

ParisTech

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ELISABETH CRÉPON
President of ParisTech

EDITORIAL

It is with pleasure that I write these words to introduce you to the first newsletter of ParisTech, new formula.

Its purpose is to foster the creation of a bond within the ParisTech community, taken in the broad sense: our faculties, teacher-researchers, students, but also our 200,000 alumni, members of ParisTech Alumni, the ParisTech Foundation, which contributes to develop and help others experience common teaching and research projects between our faculties, the representatives of ParisTech International ...

This letter will allow you, on a regular basis, to follow the actions carried out by ParisTech's 4 commissions: Diversity, Communication, Teaching, International, as well as to discover the pivotal events of each of our faculties.

We hope to provide concrete evidence of the achievements and projects our teams are jointly involved in, sharing values that unite them.

ParisTech is this unique network that allows our faculties, each with its specific ecosystem, to work for scientific excellence and to foster teaching and research both in France and around the world.

Read, tweet, share without moderation ...

HEADLINES European universities: what will tomorrow's landscape for higher education in Europe look like?



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France is hosting the European Ministerial Conference on Higher Education on **24 and 25 May 2018**. This will bring together the ministers of the 48 signatory States to the **"Bologna Declaration"** on the convergence of higher-education systems in Europe: an opportunity to take stock of the concrete changes brought about over more than 20 years by the Bologna process, the new developments expected following the Conference, and the opportunities for our institutions.

SOPHIE LEBAN Interview,
General coordinator of the Athens
program

CHRISTIAN LERMINIAUX,
Chair of ParisTech's Chemistry
department and Vice-President
of ParisTech.

What are the next deadlines for higher education Europe?

SL : Starting in early 2018, two think tanks have been created on the initiative of the Directorate-General for Education and Culture in Brussels and of the European Commission. Comprised, in the former's case, of members of higher-education institutions and networks, and, in the latter's, of experts appointed by the Member States, they are preparing this

spring's deadlines regarding the notion of European universities.

CL : The deadlines are very near and the timetable is tight, since the European Commission will be launching a call for projects for European universities this fall, following the first decisions expected on 23 May at the Education Council which will meet in Brussels. Higher-education institutions must therefore be very quick to position themselves on this issue. Europe should be releasing EUR 20 million for selected projects.

What are these European universities, precisely?

SL : During his speech at the Sorbonne on September 26th, 2017, Emmanuel Macron proposed: "[...]

the creation of European universities, which will be a network of universities of several European countries, setting up a study path in which each student will study abroad and take courses in at least two languages. European universities which will also be places of pedagogical innovation, of the pursuit of excellence. We must commit to build at least a score of these by 2024. But, as soon as the next university semester begins, we must structure the first ones, with truly European semesters and truly European diplomas [...]"

CL : European universities will be able to offer programs at several locations, with a single joint diploma from several European institutions. They will have to propose, within a specific area, a shared

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training offer and common research actions, and single diplomas. Mobility will no longer concern just the students, but also teachers-researchers and administrative staff, who will also have to be mobile.

How should this European universities project accelerate the convergence of higher education in Europe?

SL : This goes much further than existing mechanisms, such as Erasmus. Indeed, current projection for Erasmus + trends until 2020 indicate a mobility that will affect 7%

of students in those countries eligible for this program. Which, in the end, is quite small. The curricula still offer too few exchanges, too few opportunities. For example, for some students, the Athens exchange week constitutes their only experience of mobility during their studies!

CL : This project should enable the construction and structuring of a space for higher education and research by 2025. It seeks to facilitate and foster mobility for EVERYBODY, in every country and every discipline.

In concrete terms, what “specifications” warrant a “European university” label?

SL : This is being developed and will be approved by the Education Council on May 23rd. But, in a nutshell, European universities will be the result of alliances between 3 to 6 institutions which have clearly identified teaching and research synergies, are able to carry out long-term projects and to guarantee a minimum integration structure, and enjoy a critical size and State financing.

CL : We find ourselves in a “bottom up” situation. Naturally, there is a level of excellence that is expected, but eligible institutions must volunteer and have identified possible convergences.

In this respect, existing networks such as ATHENS or CESAER are effective exchange platforms through which possible alliance points may be found. ParisTech's faculties, which belong to these networks, would be perfectly justified to seize this opportunity

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THE PORTRAIT



SARAH LEMARCHAND,
Télécom ParisTech pedagogical
adviser who coordinates
the project.

**Eight ParisTech
faculties are jointly
implementing,
a program to assist teachers
to enrich their pedagogical
practices. Other schools, which
are not members of ParisTech,
could join this project.**

What is the RACINE project?

RACINE is a network of accompaniment and innovation in ParisTech teaching.

This is not new since, starting in 2009, ParisTech's faculties have been proposing a reflection and conducting joint actions on the issue of training.

Over the past five years, a dozen workshops have been offered each year, on topics such as the design and use of multiple-choice quizzes, the integration of flipped classrooms in teaching, the production and use of a pedagogical video clip, methods to get students to participate ...

The program is developed by players who have long been involved in teacher training, educational innovation, and coaching in schools. The Group in charge of managing this consists of teacher-researchers, of educational engineers and consultants of ParisTech faculties, in collaboration with networks that are active in the field of higher education, such as the PENSERA network or the network of Île de France educational consultants.

This training cycle is part of the approach to professionalize players and improve training quality. It allows the pooling of the faculties' resources to train teacher-researchers in pedagogy and to share a common culture to teach effectively.

It is based on regular consultations of the players' needs through surveys, questionnaires, and interviews.

The RACINE network also makes a common background of reference resources (works) available and offers reflective actions and feedback on thematic experiences. For example, we have recently organized a half-day around the theme, “Integrating games into your teaching”.

In what manner does ParisTech foster the project's existence?

First, ParisTech supports the project because it offers it a legal framework with a shared-financing model.

The action of the RACINE network is multifaceted. Even if one person is specifically in charge of network animation, to allow it to be structured and to develop, it is essential that the actions be supported by the studies or trainings departments, and that there be correspondents in each faculty who relay common offers appropriately.

ParisTech's scale for developing training courses based on sharing experiences is interesting. It makes it possible to reach a

sufficient number of teacher-researchers to offer workshops on a regular basis.

A few words regarding your journey ...

I started off in charge of a multimedia project, a remote-training offer, and then of the Télécom ICTE; I switched in the early 2010's. After a study stay at the EPFL Learning Center, mentored by Jean-Louis Ricci, I became a pedagogical consultant and was placed in charge of supporting learning practices and education at ParisTech Télécom in 2012. For the past 2 years, I have also been in charge of educational innovation mission at the University Paris Saclay (Pedagogical Innovations and Initiatives Mission).

Most of the projects I contribute to are based on dynamic partnerships (*Institut Mines Télécom*, ParisTech, Université Paris-Saclay ...)

Why did you choose to become involved in this project? How does it bring professional/personal development?

This project is the culmination of over a decade of collaboration with players who are highly invested and experts in their field. This project is another link in the line of innovative projects in which the pooling of forces really makes a difference. I am thinking, for example, of ParisTech's *Libres Savoirs* (“Open Knowledge”) portal (inspired by the innovative OpenCoursesWare project launched by MIT in 2003) and the dynamics of practice sharing and project construction at ICTC, a group I had the pleasure of leading until 2012.

These projects connect high-quality professionals in pedagogical innovation, who sometimes stand alone within their institution. Joint construction and joint animation are a chance to enrich my own practices. Furthermore, the network is a place for the exchange of practices, of skill development, and of training for the experts involved in the project.

MANFRED HORVAT,
Honorary Professor at TU Wien and coordinator of the Conference of Rectors
and Presidents of European Technology Universities

The aim of European universities is to improve the competitiveness of the Europe of Education and Research in the world. Faced with some countries, like China, we have no choice but to join forces. Today, Europe's institutions lack the critical mass in this area or that one to be competitive. We need to develop new innovative programs, create new integrated structures with joint research, single diplomas, genuine student and staff mobility that could be built on the model of the University of California: one institution, several campuses.



DENIS DESPRÉAUX, Director of the European and International Mission
for Research, Innovation and Higher Education

European universities make it possible to enter a new dimension of the Europe of higher education. Erasmus programs are still too limited in terms of volume of students. European universities should allow significant travel (for students, teachers, and researchers). There is also a real difference in the structural aspect of this project, which will develop over the long term. We are talking about greater institutional cooperation, not merely agreements or exchanges at the faculty or training level. These new entities, which rely on the knowledge triangle, teaching–research–innovation, are far more complete, and built over time. Of course, European universities will be able to rely on complexes. But we also wish to foster the emergence of new cooperative units, open the door to original ideas and to diversity.



PARISTECH LIVE

INTERNATIONAL



For over ten years, ParisTech has been developing its academic relations with the major Brazilian universities through regular student exchanges, PhD co-tutoring, joint research projects, joint organization of scientific events, and partnerships with alumni networks and companies. Since 2015, a permanent representative in São Paulo has accompanied these actions. ParisTech faculties participate in major events, such as the World Water Forum in Brasilia from March 18th to 23rd, 2018. The ParisTech École des Ponts and AgroParisTech have ensured the promotion of French training in the field of water.

The decree of 10 May 2017 on the Law on Equality and Citizenship entails the obligation for higher-education establishments to implement a system for validating students' civic engagement. This covers skills, knowledge and abilities acquired in the exercise of community, social or professional engagement. All ParisTech faculties already have mechanisms available to them, but of widely varying designs: credit units have been created, credits are assigned or not, annotations are made on diploma supplements, and credit unit substitutions are possible. The ParisTech Teaching Commission, which includes training directors, is preparing a summary document on practices implemented in the faculties, which will be distributed to them for information purposes.

DIVERSITY

Télécom ParisTech has successfully launched its "Helping the social elevator work better" program. Intended for alumni, this program is supervised by Yves Poilane, TPT Director, headed by Alan Hornstein, TPT Diversity delegate, and Guillaume Soulé, TPT 2015 alumni, in partnership with the Article 1 association, and allows them to commit in solidarity with young school and university students from working-class backgrounds to enable them to succeed in their academic journey and their professional integration in accordance with their potential. The commitment is made through an individual mentoring action, the animation of collective workshops, or coaching in English. This year, 15 alumni got involved following the launching event of November 16th, 2017. This initiative is expected to extend to the alumni of all ParisTech faculties. So don't hesitate to spread the word this program!

FOUNDATION



The "Innovation and Handicap" BiomecAM Chair is renewed

Brought by the Georges Charpak Human Biomechanics Institute to *ParisTech Arts et Métiers*, BiomecAM celebrated its renewal on March 21st, 2018. At the ceremony, the Chair's corporate patrons, the Société Générale, the Covéa mutualist group (MAAF, MMA and GMF), the Yves Cotrel Foundation (*Institut de France*), and the Proteor company, received a trophy for their support. Their contribution has enabled this now internationally-renowned research and teaching program to make considerable progress in various fields.

TEACHING



IN THE FACULTIES



AgroParisTech

AgroParisTech launches the first MOOC dedicated to food waste. This unprecedented, multi-partnered training, designed by scientists, is accessible to all for free and targets both professionals and consumers. From the initial raw product to your plate, this MOOC allows you to decipher the sources of loss and wastage throughout the food chain while teaching you simple practices to become a player in the fight against food waste.



Arts et Métiers ParisTech

As a founding member of the Future Industry Alliance, *Arts et Métiers* participates in the **"Osons l'industrie" ("Betting on industry") project to list the trades of future industry and the skills expected by a hundred companies.** A source of valuable information for a "talent incubator" establishment, and an initiative that will combat prejudices on the industrial sector's "old-fashioned" image.

Chimie ParisTech

The Mines Urbaines (Urban Mining) Chair of Chimie ParisTech, Arts et Métiers ParisTech and Mines ParisTech, was created with the support of the ParisTech Foundation through a sponsorship supported by Eco-Systèmes; its purpose is to develop research and teaching activities in the fields of electrical and electronic equipment recycling and eco-design. On the 5th and 6th of June, 2018, in Chimie ParisTech, it will host a symposium on the future of the e-waste recycling sector in technical, scientific, economic, industrial or societal terms.



École des Ponts ParisTech

Benoît de Ruffray was elected Chairman of the Board of Directors of the École des Ponts ParisTech. A former student of the *École Polytechnique*, a graduate of the *École des Ponts ParisTech*, and holder of a Master's degree from the Imperial College in London, Benoît de Ruffray started his career in 1990 in the Bouygues group. He held various positions before becoming the Director of the Latin American zone in 2001. From 2003 to 2007, he was General Manager of Dragages Hong Kong and oversaw the activities of Bouygues Travaux Publics in Asia and the Pacific and those of Bouygues Bâtiment International in North Asia. He was appointed Deputy General Manager of Bouygues Bâtiment International in 2008. In March 2015, he was appointed General Manager of the Soletanche Freyssinet group. He became Chairman and CEO of Eiffage in January 2016.

ENSTA ParisTech

This coming semester, *ENSTA ParisTech* and the *ENSM (Mines ParisTech)* will launch a training program on autonomous maritime systems. **The Specialized DEMAS Master (Design and Exploitation of Autonomous Maritime Systems)**, accredited by the CGE and focused on design in a marine environment, decision-making autonomy, and cyber-security, is a response to the growing demand in the field of stand-alone applications in the maritime sector.



Mines ParisTech

On April 13th, MINES ParisTech inaugurated the Solid, Fluid, Mechanics and Materials Hall thanks to the support of Safran, the faculty's partner for 50 years. This space will allow civil-engineering students to put their theoretical knowledge in mechanics and materials into practice, using the most efficient educational tools. The collaboration with Safran presaged the research model as closely in sync with companies as possible, borne by a shared vision of the 21st century's industrial issues, and based on the meshing of tools and skills, research and teaching, to develop tomorrow's technologies.

INTERNATIONAL

First semester, 2018

ParisTech missions abroad

Iran	19 January 2018 to 03 February 2018
Brazil	14 to 20 May 2018
Colombia	19 to 23 March 2018
China	08 to 13 April 2018
Russia	23 to 27 April 2018

Reception of foreign delegations

Rector of Tomsk State University	19 January 2018
Rector of Saint Petersburg Polytechnical University	13 February 2018
Vice-President for International Relations at TOMSK Polytechnical University	5 April 2018

Signed agreements

Russia	Tomsk State U/Saint Petersburg Polytechnical University (Double Diploma Agreement)
Brazil	UFMG (Double Diploma Agreement)
Iran	University Elmo-Sanat (Framework Agreement)

ParisTech, the network of engineering grandes écoles.

The complementarity of the schools' areas of excellence makes an exceptional grouping available to students, researchers and all partners (institutional and corporate), allowing a unique transdisciplinarity. ParisTech participates in strong international interactions in teaching and research through numerous partnership agreements.

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