL REPORT 2020-2021

Shape a better future

ip-paris.fr



THE INSTITUTE IN FIGURES

EDUCATION

8,000

students

34%

international students

95%

of students recruited
less than 4 months
after graduation



RESEARCH

30

laboratories

1,000

faculty members

40

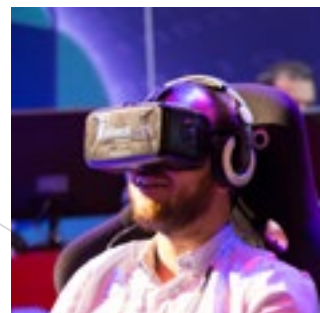
education and
research chairs

1,000

PhD students

230

postdoctoral students



INNOVATION

110

projects incubated per year

25%

of next40 and Frenchtech
120 start-ups
co-founded/directed or
from an IP Paris incubator





Institut Polytechnique de Paris (IP Paris) is a public higher education and research institution that brings together five major French engineering schools: **École Polytechnique, ENSTA Paris, ENSAE Paris, Télécom Paris and Télécom SudParis.**



Under the umbrella of the Institute, these schools combine two centuries of expertise in the pursuit of three major goals: excellence in education, cutting-edge research, and promotion of innovation.

8,000 students are enrolled at IP Paris and 1,000 faculty members work within its 30 laboratories. Building on the strength of its five founding institutions, Institut Polytechnique de Paris has established itself as a leading education and research institution in France and internationally.



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Launch of Institut Polytechnique de Paris name and brand in February 2019
in the presence of **Florence Parly**, Minister for the Armed Forces
and **Agnès Pannier-Runacher**, Junior Minister in charge of Industry



“Our missions:
educate, discover
and innovate.”

Dear readers,

This first annual report looks back on an unprecedented year marked by the Covid-19 pandemic, as well as major successes in the development of Institut Polytechnique de Paris. **Despite the difficulties caused by the health crisis, we have achieved a lot thanks to our teams' dedication and adaptability.**

During this exceptional period, we made every effort to safeguard the health of our entire community and ensure the best possible experience for staff and students in the current context by maintaining a collective focus on the individual. Thanks to digital technology, we were able to maintain our courses and **continue to pursue our missions: educate, discover and innovate.**

President Emmanuel Macron envisioned **to create a “French MIT”** by gathering five engineering schools recognized for their excellence in education and research within Institut Polytechnique de Paris: École Polytechnique, ENSTA Paris, ENSAE Paris, Télécom Paris and Télécom SudParis. All the necessary ingredients for training informed leaders and developing research for a better future are here: **200 years of history, shared values,** and a common campus located at **the heart of the world's 8th largest hub for innovation.**

IP-Paris has been rapidly taking form since the end of 2019. In order to pursue **excellence in multidisciplinary training,** new Master's programs in 14 disciplines have opened and welcomed over 700 students from around the world since the start of the 2020 academic year.

In addition, following the first Master's and PhD accreditation in 2019, we now have our first graduates and alumni from these programs. Together, the five schools have coordinated a shared recruitment process for international talent for their engineering programs. In our **pursuit of research for a**

better future, we opened two Interdisciplinary Centers, one on Energy and Climate (E4C), and Hi! Paris on AI and data science for business and society (Hi! PARIS).

We invested €1,4 million over two years **to facilitate technology transfer to support innovation**. In line with **our strategy founded on cooperation**, we established strategic partnerships to serve our three missions –education, research and innovation– including two partnerships with major international universities, a first major corporate partnership with Accenture and a reinforced partnership with a national research organization, Inria. Finally, **the bodies and structures facilitating the Institute's expansion were established** and will be reinforced throughout 2021.

Institut Polytechnique de Paris is now recognized as **a world-class science and technology institute since its ranking in the QS Top 50** (49th) at its first entry. This success is based on the strong scientific contributions of its faculty members, but also on **the worldwide reputation of its graduates** (15th largest employer reputation), **one of the highest staff-student ratio** in the world, and **a very strong international outlook** (40% of students are international and 38% of Faculty members recruited internationally).

I invite you to discover this first annual report presenting the major achievements of Institut Polytechnique de Paris in 2020.

Sincerely,

ERIC LABAYE

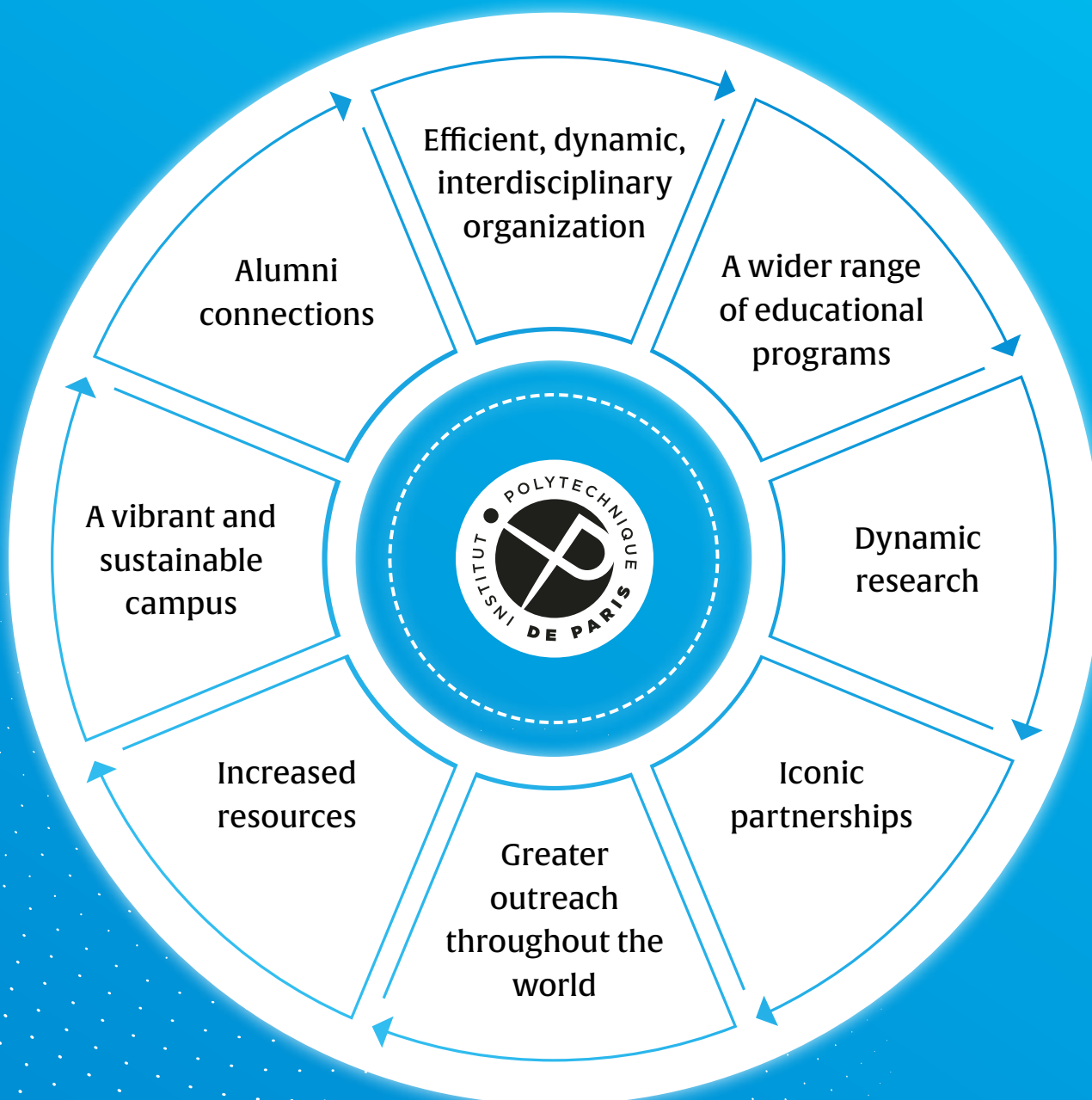
President of Institut Polytechnique de Paris
and President of École Polytechnique

“Training informed
leaders and
developing research
for a better future.”



2021 PRIORITIES

Taking IP Paris to the next level



“Institut Polytechnique de Paris also embodies the very best of our French engineering tradition and boasts excellent rankings and impressive vitality in start-up creation and excellence.”



“I believe that we have consolidated here France’s finest achievements in engineering training, and scientific developments, which go hand-in-hand with our entrepreneurial capacity, the remarkable ability to create start-ups and numerous institutes in a wide range of fields, which you have developed with incredible agility.”



Emmanuel MACRON
announcement of quantum plan, 01/21/2021



Education

1ST ACADEMIC YEAR AT FULL CAPACITY FOR THE GRADUATE SCHOOL



"I believe that the greatest benefit of Institut Polytechnique de Paris is that it brings together five major engineering schools and relies on a community of recognized faculty members in a variety of fields. Being personally interested in two different fields, artificial intelligence and solar energy, I really appreciate the cross-disciplinary approach that enables the development of innovative and multidisciplinary research projects."

Joseph CHAKAR, 2nd-year student
in the Energy PhD Track (New Year's Ceremony,
Institut Polytechnique de Paris, January 2021)



Start of the academic year for new Master's students

In September 2020, Institut Polytechnique de Paris welcomed students to **the new Master's and PhD track programs**. All the necessary precautions were taken in light of the Covid-19 pandemic. The administrative staff and faculty members implemented all the necessary measures to ensure that classes could be held and would be accessible to all students. In September 2020, Institut Polytechnique de Paris opened **seventy Master's programs in fourteen disciplines**. The Institute also welcomed its first PhD Track students.

1st PhD Tracks

The start of the 2020 academic year was marked by the **opening of the first PhD Tracks**, which are strategic programs for Institut Polytechnique de Paris. **43 students started this 5-year doctoral program** inspired by the Anglo-Saxon model. The first two years of the program, for which students earn a Master's degree, are designed to enable students to acquire the tools necessary for the successful completion of an ambitious research project, supervised by an academic tutor. The next three years are entirely dedicated to the research thesis project. Upon successful completion, **students are awarded a PhD degree from Institut Polytechnique de Paris**. The PhD Track is intended for high-level French and international students with a Bachelor's degree or equivalent.

International recruitment for the engineering program

For the first time in 2020, the five schools of Institut Polytechnique de Paris established **a joint campaign for recruiting international students**. All five schools now recruit together international students for their 5 engineering programs under the umbrella of Institut Polytechnique de Paris. The Institute targeted nine countries, in which it has developed cooperation with the best local institutions: China, Vietnam, Cambodia, Singapore, Russia, Brazil, Colombia, Argentina and Chile. **Those International students will be starting an engineering program** at the Institute's schools in September 2021.



INNOVATIVE LEARNING AND FIRST GRADUATES



E4C Student Challenge: a second edition

The E4C Student Challenge was first launched in 2019 and gives inter-institutional, international and interdisciplinary teams an opportunity to combine their expertise in science and technology, social and economic sciences and management to **design a project with a powerful societal impact**, while also gaining experience in interdisciplinary teamwork. The first challenge allowed

students to put in practice their theoretical knowledge by developing realistic and innovative proposals in response to a major challenge: **“Imagining a carbon-free city”**. The winning projects, “Metr’Eau’Pole” and “Waste Not, Want Not” especially impressed the jury with their respective proposals for heat recovery from wastewater and the reuse of biogas for electricity production. The second challenge was launched in October 2020 and encouraged students to find solutions related to the theme **“Carbon-Neutral by 2050: Local Implementation”**. The awards ceremony for the winners will be held at the start of the 2021 academic year.



1st Graduates from the PhD and Master's programs

Founded on September 1st, 2019, the Doctoral School awarded its first degree to Thomas Elia on September 18th. Thomas was part of the Chemistry and Processes unit (UCP) of ENSTA Paris and CEA DAM. He was supervised respectively by Laurent Catoire and Gérard Baudin. He became the first

candidate to defend his thesis within the framework of the Institute. Since then, **292 PhD students have earned their degree**, 220 at the IP Paris Doctoral School and 72 at the Hadamard Doctoral School of Mathematics (EDMH). Following the accreditation obtained in September 2019, the first IP Paris Master's students completed the program in September 2020. The Institute now encompasses **609 graduates from its Master's programs**. The first graduation ceremony was held on March 19, 2021.

“Our first graduates are entering the workforce at a critical time, yet we are confident that the excellent education provided by our faculty members combined with their own personal qualities will enable them to pursue fulfilling and successful careers.”

Laura FIONI, Director of Master's Programs



Research

FONDAMENTAL AND APPLIED RESEARCH AT THE FOREFRONT OF OUR STRATEGY



BIOLOGY



**CHEMISTRY
AND PROCESSES**



ECONOMICS



**INFORMATION,
COMMUNICATIONS
AND ELECTRONICS**



**COMPUTER SCIENCE,
DATA, AND AI**



10 education and research departments: a community of outstanding faculty members

Institut Polytechnique de Paris has **a pool of top-level Faculty members** in many different fields. They **strive to create and improve the education and research programs of excellence led by each school.**

They carry out the Institute's "research-based training" approach by integrating a "research" component into the Master's programs and PhD Tracks in order to prepare students for a scientific career in laboratories or companies.

The research departments at IP Paris cover 10 fields: **Biology; Chemistry and Processes; Economics; Information, Communications and Electronics; Computer Science, Data, and AI; Mathematics; Mechanics and Energetics; Physics; Humanities, Arts, Literature and Languages; Social Sciences and Management.** They conduct fundamental research as well as applied research with the aim of transcending the frontiers of science.

"Exceptional researchers from five prestigious schools of excellence working together within the institute is the recipe for success. Their combined expertise in fundamental and applied research in numerous fields and the development of interdisciplinary scientific projects will lead to new discoveries."

Yves LASZLO, Chairman of Education and Research Committee of Institut Polytechnique de Paris



MATHEMATICS

MECHANICS
AND ENERGETICS

PHYSICS

HUMANITIES, ARTS,
LITERATURE AND
LANGUAGESSOCIAL
SCIENCES AND
MANAGEMENT

Launch of 4 EUR: funding for research

At the end of 2019, **four University Research School projects (Écoles Universitaires de Recherche–EUR)** were launched thanks to the French state funding program “Investments for the Future” (PIA), thus confirming the excellence of the IP Paris academic project. The four winning projects were developed in partnership with CNRS and several other higher education and research institutions.

These projects incorporate a significant international dimension and maintain close links with the business world. **The overall amount of allocated funds represents a total budget of €14 million over a ten-year period.** These four EUR will also contribute significantly to the development of the Institute’s PhD and Master’s programs:

- **BERTIP**, a program for training in biomedical engineering
- **E4C**, Interdisciplinary Energy for Climate Institute
- **PLASMA_ST**, Plasma Science and Education
- **DATA EFM**, Data Science for Social Sciences





RESEARCH IN AI FOR THE PLANET

Energy solutions to meet the challenges of climate change: The Energy for Climate Center (E4C)

Humanity is facing an unprecedented climate challenge and there is no longer any doubt that humans have caused this phenomenon. Analysis of climate models has shown that global warming is nearly linearly dependent on the amount of carbon emitted since the pre-industrial era. **Institut Polytechnique de Paris and École des Ponts have taken the lead on sustainable development and climate change issues by creating the Energy for Climate Center (E4C) in June 2019.**

It brings together thirty laboratories and has obtained funding from the Investments for the Future University Research School (EUR) program. **The Center develops technological solutions while addressing economic and policy aspects to ensure the roll out of their production and use.**

Training future engineers on these issues is crucial. Therefore, the E4C Center offers training within Institut Polytechnique de Paris inspired by the Anglo-Saxon model with Master's programs on energy and a 5-year PhD Track. Innovation also plays a key role in its approach through an entrepreneurship training option for Master's and PhD students who want to create a start-up.

e4c.ip-paris.fr



The Center E4C is directed by
Philippe Drobinski, faculty member of
Institut Polytechnique de Paris.



RESEARCH IN AI FOR SOCIETY

An interdisciplinary approach for AI that benefits society:
The Hi! PARIS Center

Artificial intelligence offers endless possibilities but also raises questions regarding its uses and impacts. **Co-founded by Institut Polytechnique de Paris in partnership with HEC Paris, the new interdisciplinary Hi! PARIS center has a global ambition to ensure AI and data empower business and society.** It will provide a unique framework for research, education, innovation, and technology transfer. It will take advantage of cross-fertilization between fundamental sciences, technology, management and social sciences which are fields of excellence of both Institut Polytechnique de Paris and HEC Paris. It will also help to stimulate productive interactions between researchers, students and organizations, thus enabling the emergence of high-potential projects, up to start-ups.



In order to support its global ambitions, the Center is founded on a disruptive corporate funding approach with major financial contributions that support long-term research. **The Center is now supported by five founding donors: L'Oréal, Capgemini, Total, Kering and Rexel.**

These collaborations are essential in helping the center become **an international higher education and research champion in AI and data science.** They will facilitate implementation of a postdoctoral program to compete with the world's greatest institutions.



The **center was inaugurated on September 15, 2020**, at a ceremony attended by directors from both institutions, corporate donors, researchers, and with **the participation of Cédric O, Minister of State for Digital transition and electronic communication.** The event also welcomed speakers from the center's ecosystem.

hi-paris.fr



Innovation

SIGNIFICANT INVESTMENT AND MAJOR ACHIEVEMENTS IN INNOVATION



CALLS FOR PROJECTS: €1,4 million invested in 2 years

Technology transfer is a key issue for Institut Polytechnique de Paris. It is part of the Institute's research strategy for increasing the socio-economic impact. Therefore, in 2019, the Institute launched an annual call for premature projects.

In two years, 19 projects (12 in 2019 and 7 in 2020) covering a wide range of fields **were awarded between €20,000 and €90,000**. With a total investment of €1,4 million, these contributions were intended to fund either a technological development program or a techno-economic study (market research), depending on the project's development stage.

NOVATION CENTER: a common identity for IP Paris incubators

Since February 2020, the “Novation Center” has provided a common identity for the Institute’s incubators: Drahi-X Novation Center and Télécom Paris Novation Center. These multi-faceted entities include incubators, accelerators, FabLabs, investment clubs and VC, and international support programs. **The Institute therefore aims to position itself as a leader in technological innovation, both in France and internationally.**



A dynamic ecosystem

In 2019, IP Paris applied for 44 patents and its operating income reached €561,000. Although **2020 was an unprecedented year in many respects, over 20 patent applications were filed, and development revenue exceeded €690,000.** In addition, start-ups from Institut Polytechnique de Paris currently account for over a quarter of the France’s 40 most promising start-ups included in the Next40 ranking. They also account for nearly 25% of all the start-ups in the FrenchTech120 ranking.



IP Paris partners with France Digitale

In 2019, IP Paris signed a partnership with France Digitale, an organization that represents over **1,800 entrepreneurs and investors from the French digital sector.** The partnership has enabled IP Paris to partner with events that have a powerful impact: France Digitale Day, Scaleup Fair and the France is AI Conference. With this partnership, **the Institute is strengthening its position in the French and European entrepreneurial ecosystem,** while also providing its entrepreneurs and students with access to France Digitale services (fundraising, recruitment, networking, etc.).



“Whether you are an entrepreneur, working in a large company or in the public sector having the entrepreneurship toolbox allows you to understand how the economic world, society and innovation work today. Our schools are particularly well-equipped to act as leaders in this area. They have inherited the interdisciplinary tradition of the French engineer training model.

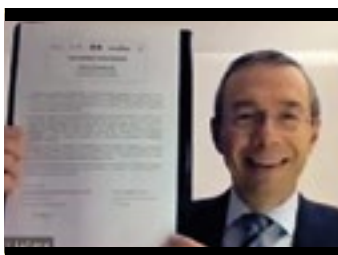
The schools stand out due to their investment and legitimacy in deep tech and their close links with companies. The joint supervision by both the Ministry for the Economy and Finance and the Ministry for the Armed Forces is also an asset for long-term innovation and entrepreneurship.”

Nicolas GLADY, Director of Télécom Paris

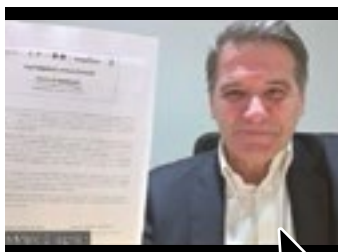
Partnership to build a better future

TECHNOLOGY AND SOCIETY: PARTNERSHIP WITH ACCENTURE

Institut Polytechnique de Paris has signed a strategic 5-year partnership agreement with Accenture. **It aims to provide joint solutions to economic and sustainable development challenges. A central aspect of the partnership is the creation of an academic and research chair, “Chair of Technology for Change” in 2021.**

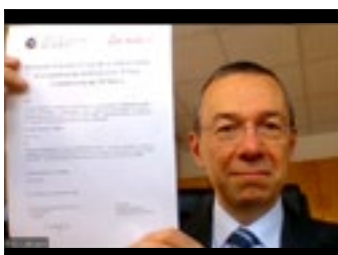


The partnership is structured around three pillars –research, education and innovation– in order to **find solutions to the issues raised in the 17 Sustainable Development Goals identified in UN Agenda 2030**. The partnership was concluded between Jean-Marc Ollagnier (CEO of Accenture in Europe), Olivier Girard (CEO of Accenture in France and Benelux), Eric Labaye (President of Institut Polytechnique de Paris), and Jean-Paul Cottet (Executive Director of the École Polytechnique Foundation).



“The combination of Accenture’s technology expertise and deep industry knowledge with the academic excellence of IP Paris will provide the scientific world with a unique opportunity to promote the latest research-based innovation more widely and rapidly and offer businesses easier access to the latest academic breakthroughs.”

Jean-Marc OLLAGNIER, CEO of Accenture in Europe



DIGITAL AND AI: partnership with INRIA

Through their strengthened partnership signed in late 2020, Institut Polytechnique de Paris and Inria (National Institute for Research in Digital Science and Technology) will jointly develop **high-risk research resulting in breakthrough innovation capable of taking on the biggest challenges**. The Memorandum of Understanding provides for the establishment of a reinforced partnership, which will be embodied by the Inria Center of Institut Polytechnique de Paris.” This collaboration will revolve around three pillars: research and education, information transfer and innovation, and support for research and innovation. It will promote high-risk research, enable the deployment of an active policy for attracting the best scientific talent, implement the creation of a building dedicated to research in Mathematics, support start-up projects, and strengthen the collaboration between the two institution’s research support services in order to best assist researchers and their initiative.



“Institut Polytechnique de Paris’ ambition is to accelerate the construction of a scientific, technological, and industrial leadership, through digital means, from France, and in a European dynamic. This ambition is based on the coherence and synergies between national and territorial policies, in fully engaging Inria, through its research centers, in the development of world-class research universities, and putting it at the heart of entrepreneurial and industrial ecosystems energized by digital means, while upholding a requirement for scientific, economic, and societal impact. This is the aim of the strengthened partnership between Inria Saclay – Île-de-France and Institut Polytechnique de Paris”.

Bruno SPORTISSE, Chairman and CEO of Inria

Partnership to internationalize higher education



PHD: 1st agreement with Shanghai Jiao Tong University

Institut Polytechnique de Paris and Shanghai Jiao Tong University (SJTU) have signed a framework agreement on co-supervision of theses, allowing PhD students from both universities to carry out a co-directed thesis and largely conduct their research in a laboratory of the partner university. Shanghai Jiao Tong University and the schools of Institut Polytechnique de Paris have been collaborating for nearly 20 years. **Each year, about 20 SPEIT students join the engineering programs of the French schools in the program within the framework of a double degree.** All students in the program must complete part of their studies in France, either with a dual degree, internships, or a semester exchange. In order to strengthen their cooperation, particularly in the area of research, SJTU and the founding schools of SPEIT set up a partnership seed fund in December 2019. This new framework agreement on thesis co-supervision signed at the end of 2020 complements this cooperation.



and staff.

ERASMUS + ACCREDITATION: providing students with an international experience

The Erasmus+ program draws on over 30 years of successful programs in the European Union in the areas of education, training and youth, including cooperation within Europe and internationally. The program promotes European and international mobility for students (studies or internships), faculty members, and staff. Institut Polytechnique de Paris schools have therefore developed projects with partners in China, Malaysia, Israel, Iran, Tunisia and Russia. The accreditations obtained in late 2019 have **created possibilities for international exchanges through Institut Polytechnique de Paris, in line with what had already been done at the Institute's schools for our students, faculty,**



Key figures from the first Rankings

QS 2022 RANKING

As of its first entry in the QS 2022 ranking, Institut Polytechnique de Paris has reached the top 50 institutions worldwide.

49th

worldwide

2nd

in France and EU

15th

in student employability

32nd

in faculty/student ratio

49th

for the scientific contributions of its faculty members

CWUR RANKING

41th

Worldwide

4th

in France



SHANGHAI RANKING BY SUBJECT 2021

Natural Sciences
and Engineering

31st

in Mathematics

42nd

in Physics

101-150

in Computer Science & Engineering

101-150

in Atmospheric Science

151-200

Automation & Control

151-200

in Telecommunication Engineering

201-300

in Electrical & Electronic Engineering

201-300

in Instruments Science & Technology

201-300

in Earth Sciences

301-400

in Chemistry

301-400

in Energy Science & Engineering

Social Sciences

50th

in Statistics

151-200

in Economics

401-500

in Management

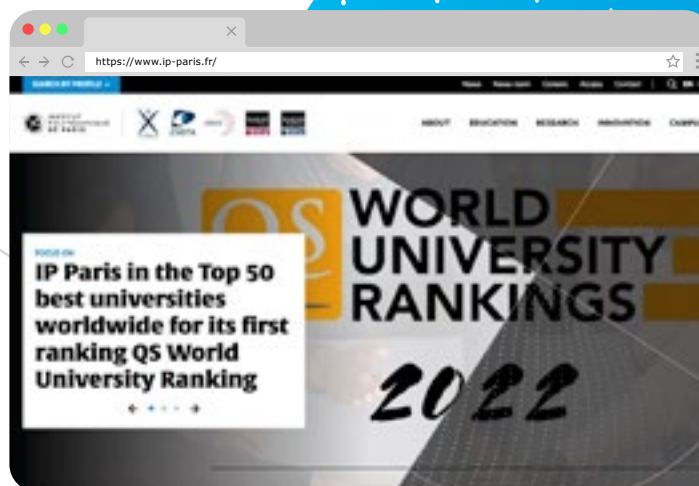
Increased international outreach and visibility

A NEW WEBSITE

highlighting our strengths and actions

Institut Polytechnique de Paris took advantage of the new academic year in 2020 to launch its new website. The website was designed to highlight all the activities of Institut Polytechnique de Paris and its schools. It promotes IP Paris educational programs from all five schools. It also presents the Institute's activities in the field of disciplinary and interdisciplinary research, innovation and entrepreneurship. **The website reflects our project and common ambition** of becoming a world-class science and technology institute.

[ip-paris.fr](https://www.ip-paris.fr)



"The international aspect is a key component of Institut Polytechnique de Paris strategy for education, research and innovation. All the actions taken in this area, whether new partnerships or joint recruitment of students for engineering programs in 2020, aim to establish IP Paris as a world-class science and technology institute.

Its first rankings, particularly the Shanghai rankings by subject, have confirmed the relevance of our common project."

Elisabeth CRÉPON, Director of ENSTA Paris

ENTRY INTO THE QS TOP 50:

an international recognition

Institut Polytechnique de Paris is now recognized as a leading institution of higher education and research since its entry into the Top 50 of the QS ranking of the world's best universities. This success is based on the strong scientific contributions of its faculty members, but also on the worldwide reputation of its graduates (15th largest employer reputation), one of the highest staff/student ratios in the world, and a very strong international outlook (40% of students are international and 38% of faculty members recruited internationally). Other rankings reinforce this recognition: IP Paris' ranking in the top 50 of the CWUR (The Center for World University Rankings) as well as the Shanghai ranking by subject, which demonstrates its multidisciplinary approach and excellence through its high scores in engineering, natural sciences and social sciences.

A COMMON VISION

For the campus



MASTERPLAN for a world-class campus

In 2020, Institut Polytechnique de Paris developed a masterplan for developing its campus through consultation with stakeholders from its five schools and in connection with partners from the Plateau de Saclay. This masterplan ensures consistency among all the real estate projects and helps to guide the major construction sites in order to build an exceptional campus. **It presents the main guidelines for the coming years**, with the aim of making the campus a welcoming, attractive and consistent space, with the highest sustainable development standards, ensuring accessibility and openness. It was presented to the IP Paris Board of Directors in December 2020.

INNOVATION PARK

Interaction between public and private research

Institut Polytechnique de Paris is a partner of the Innovation Park led by the Paris-Saclay Local Planning and Development Authority (EPA) which will **be located east of the campus**. The park will host several companies and will promote interactions between public and private research, the development of an employment market for PhD students, and the development of an innovation and start-up ecosystem. This park will contribute to Institut Polytechnique de Paris ecosystem and the broader Paris-Saclay scientific and technological hub.



SPORTS COURSE: 1st campus project funded by IP Paris

The Sports course was the first campus development project funded by IP Paris. IP Paris funded the creation of a sports itinerary with a pedestrian/cycling path connecting the five schools in order to **promote sports activities on the campus through a shared project** involving all five schools. The itinerary takes the form of a green track with directional signs, a fitness path around the lake, a fitness and stretching area, and a sports area including a city stadium and basketball courts.

SPORTS HALL: A new sports complex

Located near the École Polytechnique campus, the Sports Hall is a new sports complex shared by different schools. It is part of an effort to develop campus life and sports facilities for all the schools. **The complex has four main areas**: a judo hall, a weight/cardio-training area, a multipurpose martial arts/fitness area, and a boxing and kick-boxing area.



"2020 was a key milestone: the five schools gathered on a common campus, thus materializing Institut Polytechnique de Paris. I would like to acknowledge the work of all those who have contributed to this achievement. The elaboration process has resulted in a coherent plan for developing a welcoming, attractive and environmentally friendly campus, which will become a powerful tool for promoting Institut Polytechnique de Paris."

François BOUCHET, Director General of École Polytechnique

FULFILLING

student life



1st Call for student projects

Institut Polytechnique de Paris supports student initiatives. In 2020, it launched its first call for projects to enhance campus life and strengthen ties within the Institute's community. Regardless of the projects' focus (cultural, social, sports, entrepreneurial, events), they are all designed to mobilize students (from all training programs), organizations, staff members and faculty from several founding schools. There is a particular emphasis on the projects' cross-disciplinary nature, international aspect, diversity of the financial support (apart from the Institute), communication plan, and their innovative, responsible and sustainable nature. **At the end of the application phase from September 1st to October 15, 2020, the selection committee awarded €90,000 to finance projects in 2021 that will have positive benefits for on-campus student life and the image of Institut Polytechnique de Paris.**



"This first academic year for Institut Polytechnique de Paris was a historic one in several aspects. It marked the start of a new era for our five schools, which already shared a common history. Above all, it took place in an unprecedented context, especially for student life. In this context, we succeeded in developing exemplary mutual assistance projects, such as support for students facing difficulties linked to the pandemic and distance tutoring initiatives for middle and high school students who were hard-hit by successive lockdown periods."

Catherine GAUDY, Director General of Genes (of which ENSAE Paris is part)



Governance: a driving force

Since 2019, all of the governance bodies have come together to develop a common vision and process, supported by operational entities for the rapid implementation of the Institute's actions.



BOARD OF DIRECTORS

A governance body driving the roll out of the institute

Established in late 2019, the Board of Directors **defines the strategic guidelines for Institut Polytechnique de Paris and specifies its operating rules. The Board meets four times a year** to approve IP Paris priorities, internal policy framework and budget. It is also in charge of reviewing IP Paris management and performance.

EXECUTIVE COMMITTEE

A joint operational implementation

The Executive Committee prepares the strategic decisions and ensures the implementation of the orientations and objectives defined by the Board of Directors within Institut Polytechnique de Paris. **Each of the eight operational functions at Institut Polytechnique de Paris is led by a member of the Executive Committee** (Education and Research, Campus Life, Corporate Partnerships, International Relations, Innovation and Entrepreneurship, Student Life, Information Systems, Communication). In addition, **the cross-disciplinary "Digital Transformation" mission** was created to enhance the Institute's digital development. Finally, the Director of Planning and Resources manages resource acquisition and diversification.



ACADEMIC COUNCIL

A key advisory body

The Academic Council (Cac) established in late 2019 plays **an advisory role, particularly for the IP Paris Board of Directors**, with regard to educational programs, scientific policy and promotion of research outcomes, the shared project and multiannual contracts between IP Paris and the State, and agreements between Institut Polytechnique de Paris and national research organizations. It encompasses **50 members, including representatives from all five schools, outside experts, and staff and user representatives**. The Academic Council is consulted on measures intended to guarantee academic freedom and students' political and trade union freedoms, as well as issues of ethics and scientific integrity. In 2020, among other achievements, **the Academic Board issued opinions on the IP Paris education-research strategy and the accreditation to supervise research procedure (HDR)**.

INTERNATIONAL SCIENTIFIC ADVISORY BOARD (ISAB)

Enhancing our strategy through expertise from leading international scientists

The International Scientific Advisory Board (ISAB) is **an advisory body to the Executive Committee**. It is in charge of accompanying IP Paris in its reflection on the main orientations of its scientific policy. Its members are **eminent international scientific personalities whose research covers all the disciplinary fields of IP Paris**. At its first meeting in February 2021, ISAB was able to optimize the Institute's strategy and lay the foundations for vital and fruitful collaboration aimed at **positioning the Institute as a world-class higher education and research institution**.





Agility and operational efficiency



"The achievement of the Institute's ambitions, the optimization of its collaborative work, and the modernization of its teaching methods are all dependent on the success of the digital transformation at Institut Polytechnique de Paris. Our teams work together to implement digital infrastructure to support our staff in performing their tasks and providing students with a high-quality education. Despite its disastrous consequences, the health crisis revealed the potential of digital technology for the higher education and research community and we intend to make the most of it."

François DELLACHERIE, Director of Télécom SudParis

FUNCTIONAL COMMITTEES

8 Committees on key functions to implement IP Paris ambitions

Institut Polytechnique de Paris created 8 **operational committees to translate its strategies into concrete actions**: Education and Research, Campus Life, Corporate Partnerships, International Relations, Innovation and Entrepreneurship, Student Life, Information Systems, Communication.

GRADUATE SCHOOL

An entity supporting students and the implementation of educational programs

The Graduate School of Institut Polytechnique de Paris offers high-level training courses that provide the knowledge and skills needed to pursue an exciting career. **The Graduate School of Institut Polytechnique de Paris centralizes the Master's programs, PhD Track, and PhD programs.** It offers graduate students **the opportunity to combine learning and research in an intellectually stimulating and humanly rewarding environment.** It provides them with cross-disciplinary education in order to develop a wide range of skills (including soft skills) and ensure **a remarkably high level of employability.**

The Graduate School accompanies students throughout their studies, from admission to graduation. It ensures that it provides the support necessary for the success and development of all, academically, professionally and personally.





DOCTORAL SCHOOLS

A single framework for supervising PhD students



The Doctoral School (ED IP Paris), a dedicated entity within **the Graduate School**, **hosts nearly 1,000 PhD students supervised by over 800 faculty members** (including 550 accredited to supervise research–HDR) at **30 research laboratories (UMR CNRS, INRIA, CEA) with major scientific impacts**. These laboratories cover a wide range of disciplines. They are nationally and internationally renowned and their researchers and teachers-researchers benefit from a high level of recognition. In addition to this environment of academic excellence, **ED IP Paris also benefits from a significant industrial network (THALES, EDF, DANONE), which enables the development of industrial partnerships**, particularly with numerous R&D laboratories of industrial groups located in the Plateau de Saclay. ED IP Paris can therefore offer **an extremely rich doctoral program ranging from fundamental to applied research. 45% of the Doctoral School's PhD students are international students**. The PhD program at ED IP Paris

prepares students for a wide range of stimulating scientific career prospects (academic research, R&D, education, project management, etc.) at universities and in the private sector. The Hadamard Doctoral School of Mathematics (EDMH) supervises doctoral programs in fundamental and applied mathematics for Institut Polytechnique de Paris and Université Paris-Saclay.

GRANTS' OFFICE

Leverage for research

Institut Polytechnique de Paris has established an operational Grants' Office to help researchers obtain funding for their research projects. The Grants' Office will be **pivotal in facilitating coordinated research with increased funds** to provide the Institute with the means to achieve its ambitions through diversified funding sources. The Grants' Office staff provides operational assistance by **supporting efforts to obtain funding and identifying all the French and European calls for tender** for faculty members' projects.

"The role of Institut Polytechnique de Paris is to leverage public funding and its own resources to benefit our shared project. Our 10-year goal is to double the consolidated budget by capitalizing on the strength of its five schools and benefiting from economies of scale. The increase of our own resources is depending on active participation in French and European calls for projects with support from the Grants' Office, and on securing private funds by developing interdisciplinary centers or chairs in partnership with major companies."

Didier JANCI, Planning and Resources Director



Building the campus OF THE FUTURE

Institut Polytechnique de Paris contributes to and benefits from the dynamism of the Plateau de Saclay. This scientific and business hub, sometimes referred to as the «French Silicon Valley», is one of the eight most powerful innovation clusters in the world. The campus offers an extensive network of scientific, educational and sports facilities.

A myriad of players

With 71,000 companies, 45,000 R&D jobs, 65,000 students, 15,000 researchers and 360 laboratories, the Plateau de Saclay concentrates over 15% of French research and 40% of the public and private research jobs in Ile-de-France. In recent years, **leaders of major companies have chosen to set up their R&D centers in this area just outside Paris to benefit from the cluster effect.**

Strong synergy between education, research and entrepreneurship

This wide range of players from the worlds of higher education, research and entrepreneurship helps **drive innovation and attract forward-looking investors.** Young entrepreneurs and PhD students with innovative projects have access to the many incubators located on the campus. **And all students are immersed in an environment that nurtures their creativity and aspirations.** In addition, the future Innovation Park will bring together a number of private and public research centers.

Diverse fields of activity bringing together private and public players

Under the impetus of competitive clusters supported by the French government, **private stakeholders, acting as a network, have set up public-private collaborative programs** in fields including complex systems, connected mobility, energy efficiency, photovoltaics, the automotive sector and optics.

THE “FRENCH SILICON VALLEY”

is one of the eight most powerful innovation clusters in the world

71,000

companies

45,000

R&D jobs

65,000

students

15%

of French research

40%

of the public and private research jobs in Ile-de-France



Humanistic research and committed community during the pandemic

COMMITTED STUDENTS

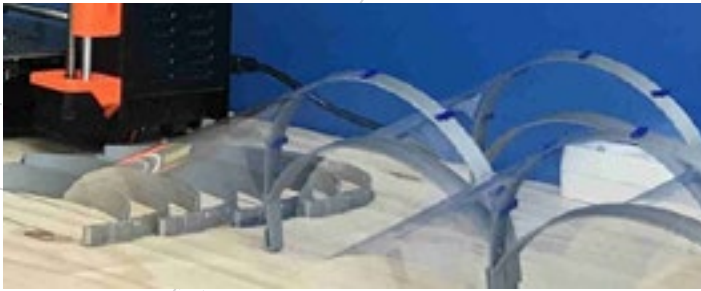
- Hundreds of students provided **academic support for high school and middle school students whose parents were mobilized** (medical and military personnel)
- Nearly one hundred students **signed up to assist hospitals, the armed forces, firefighters, and police forces**
- **Creation of the Covidaire.fr** initiative to create connections between neighbors to facilitate mutual assistance during lockdown.

LABORATORIES CONTRIBUTING TO THE FIGHT AGAINST COVID-19

- **Applied mathematics center:** analysis, modeling and assessment of scenarios for controlling the epidemic
- **Optics and Biosciences Laboratory:** study on the use of rare earth doped nanoparticles for highly sensitive detection of COVID-19
- **The Interdisciplinary Institute for Innovation (i3):** participation in the design of the StopCovid application developed by the government
- **LadhyX:** "Atchoum" project on the CARE-COVID platform to view sneezes and droplets using a rapid thermal camera

Emergency aid
for students
affected financially
by the crisis





ENGAGED START-UPS

- **Wingly** flew medical personnel
- **Hello Zack** used selective waste collection to support AP-HP hospitals
- **Mésange** made its network available to medical and paramedical personnel and professionals providing services to assist patients returning home after hospitalization

DONATIONS AND PRODUCTION OF EQUIPMENT FOR FRENCH HOSPITALS

- Several thousand **FFP2 masks** and 10,000 **surgical masks**
- **3D printing of visors**, valves for respirators, prototypes
- Production of **hydroalcoholic solutions** and **gowns**





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DE PARIS**



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