

ParisTech

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CHRISTIAN LERMINIAUX
President of ParisTech

EDITORIAL

2021 is a special year for the ParisTech network as it marks our 30th anniversary.

ParisTech has its origins in the “Grandes Écoles d’Ingénieurs de Paris” association set up by nine engineering schools in 1991. The original members included several of the ParisTech schools: Arts et Métiers, Chimie ParisTech – PSL, École des Ponts ParisTech, ESPCI Paris – PSL and MINES ParisTech – PSL. The founding schools were the first to realise that they would have to join forces if they wanted to stand out and succeed in an increasingly competitive global environment. 30 years on, ParisTech continues to promote the French engineering education system as a model of excellence. In particular, this means running joint campaigns to recruit international students, seeking greater social diversity, and training lecturers and researchers.

Given the current climate, we have had to overcome a number of challenges to honour our commitments. In terms of recruitment, we took the entire process online (promotional events, candidate applications, tests, admission interviews) so that we could cross international borders and meet potential candidates from all around the world. As a result of these actions we came very close to matching last year’s figures for applications and admissions. Moreover, to our delight, all of the international candidates we recruited before the pandemic have been able to start their course as planned.

FEATURED

International recruitment: Fantastic response, with candidates as motivated as ever!



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Chair of the ParisTech International
Commission and President of MINES
ParisTech – PSL

ALMA CATALA
Head of International Relations
at MINES ParisTech – PSL
and Head of the Admission Boards
for Argentina and Colombia

LAURA VILLETTE
Director of ParisTech in China

Across the ParisTech schools, international students make up almost 30% of the student body each year. How does the network go about attracting and recruiting these students?

VL: Our international strategy is focused on the specific features and value of the engineering degree awarded by the ParisTech schools,

and indeed of the French engineering system more generally. ParisTech students not only benefit from excellent teaching, as demonstrated by the schools’ league table rankings, but also graduate with the same employment prospects as students who complete two Anglo-American-style master’s courses (in science/engineering and in management). Our strategy is also underpinned by long-standing ties with several target countries with which France enjoys strong economic relations, such as South America, Russia and China.

AC: We’ve been working with top institutions for a number of years, taking a partnership-based approach whereby we build close relationships with our partners’ international relations teams and department leaders. We have signed agreements to facilitate student exchanges and set up double degree programmes.

In terms of attracting candidates, ParisTech has also reinforced its social media presence. We also aim to showcase our institutions to lecturers and researchers at our partner universities, as they play a significant role in advising students.

LV: The underlying strategy of the network is to promote the value of French engineering qualifications in countries where this type of degree does not exist, and to highlight the range of career opportunities open to graduates (research, employment or entrepreneurship).

Has the current health crisis changed the way you recruit international students?

VL: No – and that’s something we’re very proud of! The ParisTech schools implemented strict measures to ensure that teaching could continue.

Apart from during the first lockdown, we have not had to stop face-to-face classes completely. Overseas placements have been able to go ahead in many cases, and thanks to the quick response of the ParisTech network, our newly recruited international students have been able to continue their studies without interruption, albeit with some adaptations.

AC: We took a very proactive approach to ensure that we maintained recruitment and outward mobility at pre-pandemic levels and were able to welcome students as usual. We looked for alternative ways of presenting our exchange programmes and took our promotional campaign online, using social media and webinars to reach prospective students. We are delighted to say that despite the difficult circumstances, all of the international students we recruited have been able to take up their places this year – and they are as motivated as ever!

LV: As early as February, we knew that we would be running our recruitment campaign online. Usually, representatives from the ParisTech schools travel to China, Brazil, Argentina, Colombia and Russia in the spring to promote our courses and meet candidates. This year overseas travel was of course out of the question, so we decided to go digital. We recorded a series of videos in which we spoke with the schools' directors, international students and heads of international relations, and updated the ParisTech websites and social media channels. We also held

a global webinar, with additional sessions for Russia, Argentina/Colombia and China. In China we completely revamped our WeChat account and created a presentation page in Chinese for each of the ParisTech schools.

Would you say the ParisTech 2020 international recruitment campaign was a success?

VL: The resilience shown by the network has been truly remarkable. We were able to hold our promotional activities and entrance exams online, and the international teams were impressively quick to adapt, which meant that the schools could continue to engage with candidates and maintain their interest. Overall, we saw the same level of applications and admissions as in previous years and what's more, we noticed an increase in the quality of applications, so we are particularly pleased with how things went this year.

AC: I can honestly say the campaign was a great success. It wasn't easy, but ParisTech quickly adapted its recruitment process. Everything was done online – webinars, test, interviews, a new CRM system. All of this meant that we could accept and process just as many applications as before. Overall we admitted the same number of students as last year, and even exceeded last year's figures for some countries. The new online tools allowed us to reach candidates from a wider range of backgrounds.

One of the next steps will be to ensure we can welcome the students we recruited in 2020 in the best possible conditions.

LV: The pandemic pushed us to acquire and adopt new tools more quickly and learn how to use them to communicate effectively online.

What will the 2021 recruitment campaign look like? Will there be any changes?

VL: Our first goal is to consolidate the excellent results of the 2020 campaign and learn from our experience. There are always points that can be improved. In 2020 we received independent applications from a number of highly talented external candidates – i.e. students not enrolled at one of our many partner institutions. We hope to expand this source of recruitment, in particular in Asia by making the most of the team we have in China, who are already doing an outstanding job.

AC: Our recruitment process has evolved, and will continue to do so. We made a lot of significant and very successful changes in 2020.

LV: We will be working in the same conditions as in 2020, as international borders are still closed. We intend to apply everything we learned from the 2020 campaign and continue to improve, adapt and develop our promotional tools. One major change for 2021 is that we will be recruiting students from other parts of Asia: Korea, Japan,

Singapore, Taiwan, Hong Kong, Vietnam, India, Malaysia, Indonesia, Thailand, Laos and Cambodia.

Is this recruitment process specific to the ParisTech schools?

VL: For the moment yes, it's only for the ParisTech schools, but we plan to open up the process to other schools by inviting them to join the network. We specifically want to restrict the recruitment process to schools that share the same values – firstly, a commitment to offering broad engineering programmes that provide students with an excellent education and the same employment prospects as students who complete two master's degrees elsewhere in the world, and secondly, a desire to foster strong ties between research and teaching.



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Chargée de mission pédagogique : paritech@atp.pariitech.fr

How did the RACINE network adapt to the pandemic in 2020?

As for everyone, the health crisis took us completely by surprise and caused considerable disruption in our schools. Initially, given the urgency of the situation, the correspondents for the schools in the network had to play a front-line role in order to keep classes running in their institution. The face-to-face workshops that were due to take place between March and June 2020 therefore had to be cancelled. However, we pooled our experience and decided to run all the workshops online from July 2020 onwards so that we could meet the needs of academic staff, who urgently needed help in adapting their teaching methods and materials to online or hybrid formats in time for the start of the 2020/2021 academic year.

What kind of support did lecturers and researchers ask for?

The unprecedented circumstances brought about by the pandemic meant that academic staff had to re-think their teaching practices or adopt entirely new methods that worked online, as at that time, almost all teaching was delivered face-to-face. Based on the questions staff asked us, we reorganised our educational workshops and ran them online.

We addressed questions such as: How do I plan a course using online digital tools? What's the best balance of synchronous and asynchronous activities? How can I make sessions interactive and keep my students motivated? How do I carry out exams and assessments?

During summer 2020, you led an online workshop called "How to plan for online and hybrid teaching". What did you learn yourselves, as instructors?

When we redesigned our "How to plan for online or hybrid teaching" workshop, we applied one of the key principles of the RACINE network, which says that *what* we teach should be intrinsically related to *how* we teach. In other words, if we want to teach staff how to make online courses interactive, we have to incorporate interaction in our own online sessions so that staff experience things from a student's perspective. The key takeaway is that online classes *can* be interactive, but only if sessions are carefully planned to take into account the nature of online or hybrid teaching. Simply carrying over face-to-face methods to an online environment puts students at risk of fatigue or even burnout in the long term, especially if classes take the form of lectures running for several hours at a time.

GILLES BUISSON
(École des Ponts ParisTech)

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Instructional Designers
for RACINE ParisTech



THE LATEST FROM PARISTECH

COMMUNICATION

Statut de l'association dénommée
"Grandes Ecoles d'Ingénieurs de Paris"
GEI Paris

RÉGIE PAR LA LOI DU 1^{ER} JUILLET 1901
Statut déposé le 12 février 1991

In 1991, nine French engineering schools set up the "Grandes Écoles d'Ingénieurs de Paris" association with the aim of collaborating in areas of mutual interest and forming an entity that was large enough to forge a reputation on the world stage. The network was renamed ParisTech in 1999.

2021 marks the 30th anniversary of the schools' decision to join forces in order to develop and promote the French engineering education system both within France and abroad. The ParisTech schools are proud to follow in the footsteps of their predecessors by recruiting and training the scientists and engineers of the future. This anniversary is the occasion to reflect on the core values of the network, which are more important than ever given the current climate: openness, solidarity, innovation and excellence.

TEACHING



In December 2020, the Teaching Commission carried out a comprehensive survey into how **soft skills** are taught at the ParisTech schools. Today's students are tomorrow's managers, and if they are to establish themselves in the workplace and find meaning in their professional lives, it is essential that they learn emotional intelligence and skills such as decision-making and critical thinking.

The survey revealed that soft skills training is a key element of the curriculum across the network, proving that the ParisTech schools take the matter very seriously and recognise that this type of training will empower students to become the responsible leaders and changemakers that the world needs.

DIVERSITY



The "Ambition Sciences" partnership between ParisTech and ENCPB, launched in September 2020 as part of the "Cordées de la réussite" scheme, has gotten off to a flying start. The partnership involves three of the ParisTech schools (AgroParisTech, Arts et Métiers and Chimie ParisTech – PSL), with 28 tutors holding fortnightly sessions for groups of three 1st or 2nd year *prépa* students. The sessions alternate between online and face-to-face meetings, always in accordance with the latest health guidelines. The tutors plan content based on the students' needs (methods, concepts, practical exercises, revision) and offer encouragement by sharing their own experiences of *prépa* and engineering school. The feedback has been very positive: "We all get a lot out of it", "It encourages everyone to aim higher!"

INTERNATIONAL

PARISTECH INTERNATIONAL SUMMER SCHOOL
Engineer your future
A journey through
Heritage Innovation & Sustainability
FROM JULY 1st TO 16, 2021
Program in English opened to international students

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AgroParisTech
ESPCI PARIS PSL*

Arts et Métiers
INSTITUT COPERNIC
PSL*

PSL*

This year, ParisTech is organising a summer school for the first time. Entitled "Engineering your future – A journey through Heritage, Innovation and Sustainability", the programme will run from 1–16 July 2021 and is aimed at international students who want to find out more about how engineering is taught in France. It will include both scientific sessions (conferences, workshops, trips) and intercultural activities, and students will also visit the five participating schools (AgroParisTech, Chimie ParisTech – PSL, École des Ponts ParisTech, ESPCI Paris – PSL and the Institut d'Optique Graduate School). Around twenty places will be available. Further details can be found [here](#).



In 2020, ParisTech secured funding under the Erasmus+ International Credit Mobility scheme to develop a partnership with the University of Nairobi in Kenya. The aim is to strengthen the ties already established by the schools via the ADESFA programme (Support for the Development of French Higher Education in Africa) of the French Ministry for Europe and Foreign Affairs. The partnership has now been launched and covers mobility projects for doctoral students, places for Master's students at the ParisTech schools, and exchange programmes for administrative and academic staff. For more information, see [here](#) (French only) or contact the International Relations team at one of the seven schools.

PARISTECH ALUMNI

ParisTech Alumni

ParisTech Alumni was created in 2008 and brings together the graduate associations of the ParisTech schools. In 2021, in a rallying call to the alumni community, which now has around 90,000 graduates, the Executive Board reaffirmed the key goals of ParisTech Alumni:

- Work together to promote the value of French engineering qualifications around the world
- Promote sustainable development and social progress through innovation in science and technology

Our alumni are valuable ambassadors of ParisTech. This year, ParisTech Alumni is running a campaign to gather testimonials from international graduates who can demonstrate how they have benefited from studying at one of the ParisTech schools. To share your story, please write to: contact@paristech-alumni.org.

INTERNATIONAL ACTIONS

Agreements

Renewal of the Cooperation Agreement with Tsinghua University (China)

Renewal of the Cooperation Agreement with the University of Guadalajara (Mexico)

NEWS FROM THE SCHOOLS



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AgroParisTech

AgroParisTech has been awarded the new Erasmus+ Charter. Institutions are required to hold this charter in order to participate in the 2021-2027 Erasmus+ programme, so this is a very important achievement for AgroParisTech in terms of its international strategy. Furthermore, despite the added complication of preparing its application during France's first lockdown, AgroParisTech was awarded full marks for its application. The new Erasmus programme focuses on digital inclusion and the green economy.



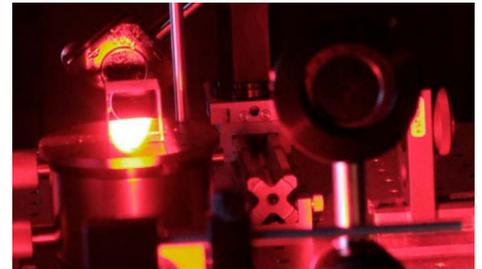
Arts et Métiers

Solidarity and commitment – two values that define Gasole (Gadz'Arts Solidaires), the community action group run by students at Arts et Métiers. The students participate in local and international projects, and, despite having to adapt their plans due to the health crisis, have already carried out a number of missions. Examples include organising a Christmas toy collection for children from disadvantaged backgrounds, donating hair for wigs for cancer patients, giving French and Maths lessons to young immigrants, and collecting for food banks. You can read more about the projects [here](#) (in French).



Chimie ParisTech – PSL

The NanOQTech project has won a Stars of Europe award. The project, whose full title is "Nanoscale Systems for Optical Quantum Technologies", was one of twelve French scientific projects (all part of the Horizon 2020 research programme) to receive a trophy in the "Stars of Europe" ceremony, now in its 8th year. The project is led by Philippe Goldner, CNRS Director of Research at the *Institut de Recherche de Chimie Paris* (Chimie ParisTech – PSL). In 2015, PSL supported the NanOQTech project in its bid for funding under the Horizon 2020 FET OPEN programme.



Institut d'Optique

PhotonHub Europe, a new pan-European photonics digital innovation hub, has been awarded €19 million under the EU Horizon 2020 programme. PhotonHub Europe will help European SMEs and mid-caps become highly competitive digital businesses through faster and smarter deployment of photonics-based technologies. The laboratory of the Institut d'Optique Graduate School will be participating in the R&D activities of the PhotonHub Europe project via its experimental photonics platforms.



École des Ponts ParisTech

Céline Guivarch, Head of Research at the École des Ponts ParisTech, has been awarded the Irène Joliot-Curie prize. On 15 December 2020, Céline Guivarch, Head of Research at the École des Ponts ParisTech, received the "Young Female Scientist" award, one of the three Irène Joliot-Curie prizes bestowed by the French Minister of Higher Education, Research and Innovation each year. The prize rewards Ms Guivarch for her interdisciplinary research work on climate change, which combines climate science, economics and applied mathematics. Céline Guivarch is also a member of the French High Council on Climate.



MINES ParisTech – PSL

Scenarios for a "renewable" France. A new series of webinars has been launched by the Modelling for Sustainable Development Chair (MPDD), which is led by the Centre for Applied Mathematics of MINES ParisTech. The webinars will take place on the last Thursday of each month and will take a critical look at the issues related to integrating renewable energies with the aim of decarbonising the French energy mix by the end of the century. The series kicks off on Thursday 28 January (10am–12pm CET) and the second session is scheduled for 26 February. Contact: sandrine.selosse@mines-paristech.fr

ParisTech, the major engineering schools network

The complementary nature of the areas of excellence of the various schools provides our students, researchers and partners (academic and corporate) with an exceptional consortium that offers unique transdisciplinary opportunities. ParisTech also has strong international teaching and research links via its many partnership agreements.

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