

EDITO



Le caractère fortement international est l'un des principaux atouts de l'École. Il présente de nombreuses facettes dont la plus visible est certainement l'accueil à Rueil-Malmaison, et ce depuis de nombreuses années, d'environ 50% d'étudiants étrangers venant, pour la promotion 2018, de 45 pays différents. Un aspect moins connu peut être, mais tout aussi important, est la mobilité proposée à nos étudiants, vers des universités étrangères prestigieuses, où ils vont pouvoir suivre des cours pour certains, découvrir la recherche pour d'autres ... et dans tous les cas développer leurs réseaux, poursuivre l'apprentissage du travail en milieu multiculturel et n'en doutons pas se forger de très beaux souvenirs. Je vous laisse découvrir leurs aventures.

[Lire la suite](#)

Its strong international dimension is one of the School's biggest assets. It is evident in numerous ways, the most visible demonstration probably being the fact that, for a number of years now, around half of all students hosted at Rueil-Malmaison have been foreign, with some 45 different countries represented in the class of 2018. Another aspect - that is perhaps less well known but just as important - relates to the mobility opportunities offered to our students, with exchanges available in prestigious universities outside France, where they can either follow a study program or discover the world of research. Whatever option they choose, students will be able to develop their network, continue to learn to work within a multicultural environment and, of course, build some great memories. I am sure you will enjoy reading all about their adventures.

[Read more](#)

Sommaire

DOSSIER



- IFP School : une école résolument tournée vers l'international
- IFP School: a graduate school with a resolutely international dimension

FOCUS



- Le Professional Skills Module (PSM)
- The Professional Skills Module (PSM)

LIVE



- Interview d'Eric Deville, Professeur associé, advisor de l'équipe d'étudiants vainqueurs de la finale Europe du concours IBA
- Interview with Eric Deville, Associate Professor, advisor to the winning student team in the final of the European IBA competition

ALUMNI ASSOCIATION LIFE

- Découvrez les actualités de l'Association
- Discover the latest news from the Alumni Association

NEWS

- Découvrez les actualités de l'École
- Discover the latest news from the School

Edito

Its strong international dimension is one of the School's biggest assets. It is evident in numerous ways, the most visible demonstration probably being the fact that, for a number of years now, around half of all students hosted at Rueil-Malmaison have been foreign, with some 45 different countries represented in the class of 2018.

Another aspect - that is perhaps less well known but just as important - relates to the mobility opportunities offered to our students, with exchanges available in prestigious universities outside France, where they can either follow a study program or discover the world of research. Whatever option they choose, students will be able to develop their network, continue to learn to work within a multicultural environment and, of course, build some great memories.

I am sure you will enjoy reading all about their adventures.

While some students are off exploring new horizons, the multicultural experience is also very much on the agenda at Rueil during the Professional Skill Module (PSM) when students not on work-study programs work together on innovative projects on topics such as entrepreneurship, georesources in the energy transition or smart cities.

And lastly, what better illustration of this multicultural working context so dear to our partner companies than the success of our IFP School team in Prague at the European IBA (Imperial Barrel Award) competition? Our team came first out of 21 entrants, beating the University of Stavanger into second place! We wish them all the best for the world finals in Salt Lake City.

We hope that you enjoy this issue.

Christine Travers
Dean, IFP School

IFP School: a graduate school with a resolutely international dimension

IFP School has a high profile and is widely recognized on the international stage for its graduate programs in the fields of energy innovation and sustainable mobility. The school's resolutely international dimension and the multicultural environment it provides prepare its students for professional, intellectual and geographic mobility.

In this context, the School is pursuing its strategy of reinforcing its international presence, offering placements of between 6 and 8 weeks in partner universities (Korea, USA, Japan, etc.), benchmark players in the fields covered by IFP School. These mobility opportunities are available to students on programs in the fields of economics, processes and sustainable mobility.

The purpose of these periods abroad? To give students the opportunity to immerse themselves in a different context that enables them to adopt a multicultural approach to the situations they encounter and acquire new skills as well as new learning and working methods.

These periods abroad often fall within the framework of the Professional Skills Module, aimed at developing **students' cross-functional expertise** in addition to their technical graduate program content. Students can apply for international mobility and eligibility criteria are based on motivation and intellectual curiosity. Although they address a common objective and they are of equal length, the ways in which these periods abroad are actually organized may vary depending on the program.

For example, students on the *Processes and Polymers* (POLY) program travel abroad within the context of an agreement signed in 2016 with the University of Akron, in Ohio (USA). Céline Pierre, program supervisor, explains: *"students follow courses with their American counterparts, studying subject areas that complement those of IFP School. They also take part in lab tests and experiments. In return, students from Akron are hosted at IFP School for an equivalent period of time."* Students have all emphasized the benefits of these exchanges in terms of the quality of the courses delivered, immersion in a different cultural and professional environment and the discovery of the industrial stakes associated with research projects.

Students on the *Energy and Markets* (ENM), *Powertrain Engineering* (PWT) and *Energy and Powertrains* (MOT) programs do not follow course programs but, instead, join a laboratory team, chosen on the basis of a research project. While students are ultimately aiming for operational positions in industry, this immersion enables them to gain an understanding of the challenges of research and the contributions it makes. Olivier Massol, head of the ENM program, monitors students' work from a scientific point of view, focusing, in particular, on ensuring it forms the basis of research that can ultimately be published. He explains: *"Through this initiative, I want our students to get a feel for the vitality, wealth and extraordinary intellectual rigor of research in the field of energy economics, when conducted to international standards."*

Lecturer Ludivine Pidol supports the international mobility projects of students on the *Powertrain Engineering* and *Energy and Powertrains* programs. *"Students can choose from a selection of partner universities where they will benefit from high-quality supervision and rub shoulders with experts in their fields. Nevertheless, they are on their own in terms of the initial application stages of the process: it is up to them to persuade the relevant research directors with respect to their motivation."* She has supported some ten students since 2017.

Feedback from students and host universities and laboratories alike has been extremely positive, reinforcing our ambition to make existing international exchange programs permanent, broaden their scope of application to other programs offered by IFP School and implement new strategic partnerships with prestigious academic players in Europe and around the world.

In addition to being an enriching experience on a personal level, the international mobility opportunities provided by IFP School help shape the professionals of the future, experts in the fields of energy innovation and sustainable mobility, which, by their very nature, are resolutely international in dimension.

IFP School students feedback

Loïc Balland and Baptiste Griseri, students on the Energy and Markets program were hosted by the Integrated Systems Engineering department at Ohio State University where they contributed to a research project aimed at understanding and modeling vertical integration strategy economics in the natural gas and electricity sectors. Both students highlight the fact that their capacity to be operational in complex areas was greatly appreciated; a capacity acquired "thanks to IFP School's ENM course program, giving students the technical skills required to interact on advanced modeling issues targeting the electricity and gas markets within a research environment."



Five students from the Processes and Polymers program, Clarissa Biscainho, Praduman Arora, Alexandre VanDame, Tatiana Torrico and Nichapa Chatree, who were hosted by the College of Polymer Science and Polymer Engineering at the University of Akron last year, returned extremely enthusiastic about their experience. The courses they followed there allowed them to broaden their knowledge and discover the working methods employed by research teams. *"We're lucky to have been able to work alongside a number of different professors and join their labs. This gave us a concrete insight into the state of research and innovation in the field of polymers, as people who are ultimately going to be working in industry. »*



Paul Georgian Luca, a student on the Powertrain Engineering program, was hosted at Ohio State University's Center for Automotive Research, where he worked on a research project focusing on the modeling of fuel evaporation. The mobility experience also gave him the opportunity to learn from the passion of students involved in research projects. The two month placement allowed him to *"become more independent and acquire fundamental skills in the areas of project management and time managements"*. The multicultural environment in which he was immersed also helped him broaden his horizons and develop his network. Moreover, he encourages *"students to take advantage of this great opportunity offered by IFP School"*.



Mélanie Marcon-Dagand and Thomas Chabry, students from the Powertrain Engineering and Energy and Powertrains programs also benefited from this mobility opportunity. In early January, they went to the University of Chiba in Japan to work in an internationally renowned powertrain research laboratory, led by Professor Yasuo Moriyoshi. *"A unique opportunity for us, from both a technological and cultural point of view, and an invaluable experience for our future professional development."*



The Professional Skills Module (PSM)

Traditionally at IFP School January is dedicated to the Professional Skills Module (PSM). As Pierre-Yves Déquirez, joint module manager, explains, "the objective for each student is to acquire skills and expertise in the non-technical aspects of their chosen future professions, within multidisciplinary (practically all programs are concerned) and multicultural groups (the accent is placed on the diversity of nationalities within the group)".

In January 2018, 109 students representing 31 nationalities took part in the PSM (the majority of apprentices were not concerned since they are in their company during this period).

The PSM content is hinged around two activities: a project and elective courses, with equal weighting.

A few examples of project topics offered this year: georesources in the energy transition, innovation and entrepreneurship, the energy transition for a smart city, etc.

Students are split into subgroups of between 4 and 7 and spend twelve half-days working on themes specific to each project. They are supervised by experts (teaching staff or visiting lecturers), with whom they discuss progress every Monday morning at least.

Courses are very much à la carte and students have to select six options from those on offer. They are all taught in English and last for a day and a half. The courses are associated with the following five themes: business, CSR, project management, intercultural and team work, introduction to the energy sectors.

For the "innovation and entrepreneurship" and "energy transition for a smart city" projects, courses have been designed that are specifically dedicated to the project and, as such, are compulsory. In the other cases, students are free to choose the options that interest them, on a first come first served basis.

At the end of January, the groups present their projects before a jury and are assessed. Project results are primarily provided in report form but they can also be delivered in other formats, including videos: for example, the geothermal energy project is [accessible via the following link](#).



The PSM involves recourse to numerous outside lecturers for elective courses. It is managed by two members of IFP School teaching staff, Pierre-Yves Déquirez and Ludvine Pidol, assisted by Claudine Petit and Isabelle Pénicaud.

Interview with Eric Deville, Associate Professor, advisor to the winning student team in the final of the European IBA competition



What is the IBA competition?

The *Imperial Barrel Award* (IBA) is an annual competition organized by the *American Association of Petroleum Geologists* (AAPG). Twelve "regional finals" are organized, one for each major geographic zone (one in Europe, one in Canada, six in the USA, ...), and the world final takes place in May at the AAPG conference, which, this year, will be held in Salt Lake City.

The competition is organized as follows: a data set (3D seismic block, drilling data) is provided to student teams at the end of January. Teams are required to analyze the data and propose prospects and an exploration strategy. Beforehand, students need to conduct a bibliographic study in order to understand the regional geodynamics and identify all the aspects of the oil system concerned. This year, the data came from the Danish waters of the North Sea. Teams present their findings at regional finals held in March.

Tell us about this year's IFP School team!

The IFP School team was made up of 5 students: 2 girls and 3 boys, 3 geologists and 2 geophysicists. In terms of nationalities represented, the students came from France, Latvia, the United Kingdom and Venezuela.

The obvious team spirit undoubtedly enabled them to be more effective in their analysis and carry out work of the highest quality over a two month period.

At the AAPG's European conference in Prague, 21 teams presented their findings for the first time to two juries made up of 3 representatives from industry. These juries take place concurrently, with 3 teams selected from each. The next day, the 6 finalists find themselves once more in front of a jury, this time made up of 7 industry experts. The best 3 teams are ranked. The IFP School team came first, ahead of the University of Stavanger in second place, and the Universities of Lomonosov and LaSalle Beauvais, placed equal third.

What was your role as advisor?

Basically I help the students in terms of organization and time management, meet up with them on a regular basis for progress updates and have them give a practice presentation prior to D-Day in Prague. With the motivated, dynamic and multicultural team we had this year, it was a very rewarding experience. And I must admit that I was delighted with their success because it was a well deserved reward for all their hard work and commitment.



Discover the latest news from the Alumni Association

Magazine

Issue 268 of the IFP School Alumni Mag has just been published. Its feature report is dedicated to the theme of HSSE (Health, Security, Safety & Environment), the various components of which reflect the increasingly demanding expectations on the part of society and priority objectives for companies. As Olivier Peyret, President of Schlumberger France so rightly says in the editorial, *"This issue of IFP School Alumni Mag illustrates the diverse and complex issues our industries are faced with when dealing with HSSE"*.

Conference

The electricity industry is being shaken up by some major changes affecting the entire energy sector, within which it plays a central - and ever more decisive - role. The conference organized by the Association on March 27, which welcomed 4 expert speakers from the sector, was an opportunity to present both a clear vision of the main challenges facing the players concerned and a very concrete insight into how the network is managed, as provided by the Director of the French National System Operations Center. A real eye-opener, according to the majority of participants!

Discover the latest news from the School

Appointment: an IFP School graduate appointed Deputy Director of HR at Engie

On 1 January 2018, Rosaline Corinthien Pivetta, who graduated from the APP (today PRO - Energy and products) program in 1998, has been appointed Deputy Director of Human Resources at Engie, responsible for developing talent and managers. Prior to joining Engie in 2012, she held a number of roles including Technical Director Europe for Fuchs Petrolab A.G. And project manager for the construction of the Bayet combined cycle power plant on behalf of Alpiq. She was also methanol development consultant in Trinidad and Tobago and analyst with the French Commission for Energy Regulation concerning the regulation of methane terminals. From 2012, Rosaline was successively General Manager of Storengy China, and Chairman of gas infrastructures for ENGIE China. In 2015, she was appointed Strategy, Communication and Social and Environmental Responsibility Manager of the Global Energy Management BU. An outstanding career to date that makes us proud to have her among our Alumni! Congratulations to her!

Engineers of the future awards: a former student among the winners!



© photo pascal Guitet

In December, Marie Godard-Pithon, who graduated from IFP School's RIG (today ENEP – Energy and Processes) program in 2008, was given the [International Engineer Award](#) by Industrie & Technologies and L'Usine Nouvelle magazines.

The award was in recognition of Marie's work and perseverance developing fuels that meet the stringent specifications of the Chinese market.

With her teams, she adapted Axens' flagship process Prime G+ for the desulfurization of gasolines, in order to make it competitive enough to steal a march on the rest of the field! Marie has now gone to India, a market with huge potential, including for the production of 2nd-generation bioethanol, to manage operations with the country's refineries.

The Engineers of the Future awards were launched 14 years ago to recognize outstanding research by talented young or experienced engineers.

Many congratulations to Marie!

Success of the international conference New direct-injection two-stroke engines



In conjunction with its Powertrain and Sustainable Mobility training courses, IFP School organized on February 15 at its campus in Rueil-Malmaison (near Paris), a conference on two-stroke direct injection engines for companies specializing in this field (manufacturers, suppliers, engineering companies).

Organized with a team of motivated students from the School, this event brought together 80 professionals and 30 students from 14 different countries: a great success that confirms the automotive world's interest in two-stroke engines!

After 4 technical sessions and informal exchanges with speakers to take stock of R&D advances in this field, three presentations received particular attention from the participants:

- a new technology from Achatés Power for automotive, heavy-duty and stationary applications, which claims fuel economy improvement of between 30% and 50%.
- the BRP-Rotax snowmobile engine. It produces 165 hp with optimised fuel efficiency and incredibly low response time.
- IFP School's student project which promotes the use of a 2-stroke [gasoline direct injection engine](#) as a range extender for electric vehicles. Lightweight, compact and compliant with future anti-pollution standards!

To [download the opening presentation of the conference](#).

For more information on this conference and our training courses, please contact [Pierre Duret](#), Director Powertrains and Sustainable Mobility.