

ParisTech

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CHRISTIAN LERMINIAUX
President of ParisTech

EDITORIAL

The unprecedented global crisis of these past months has had an undeniable impact on our schools, on our partners and on each and every one of us. I am proud to say that the ParisTech community quickly rallied together and has demonstrated an extraordinary level of agility, allowing us to maintain many of our activities and move teaching online. Staff and students alike have applied their skills to help healthcare professionals, and many of our alumni have offered support. In terms of financial aid, the ParisTech Foundation donated to the COVID-19 emergency fund set up to assist students facing hardship, prompting a number of further donations.

Our focus now is on the new academic year. We are looking at different solutions and reflecting on what we – and society at large – have learned from the crisis. In China, things are slowly returning to normal. You can read accounts from some of our staff there in this issue. Throughout lockdown, the ParisTech commissions (Teaching, International, Communication and Diversity) have continued sharing best practices – an activity whose importance has been magnified by the uncertainty we are all experiencing. We have also adapted our strategy, for instance by shifting to an online campaign to recruit international students for 2021. These examples clearly show that being part of a network like ParisTech gives us the strength to remain efficient and resilient in the face of adversity.

FEATURED

Teaching and learning continue as the ParisTech schools prepare for the new academic year



Since the beginning of the COVID-19 health crisis, the ParisTech schools have introduced numerous measures to keep classes running and to accommodate distance learning. We spoke to two members of staff to find out more.

MARIE MATHIEU PRUVOST
Director for Education
at the Ecole des Ponts ParisTech

RIAD HAIDAR
Deputy Director
for Education at the Institut
d'Optique Graduate School

How have you handled the COVID-19 crisis in terms of remote teaching?

MMP: At the beginning of March, the Directorate for Education at the Ecole des Ponts ParisTech started preparing for the possibility that the school would have to close, focusing on the need to ensure the continuity of teaching and learning. Despite lockdown, we were able to run 85% of classes remotely thanks to the outstanding efforts made by staff, guest speakers and module leaders to adapt their teaching materials and deliver sessions online. All of our language classes ran as planned. However, some things did of course have to be cancelled, for example

the inter-school "Design week" and certain practicals and lab sessions. To ensure ongoing follow-up of students, we made arrangements for staff to work from home, and our administrative personnel worked in fixed pairs to limit contact. Students are sitting all of their exams remotely.

RH: SupOptique was quick to realise the impact the epidemic was going to have and cancelled the European ATHENS exchanges even before restrictions were imposed. During lockdown, thanks to the tools we had available and the flexibility of our teaching teams and technical staff, we were able to move almost all of our classes online and stick to our original teaching timetable. We managed to organise some practical sessions too, for instance by having students analyse simulated data. Language classes were conducted via video link, and most of our interns were able to work from home. These measures were adopted at all three of our sites (Paris-Saclay,

Bordeaux and Saint-Etienne) and we even took the opportunity to organise a number of joint sessions. Our year leaders and tutors are closely monitoring students to keep an eye out for anyone who appears to be struggling or at risk of dropping out.

What are the main tools you've been using?

MMP: Lecturers have been given access to a number of different tools, such as Adobe Connect Meeting, which we used to run 37 virtual classrooms simultaneously! But staff are also free to choose other solutions to suit their particular teaching requirements or classes. The Educational Engineering Innovation Team (S2iP) has been an invaluable source of support in terms of training and assisting staff and monitoring students. If staff have technical issues or teaching-related queries, they can also contact our two digital learning designers via a special hotline.

RH: We've been using the eCampus platform that was developed at the Université Paris-Saclay. Thanks to a rapid response from our technical teams and the flexibility of our teaching staff, students have been attending lectures online, via video link. Some lecturers choose to pre-record videos or PowerPoint presentations with audio comments which they then follow up with live Q&A sessions – from an educational point of view, creating these kinds of opportunities for staff-student interaction is one of our priorities.

What should students expect when the new term starts?

MMP: Given the ongoing need for social distancing, we're planning to run remote sessions alongside on-site classes and set up a rotating attendance system to limit the number of students on campus at any one time. We're also aiming to increase the quality of the teaching we provide online. International students who are due to undertake an exchange in the 1st semester

will be able to postpone it to the 2nd semester. Those on double degree programmes will be able to take all or part of their 1st semester classes remotely, and specific support will be provided as the situation evolves.

RH: The new term is still due to start in September as planned. International students joining us usually take French language classes at EPF/ESTP in Sceaux. Given the circumstances, the courses will run remotely for the time being, but this may change as restrictions are lifted (opening of borders, availability of visas, etc.) The biggest challenge we face is undoubtedly what to do about practical classes. Experimentation is one of the cornerstones of our academic programmes but is obviously very difficult to do online – although COVID-19 has forced us to make rapid progress in this area!

What has the crisis taught you?

MMP: The thing that stands out for me is how quickly everyone rallied together in the face of such an unprecedented and worrying situation. As Frédérique Vidal (the French Minister of Higher Education, Research and Innovation) commented, the agility demonstrated by higher education institutions has been truly remarkable. We've seen a huge response from our alumni community too, with many former students offering to support students facing financial difficulties or assist those looking for internships. I also think the new methods we've implemented for remote teaching and meetings will prove to be useful in the longer term too, even replacing more traditional formats where they are most beneficial. Ideally, I'd love to see "blended learning" – the combination of e-learning and conventional face-to-face teaching – become the norm.

RH: It's been a chance to put the efficiency of our entire academic structure to the test (academic staff, administrative teams, student representation committees) and has highlighted the value of being part of a transverse network like ParisTech: together, we've been able to share best practices and set up a support fund that no single school could have financed alone. Finally, looking beyond the difficulties we've encountered in a number of areas, I'd like to underline the opportunities now open to us to accelerate the transformation of education and training. We need to rethink our approach to digital and hybrid learning (even for lab work), to reflect on how our three sites can interact with one another, and to redefine fundamental principles about skills acquisition and assessment, including for internships.

ZOOM

China: a light at the end of the tunnel?

ParisTech is part of three Franco-Chinese institutes: Chimie Pékin (Beijing), SPEIT (Shanghai) and ICARE (Wuhan). We asked Anouk Galtayries and Van-Bao Ta (co-directors of Chimie Pékin), Frédéric Toumazet (Dean of SPEIT), Michel Farine (European Dean of ICARE) and Laura Villette (ParisTech director in China) about their experience of the COVID-19 crisis.

What has it been like in China during the crisis? What support did you receive?

F.T.: In China, or in Shanghai to be precise, everyone seemed to be in a kind of stupor at first. The city was already empty because people had left for the Chinese New Year holiday, and the situation seemed surreal. After the first few days, the restrictions began: masks, sometimes gloves too, and stringent health checks.

L.V.: Somewhat paradoxically, the crisis has brought us closer to our Chinese partners. In February the ParisTech China Office sent messages of support to the directors of international relations at our partner universities. Christian Lerminiaux, President of ParisTech, followed up on this by writing letters of support to the presidents of those universities. And then when the crisis reached France, the roles were reversed and our Chinese partners reached out to us with words of encouragement and support.

How have things changed for your students?

M.F.: ICARE, which is part of HUST, is located in Wuhan, which was of course the original epicentre of the coronavirus outbreak. Classes did not start up again after spring break and HUST is still closed

to students. Teaching staff have just recently started returning to their labs, but are subject to strict health checks. We've felt fully supported by the Chinese-European team, who were all 100% committed to putting students' needs first as we worked out how to best manage the crisis.

A.G./V.B.T.: At Chimie Pékin, the management team decided to move teaching online. One challenge we've faced was the time difference, because some of our academic staff are still stuck in France. Using large-scale video conferencing tools and cloud storage solutions we've been able to set up two types of online classes: pre-recorded video sessions, and live broadcasts.



M.F.: From the middle of April, our European lecturers started putting up their classes online, usually as PowerPoint presentations with accompanying notes and audio comments, and we plan to continue working like this until August. Our students can therefore work independently from wherever they currently are (many international students have returned home, and our Chinese students are dispersed throughout the country) and then participate in live Q&A sessions with lecturers. Classroom-based exams will be held from September onwards so that students can complete the requirements for their French Master's qualification.

F.T.: The biggest challenge was how to support our exchange students. In an already complicated situation, we had to assist French students here who wanted to go home, and then when the crisis reached France, we had to turn our attention to students there who wanted to come back to China. With the crisis unfolding on a different timescale in the two countries, the health guidelines and restrictions were not always the same, and this led to considerable confusion and worry.

Would you say the crisis is over?

A.G./V.B.T.: Sadly no, it's a long way from being over. Yes, the situation has improved, but we're not back to normal yet.

What arrangements have you made for the new term?

A.G./V.B.T.: We already know that this new term is going to be like no other. There will still be restrictions in place, and lots of questions remain to be answered, in particular when and how students will return, what to do about recruiting new students, when travel restrictions will be lifted, etc.

M.F.: If our European staff cannot return to China in September, we will continue to run classes remotely. Chinese lecturers should be able to resume teaching as usual, but we don't yet have any official information from HUST.

F.T.: We've learned a great deal about how to teach online. We're going to need to continue to build on this and apply everything we've discovered during this period to our regular teaching activities.

[You can access these interviews in full and read about the experiences of French staff in China here.](#)

THE LATEST FROM PARISTECH

COMMUNICATION



ParisTech now has its very own [YouTube channel](#)! What makes a ParisTech engineer? Which schools are part of ParisTech? What do French students and international students think of ParisTech? What joint projects are the schools working on – ATHENS, RACINE, workshops on diversity/teaching, international recruitment...? In the videos, the schools' directors and teaching staff and students from all parts of the globe – France, China, Brazil, Colombia, Argentina, Russia – answer all these questions and more. It's a great way to keep up-to-date with the latest news from ParisTech on topics such as teaching and diversity and our international projects. Enjoy!

TEACHING



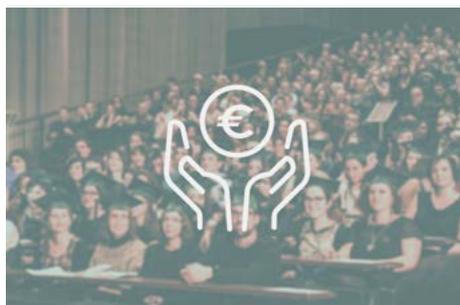
RACINE, the ParisTech teaching innovation and support network, continues to grow, with the appointment of Yaelle Albo as **Project Manager for Teaching Practices**. Ms. Albo has extensive experience in support and innovation, and in line with the network's current focus on training staff and sharing innovative teaching methods, she will be responsible for optimising teaching practices and familiarising the schools' academic staff with cutting-edge teaching methods used at higher education institutions across France. Bienvenue!

DIVERSITY



On 6th March 2020, the Teaching Commission and the Diversity Commission held a workshop entitled "**Diversity across our campuses**". The event was attended by students, administrative staff and lecturers and researchers from the ParisTech schools and had two key goals: to ensure student well-being, and to prepare students to manage diversity when they enter the professional world. Participants engaged in a round-table discussion and then worked in small groups to come up with ideas for actions relevant to the four types of diversity identified (gender, international/cultural, disability, social). Each of the schools will be able to use these proposals to enrich and strengthen their diversity action plan. You can watch the presentation on the [ParisTech YouTube channel](#) (in French).

PARISTECH FOUNDATION



The ParisTech schools have appealed for financial support from their alumni and economic partners as students struggle with the consequences of the COVID-19 health crisis. The emergency fund was **set up by ParisTech Development** after the schools were contacted by alumni eager to lend a hand. **Anybody can donate**, and the money collected will be used to assist students who are encountering difficulties in their studies as a result of the COVID-19 epidemic.

In support of the wave of generosity and solidarity, **the ParisTech Foundation in turn released ten thousand Euros to boost the fund**, which meant that grants could be distributed as soon as eligible students were identified.

INTERNATIONAL



The five ParisTech schools involved in the "French-African Cooperation for Engineering in Africa" (FACEA) project, which is financed by the ADESFA programme of the French Ministry for Europe and Foreign Affairs, hosted a **delegation from the University of Nairobi**. The group of delegates, headed up by Professor F. Mulaa, visited the ParisTech laboratories and met with researchers and teaching directors to learn how engineering courses are organised at ParisTech and what research is being carried out. The delegates found the tours of the technical facilities especially useful as a source of ideas for the "Engineering and Science Complex" project currently underway at the University of Nairobi.

INTERNATIONAL ACTIONS

Agreements

Renewal of framework agreement with PUC Rio (Brazil)

Renewal of framework agreement with the Faculty of Exact and Natural Sciences of the University of Buenos Aires (Argentina)

Amendment to the framework agreement with the University of Los Andes (Colombia)

Trips

Trip to Beijing: C. Lermينياux, President of ParisTech 14-17/01/2020

Trip to recruit doctoral students (China) January 2020

The planned trips to Argentina, Colombia, China, Russia and Brazil were cancelled due to COVID-19 but the promotional campaign is going ahead online.

Watch the webinar [here](#) and follow us on [LinkedIn](#) and [Twitter](#).

Visiting delegations

Delegation from the University of Nairobi (Kenya) 24-28/02/2020

NEWS FROM THE SCHOOLS



AgroParisTech

“The Thursday podcast” – a new series launched by AgroParisTech. Tune in each week to meet students and alumni who have launched initiatives in a bid to tackle today’s challenges and create a better future. Clément transforms non-recyclable waste for use in the construction sector, Annie’s goal is to revolutionise food production in Africa, and Cléa and Benjamin are fighting plastic pollution in the Mediterranean – inspirational projects led by inspired young entrepreneurs! The podcasts are available on [YouTube](#) (in French).



Arts & Métiers

With so many companies struggling in the wake of COVID-19, Arts & Métiers has launched a programme to help businesses get back on their feet. Baptised GARAS (Support & Guidance for a Safe Return to Work), the scheme aims to help companies implement effective health and safety measures to protect their employees. The team has put together an information kit explaining all of the necessary measures and can also arrange for an engineering student from one of the schools to complete an internship in the company to oversee implementation of the measures. With the support of all eight campuses, the GARAS team hope to reach businesses of all sizes in all areas of the country.

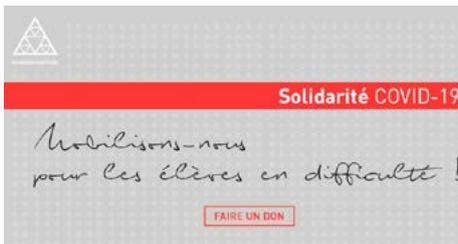


Chimie ParisTech - PSL

During lockdown, first-year students at Chimie ParisTech (PSL) spent five half-days working on a website creation task. Web design was a new challenge for most of the participants, but armed with enthusiasm they quickly got to work, designing sites for a number of clubs and societies within the school (the Flash video club, the Focus photo club and the Ecoscience society to name just a few). The project gave the students the chance to give something back to the university community at the same time as developing their digital skills.

ESPCI Paris - PSL

In response to the shortage of protective equipment facing front line workers, ESPCI Paris supplied several dozen boxes of PPE for hospital staff. In total, over 60,000 gloves, 1,000 masks, 500 disposable overalls and aprons and countless pairs of protective goggles and overshoes and mob caps were collected. In parallel, the school’s nine 3D printers were running around the clock to manufacture protective face shields, and the IPGG teams have been working with the Institut Curie to produce parts for ventilators. A number of engineering students have also lent their support to the [crowdfightCOVID-19.org](#) initiative which aims to bring together skilled scientists and researchers to compile data on the disease. Finally, a team from the Gulliver laboratory and one from the CBI laboratory have received funding from the French National Research Agency (ANR), following its latest call for projects. The teams are developing simple testing devices that deliver rapid results at the point of care. A third team, from the Institut Langevin, is working on a system that can remotely monitor a patient’s breathing.



Ecole des Ponts ParisTech

The Fondation des Ponts has set up a COVID-19 solidarity fund to support students facing hardship. Cancelled internships, loss of income from part-time jobs, less family support, isolation... Many students at the Ecole des Ponts have found themselves struggling during the coronavirus crisis. [Click here to find out more and offer your support.](#)

MINES ParisTech – PSL

MINES ParisTech, a member of the Université PSL and France’s top engineering school in terms of research partnerships, is honoured to announce that Pierre Rouchon has been awarded an Advanced Grant from the European Research Council for his project entitled “Quantum Feedback Engineering, Q-Feedback”. Pierre Rouchon is professor at the Systems and Control Centre of MINES ParisTech and a member of the QUANTIC team (INRIA-Paris, ENS-Paris and MINES ParisTech-Armines). The ERC grant (up to 2.5 million Euros over a period of 5 years) will be used to further the field of quantum control and automation theory, an essential step in developing the quantum technologies of the future.

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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