

### PARIS ARTIFICIAL INTELLIGENCE FOR SOCIETY

### **PRESS KIT**

Tuesday, September 15, 2020







ERIC LABAYE President of Institut Polytechnique de Paris and President of École Polytechnique

"The objective is to create a world leader in the fields of Artificial Intelligence and Data Science. Thanks to the excellence of our research and education, this Center will work on the frontiers of science in order to develop an Artificial Intelligence and Data Science that are responsible and ethical. Hi! PARIS will contribute to the development of a digital sovereignty of France and Europe, guaranteeing the competitiveness of its enterprises, the efficiency of its administrations, and the quality of life of its citizens."

#### About Institut Polytechnique de Paris

The Institut Polytechnique de Paris (IP Paris) is a public higher education and research institution that brings together five prestigious French engineering schools: École Polytechnique, ENSTA Paris, ENSAE Paris, Télécom Paris and Télécom SudParis. Under the auspices of the Institute, they share their bicentennial combined expertise to fulfil two major ambitions: to develop educational programs of excellence and cutting-edge research in science and technology. IP Paris gathers 8,000 students and 1,000 faculty members. Thanks to the academic anchorage of its five founding schools and its alliance with HEC Paris, IP Paris positions itself as a leading academic and research institution in France and internationally.



PETER TODD Dean of HEC Paris

"The success of our project is based on the challenge of achieving multidisciplinarity at the very highest level, relying on the combination of complementary and recognized fields of expertise of HEC Paris and Institut Polytechnique de Paris, but also on the support of major actors in the economic world. We hope that many companies will join Hi! PARIS, thus fashioning a new AI at the service of a durable economy and a just society."

#### About d'HEC Paris

Specializing in education and research in management sciences, HEC Paris offers a complete and unique range of academic programs for the leaders of tomorrow: the Grande Ecole program, Specialized Masters and MSc, Summer School programs, the MBA, Executive MBA and TRIUM Global Executive MBA programs, the Ph.D. program and a wide range of programs for executives and managers.

Founded in 1881 by the Paris Chamber of Commerce and Industry, HEC Paris has a full-time faculty of 140 professors, 4,500 students and 8,000 managers in executive education programs every year.

For more information : www.hec.edu

For more information : www.ip-paris.fr

### CONTENT

**1** – AN INTERDISCIPLINARY CENTER

2 - THE GOVERNANCE OF THE HI! PARIS CENTER

**3** – A DISRUPTIVE FUNDING MODEL: LARGE-SCALE SPONSORSHIP

**4** – JOINT INTERVIEWS WITH THIERRY FOUCAULT AND ERIC MOULINES, THE CENTER'S SCIENTIFIC DIRECTORS

> **5** – INTERVIEW WITH GAËL RICHARD, THE CENTER'S EXECUTIVE DIRECTOR

**6** – INTERVIEWS WITH KRISTINE DE VALCK AND ADRIANA TAPUS, DOCTORAL DIRECTORS

7 – IMAGE AND BRAND

## HI! PARIS : AN INTERDISCIPLINARY CENTER



### An Interdisciplinary Center Dedicated to AI and Data Science, for the Benefit of Science, the Economy, and Society

Exponential growth in the volume of data and Artificial Intelligence capabilities have created a new paradigm for scientific methods and are transforming all sectors of the economy. France is currently in need of world-class research that is both ethical and effective, as well as training and an innovative ecosystem in the field of AI and Data Science. This issue is crucial in developing technologies related to AI in France, especially given the institutions it is up against in the English-speaking world and Asia. If France is to be endowed with the means to meet the growing needs of companies and society and take up these major scientific challenges, then the time has come for companies and academic institutions to band together for the sake of progress.

### A Dynamic Ecosystem Founded on the Alliance between HEC Paris and Institut Polytechnique de Paris

The alliance between HEC Paris and Institut Polytechnique de Paris (IP Paris) was formalized at the start of 2019 and is already offering many benefits, including the creation of a joint doctoral school to provide innovative and hybrid training for research professors. The excellence of students and faculty from both institutions combines basic science and its applications, mathematics and economics, computer science and management. This talent pool is developing within an established ecosystem featuring partnerships, open innovation, and growing start-ups. The creation of this new Center is a major milestone in this alliance. It will help expand scientific boundaries in the areas of AI and data science in order to establish tools to benefit the economy and society.

### **HEC Paris and IP Paris: Established Assets**

Since 2018, HEC Paris and IP Paris have forged an alliance through numerous projects in the areas of teaching, research, and entrepreneurship. This alliance combines expertise in the economic world and in-depth knowledge of the technology that will shape our future. IP Paris and HEC Paris bring together hundreds of research professors and PhD students in science and management who are working on topics related to AI and data science. As both institutions develop high-level research and education, they are pursuing joint projects that embody the values of excellence, openness, and innovation. The creation of this Center marks a crucial step that will help to release the full potential of the combined expertise of HEC Paris and IP Paris in order to develop projects with high added value to benefit science, business, and society.

The training students receive in both institutions is based on the values of excellence, diversity, innovation, multidisciplinarity and the concept of serving the general interest. HEC Paris and IP Paris attract the world's top students. The schools have been recognized for their expertise in key fields for business, AI and data science, as well as their ability to make the most of these issues and incorporate them into strategies for new industrial and economic models.

Interdisciplinarity is key. It is central to the training provided at HEC Paris and IP Paris. Mastering emerging technologies like AI and data science requires the combined mastery of several disciplines and the ability to combine these areas of expertise to develop innovations. These training programs also emphasize soft skills (leadership, sense of community, creativity) which enable students to not only solve complex problems, but manage the technical, human and strategic aspects of projects. This cross-disciplinary knowledge trains future leaders who are visionaries ready to lead and support the major transformations underway– ready to innovate.



### A Global Impact

The goal of Hi! PARIS is to enhance research and training in AI, data science, and business. It will offer training programs backed by excellence in research and multidisciplinary courses (marketing, administration, management, applied mathematics). It aims to recruit top international talents, those who want to be involved in extensive studies on AI and data science. The Center also aims to increase the number of PhD students in these fields in order to encourage research in AI and its applications. It also seeks to support future researchers and foster exchanges within the international scientific community, including through large-scale scientific events.

It is a meeting place, where ideas come to fruition and exchanges occur between the private sector and the world of public research. The Center will bring about the creation of an engineering unit aimed at promoting open innovation and encouraging new methods. It will help researchers establish research codes according to the highest standards, promote them among the entire community, thus strengthening the impact and visibility of these disciplines in society.

The Center will be a unique space for disruptive technology, training and innovation, the development and transfer of technology. It will operate in key research areas, covering a wide range of disciplines: basic AI methods (machine learning, statistics, cybersecurity, AI applied to business-finance or marketing) and societal implications (ethics, health, climate, regulation). It will also help to establish attractive Master's programs offering significant opportunities, develop innovation programs and organize Data challenges.

### **HI! PARIS's Objectives**

- Hire 30 world-class professors over the next 5 years in order to enhance our research and teaching capabilities and further the societal implications of AI
- Create a dedicated team: 150 PhD students in world-class international research, 30 post-doctoral students and guest professor programs through university partnerships
- Compete with the top European and global universities
- Co-create new programs featuring a unique combination of skills and mindsets involving science, technology, business, and societal challenges
- Triple the number of students in the Master's program, reaching 500 students by 2025; double the number of PhD students working on AI and Data Science
- Increase our incubation and acceleration capacities in order to attract and encourage the development of the best start-ups
- Build a network by building bridges between the academic world, the ecosystem of entrepreneurs and economic leaders

## THE GOVERNANCE OF THE HI! PARIS CENTER



### Several internal and external bodies operate under the responsibility of the President of Institut Polytechnique de Paris and the Dean of HEC Paris, who have established an internal governance committee:

### **Executive Management of the Center**

The objectives of the Center's Executive Management:

- Develop a strategic training-research plan
- Establish and implement an annual action plan and associated programs
- Establish and implement the budget
- Establish the annual business and financial report
- Nominate members of the Academic Operational Committee

The center's Executive Management is led by two joint Scientific Directors: Prof. Eric Moulines and Prof. Thierry Foucault, and an Executive Director of Operations, Prof. Gaël Richard.

### The Academic Operational Committee

The objectives of the Academic Operational Committee:

- Lead the Center's everyday scientific and educational activities
- Handle calls for tender (announcement, selection, and follow-up) among partner institutions
- Propose actions initiated by the academic/student community and/or companies
- To communicate topics addressed by the academic operational committee and progress made within the institution in order to mobilize the entire community, foster discussions, and stimulate initiatives

In addition, the operational committee assists executive management in establishing the Center's annual budget and the annual business reports.

• Members:

The Academic Operational Committee is made up of 11 members:

- The Center's joint Scientific Directors
- The Center's Executive Director of Operations
- 8 researchers from IP Paris and HEC, chosen to best represent the Center's various research topics.



### The Corporate Advisory Board (CAB)

The main role of the Corporate Advisory Board (CAB) is to discuss the Center's development strategy with the Center's management, and its relevance in relation to the Center's objectives, societal and economic challenges, and its relevance for economic stakeholders.

Board members:

- The Chairman of the Board for corporate sponsors, as ex officio members
- 1 member per corporate sponsor
- Presidents of IP Paris and HEC Paris as ex officio members
- Directors of the Center, Directors of Finance, Research Directors, Directors of Corporate Relations from HEC Paris and IP Paris

Its main activities also include:

- Regular interactions with the Center's governing bodies for the various activities
- Proposals for initiatives: scientific events, seminars
- Communicating information about the Center among corporate sponsors: scientific activities, workshops, summer schools, meetings
- Review of the Center's annual business and financial report

### The Scientific Advisory Board (SAB)

The Scientific Advisory Board (SAB) was created in order to support the Center's ambitions. This Scientific Advisory Board, made up of ten academics who are internationally recognized in the Center's areas of research, from outside the Center's partner institutions, will be the forum for reflection, assessment (particularly in the area of recruitment), and proposals regarding the Center's scientific policy.

The Scientific Advisory Board will ensure the Center's excellence in the areas of training and research, diversity in terms of the topics addressed in all basic research / disruptive technology, and the transparency of the processes.

The mission of the Scientific Advisory Board:

- Provide advice on the Center's main guidelines for scientific policy in line with the development of the Center's scientific disciplines
- Assess the various actions and research programs and deliver an opinion on the Center's annual business report
- Deliver an opinion on the granting or renewal of a Chair funded by the Center, whether internal (for a researcher at one of the Center's partner institutions) or external (in the context of recruitment)



### SAB Members:

- Prof. Francis Bach specialized in statistical learning and optimization
- Prof. Katherine Carley specialized in cognitive science, social networks, and information technology for the analysis of social and organizational systems
- Prof. Luciano Floridi specialized in the philosophy and ethics of information, digital ethics, and data ethics
- Prof. Anindya Ghose specialized in marketing and management sciences
- Prof. Avi Goldfarb specialized in artificial intelligence, health and marketing. His research focuses on the possibilities and challenges of the digital economy.
- Prof. Michael I. Jordan specialized in statistics and machine learning
- Prof. Roni Michaely specialized in finance and specifically financial markets, corporate finance and governance, and major issues like Big Data and Fintech
- Prof. Masagi Sugiyama specialized in machine learning and data science with applications in robotics and signal and image processing
- Prof. Mihaela van der Schaar specialized in statistical learning in medicine, finance, and education
- Prof. Lenka Zdeborova specialized in statistical physics and its applications in computer science and technology

A DISRUPTIVE FUNDING MODEL: LARGE-SCALE SPONSORSHIP



### A Disruptive Funding Model: Large-Scale Sponsorship

In order to develop ambitious and long-term research projects, it is necessary to design a model of citizen patronage favoring the general interest of all, on the Anglo-Saxon model. To achieve its ambitions and develop tomorrow's AI for all, the Center should have an annual budget of 50 million euros. To achieve this level of funding, the alliance has taken the initiative of developing a new concept of patronage: the success of this project requires a break from the existing model.

Five patrons: L'Oréal, Capgemini, Total, Kering, and Rexel contribute to the evolution, alongside the Center, of today's French patronage model. These French flagships with worldwide influence, which have long supported research and development in France, are committed to helping France up its scale. Without their support and funding, this new Center could not have been established. It is thanks to them, and to the other French and European sponsors who will join them, that research and teaching activities will be strengthened in order to increase France's level of competitiveness on this fundamental and priority theme. These collaborations, which are essential to becoming an international champion in higher education and AI research, will help establish a post-doctoral program that can compete with the world's largest institutions. This new approach will raise the necessary funds to increase research, education, and innovation capacities in the field of AI in France and will offer the possibility of recruiting a new cohort of world-class professors and researchers.







JEAN-PAUL AGON Chairman and CEO of l'Oréal

"The L'Oréal Group is particularly proud to be part of the founding team supporting the creation of this new Data Analysis and Artificial Intelligence (AI) Centre.

This major step follows the partnership between the HEC Paris business school and the Institut Polytechnique de Paris (the Paris Polytechnic Institute). Combining the best of academia and business is a first in Europe – and it is undoubtedly the right way to get the best quality training in global R&D. The Centre and L'Oréal share the same values and hunger for excellence, innovation and a multidisciplinary approach, which is why it appeared both obvious and critical for us to support it from its inception as a founding sponsor – collaboration with the Centre will undoubtedly be a "win-win" partnership.

We are convinced that this partnership will also contribute to building a true French and European champion of science, technology and business, capable of competing with the best institutions in the world, as well as being seen as a credible alternative to GAFA and technology companies based mainly in the US and Asia.

Finally, we believe that this centre will be an excellent asset to attract and retain in Europe the most talented students, and the talents our companies will have need of in the near future."

### About L'Oréal

L'Oréal has devoted itself to beauty for over 100 years. With its unique international portfolio of 36 diverse and complementary brands, the Group generated sales amounting to 29.87 billion euros in 2019 and employs 88,000 people worldwide. As the world's leading beauty company, L'Oréal is present across all distribution networks: mass market, department stores, pharmacies and drugstores, hair salons, travel retail, branded retail and e-commerce.

Research and innovation, and a dedicated research team of 4,100 people, are at the core of L'Oréal's strategy, working to meet beauty aspirations all over the world. L'Oréal sets out ambitious sustainable development goals across the Group for 2030 and aims to empower its ecosystem for a more inclusive and sustainable society.

More information: https://mediaroom.loreal.com/

# ĽORÉAL





### PAUL HERMELIN Chairman of the Board of Directors of Capgemini

"Working with data is at the heart of Capgemini's business and it requires a dual culture, both mathematical and societal. The alliance of these two prestigious institutions - HEC Paris and the Institut Polytechnique de Paris - brings together specifically the best of business intelligence and social understanding, on the one hand, plus algorithms and IT on the other. It was therefore natural and exciting for us to support it.

We have no doubt that France is capable of giving birth to a champion of Research and Innovation in the field of Artificial Intelligence and Data Science, capable of rapidly achieving a European dimension and as a result, participating in innovation on a global scale.

As a founding sponsor of the brand new «AI & Data Analytics for Science, Business & Society» center, Capgemini is helping to build a French base, with the idea that you first need to be strong in your own country - the cradle of our group - in order to then be able to spread the word more widely.

While AI has exceptional power to revolutionize customer usage, industrial processes and public services, this technology can appear potentially threatening and invasive. To move forward, it is therefore essential to address these issues, and particularly those of an ethical nature. This is at the heart of today's and tomorrow's innovation."

### **About Capgemini**

Capgemini is a global leader in consulting, digital transformation, technology and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. Today, it is a multicultural company of 270,000 team members in almost 50 countries. With Altran, the Group reported 2019 combined revenues of €17billion.

Visit us at www.capgemini.com

People matter, results count.







PATRICK POUYANNÉ Chairman and CEO of Total

"I am delighted that Total is a founding member of this new center for data science and artificial intelligence. I am very happy that the center is at the heart of Saclay, one of the world's biggest scientific clusters, where Total has already decided to build its new innovation and research center into low-carbon energies. At Total, we see this kind of ecosystem, where research and education work alongside businesses and startups, as the source of tomorrow's innovations.

Data science and artificial intelligence have made huge strides in recent years, allowing us to leverage industrial data in new ways and provide tailored services to our customers. For a broad energy group like Total, competitiveness relies on innovation in these complex fields. And innovation is both a guarantee of technological sovereignty and an essential means for us to achieve our ambition to get to net zero carbon by 2050.

The unique combination of the center's economic, societal, technological and algorithmic capacities will give it the ability to take a new approach to both the challenges of AI, and its acceptability, ensuring that these tools are used for people's benefit.

For all these reasons, Total is supporting the initiative and is grateful for the leadership of two prestigious institutions, Institut Polytechnique de Paris and HEC Paris, which will combine expertise and excellence to establish a center with an international reputation."

### **About Total**

Total is a broad energy company that produces and markets fuels, natural gas and low-carbon electricity. Our 100,000 employees are committed to better energy that is safer, more affordable, cleaner and accessible to as many people as possible. Active in more than 130 countries, our ambition is to become the responsible energy major.







FRANÇOIS-HENRI PINAULT Chairman and CEO of Kering

"Kering has placed innovation at the very heart of its growth strategy and has developed a strong competitive advantage in the digital space of the luxury industry. In a constantly-evolving market, where customers are more and more connected, we are developing digital technologies and harnessing the power of Artificial Intelligence. These platforms are enabling our Houses to build increasingly personalized experiences for their customers and to increase the efficiency of their teams and operations. The data science hub we have developed at Group level and our entrepreneurial culture will be key to achieving our ambitions, and both will help to strengthen our leadership position in the use of digital platforms and Al.

The ambitious alliance between the Institut Polytechnique de Paris and HEC Paris is unprecedented in France – and is particularly relevant – as it brings together leading scientific institutes with a top-ranked business school. The support we are providing is proof of our willingness to strengthen a French center for data analysis and AI, focusing on applications for the economy and society at large. We are proud to be part of this ecosystem, and to be helping to further enhance the excellence of training and research programs in these fields in France."

### **About Kering**

A global Luxury group, Kering manages the development of a series of renowned Houses in Fashion, Leather Goods, Jewelry and Watches: Gucci, Saint Laurent, Bottega Veneta, Balenciaga, Alexander McQueen, Brioni, Boucheron, Pomellato, DoDo, Qeelin, Ulysse Nardin, Girard-Perregaux, as well as Kering Eyewear. By placing creativity at the heart of its strategy, Kering enables its Houses to set new limits in terms of their creative expression while crafting tomorrow's Luxury in a sustainable and responsible way. We capture these beliefs in our signature: "Empowering Imagination". In 2019, Kering had nearly 38,000 employees and revenue of  $\in 15.9$  billion.

### KERING





PATRICK BERARD Chief Executive Officer of Rexel

"Rexel, a worldwide expert in the multichannel professional distribution of products and services for the energy world, is proud to support the Institut Polytechnique de Paris and HEC Paris to create the Center on Data Analytics and Artificial Intelligence (AI) for Science, Business and Society.

We believe that bringing businesses together with academic institutions and their world-class research staff, will lead to greater creativity and innovation. At Rexel, our data scientists and engineers, working closely with operational teams, process large volumes of data to tackle the challenges of today and tomorrow, and deliver an increasingly immersive and personalized customer experience.

We have outstanding universities and academic institutions in France. Our engineers and scientists are recognized the world over. By capitalizing on these assets, this new national and European center of excellence will help accelerate the deployment of effective AI solutions.

Data analysis and artificial intelligence are transforming our society and changing the way we live and work. By investing in the key skills and jobs of tomorrow, we will create more shared value, for society, for the environment, and for each and every one of us."

### **About Rexel Group**

Rexel, worldwide expert in the multichannel professional distribution of products and services for the energy world, addresses three main markets - residential, commercial and industrial. The Group supports its residential, commercial and industrial customers by providing a tailored and scalable range of products and services in energy management for construction, renovation, production and maintenance.

Rexel operates through a network of more than 1,900 branches in 26 countries, with more than 26,000 employees. The Group's sales were €13.74 billion in 2019.

Rexel is listed on the Eurolist market of Euronext Paris (compartment A, ticker RXL, ISIN code FR0010451203). It is included in the following indices: SBF 120, CAC Mid 100, CAC AllTrade, CAC AllShares, FTSE EuroMid, STOXX600. Rexel is also part of the following SRI indices: FTSE4Good, Ethibel Sustainability Index Excellence Europe, Euronext VigeoEiris Europe 120 Index, Dow Jones Sustainability Index Europe and STOXX® Global Climate Change Leaders, in recognition of its performance in corporate social responsibility (CSR). Rexel is on the CDP "Climate A List".

For more information, visit Rexel's web site at www.rexel.com/en





# In order to strengthen and diversify the Center's own resources, the foundations of HEC Paris and École Polytechnique will make it possible to use the patronage of corporate donors.

### About the École Polytechnique Foundation

Created in 1987 by twenty leading French companies at the request of Bernard Esambert (X 1954), the Chairman of the École Polytechnique Board of Directors at the time, and with the support of the Alumni Association, the École Polytechnique Foundation builds bridges between the business world and the École Polytechnique community, including its students and research professors. Its main missions are to help the development of education at École Polytechnique, to develop research and the transfer of advanced technologies to the French industry, to fund the development of I'X, and thus to contribute to its French and international outreach.

Recognized as a public utility organization, the École Polytechnique Foundation is entitled to receive donations, bequests, and other gifts from both individuals and companies. To fund the development of I'X in terms of internationalization, innovation, research, entrepreneurship, education, and diversity, it launched a second fundraising campaign in November 2016, with a fundraising objective of 80 million euros in 5 years.

Two structures relay its actions abroad: the Friends of École Polytechnique in the United States and the École Polytechnique Charitable Trust in the United Kingdom.

Contact: Jean-Paul Cottet (X 1974), Executive Director - cottet@fondationx.org / + 33 (0)1 53 85 40 10

### **About the HEC Foundation**

The HEC Foundation is a recognized public-interest foundation with a dual mission: to help finance the main strategic priorities of HEC Paris, and to make the institution's outstanding programs accessible to the greatest number of people.

Thanks to the support of alumni, corporate sponsors, and foundations, the HEC Foundation makes a decisive contribution to the development of HEC Paris and its Equal Opportunity programs. Support for research and teaching activities is also central to the projects that are funded, via 16 Chairs and Corporate Initiatives, the IDEA (Innovation, Digital, Entrepreneurship & Action) Center, the S&O (Society & Organizations) Institute, and a major program of research projects and doctoral grants. Most of the Research Chairs are supported by corporate sponsors. Recently, Hubert Joly and Jean-Marie Eveillard – both alumni – created two chairs: the Joly Family Chair in Purposeful Leadership and the Jean-Marie Eveillard Chair in Value Investing.

In 2019, the HEC Foundation HEC counts:

- over 2,500 annual donors

- 40 corporate partners

- a team of 15 staff and 40 volunteers

A new fundraising campaign named «Impact tomorrow" was launched in 2019, dedicated to the pursuit of excellence, diversity, and transformation of the School. The. The Alliance with the Institut Polytechnique de Paris, and more specifically the creation of the HI!PARIS center, are part of the plan for excellence in research and academic innovation rolled out jointly by the School and its Foundation.

Contact: Delphine Colson (H.94), Executive director: colson@hec.fr - 01 39 67 97 07

JOINT INTERVIEWS WITH THIERRY FOUCAULT AND ERIC MOULINES, SCIENTIFIC DIRECTORS OF THE HI! PARIS CENTER





ERIC MOULINES



THIERRY FOUCAULT Link to biography

### Hi! PARIS, Innovation through a Multidisciplinary Approach to Research and Education

### • Question 1: Hi! PARIS is a multidisciplinary center similar to other major research centers created by Institut Polytechnique de Paris and HEC Paris. Why is interdisciplinarity so important for AI and data science?

**Eric Moulines :** Al is much more than algorithms. This is reason for the partnership between IP Paris and HEC Paris. In engineering schools, we have a tendency to work on methodological issues, the development of new algorithms and new theories explaining these algorithms. This partnership opens new opportunities with the implications of AI. IP Paris and HEC Paris are truly complementary. The Center has three main areas of expertise: 1/ The development of new algorithm methods and theories that support them, 2/ business applications for AI, an area in which HEC Paris has already been working and will continue to focus on, 3/ cross-disciplinary issues involving the applications of AI in social problems. The topics we work on together, in an interdisciplinary manner, are all related to the applications of AI in our societies: AI and health, AI and Iaw, AI for regulation and AI issues for energy transition. In this sense, Hi! PARIS truly offers a reference point in France and distinguishes itself from "3AI" institutes, created as a result of the report by Cédric Villani, which are technology institutes primarily focused on specific scientific issues.

**Thierry Foucault :** One particularly innovative aspect of the Center is its multidisciplinary approach. This union of a major research institute in engineering in hard sciences and a world-class business school is unique in France and makes sense. The report by Villani is entitled "For a Meaningful Artificial Intelligence". To make AI meaningful, it is necessary to both understand AI techniques and the broader social implications, for example in economics, law, ethics, etc. Therefore, researchers from different areas of expertise must work together at the same research center, covering both data science and social sciences (management, economics, law, psychology, etc.) and promoting a multidisciplinary approach to AI issues. This is precisely why the Center was created.



### • What will the Center's research areas be ?

**Eric Moulines :** On the IP Paris side, we will be working on methods for AI and data science, in other words, the development of algorithms which form the basis for new AI methods. We will also be working on statistical learning and emerging trends, areas where we must position ourselves, such as reinforcement learning, deep learning with methodological and theoretical developments, for example with automatic text processing. We will also focus on the large-scale distribution of algorithms, and the federated learning approach.

The HEC Paris side will develop everything related to understanding data science and AI for business, AI and data in finance, marketing and organizations. We will work together, in an interdisciplinary manner, on subjects related to the applications of AI in our societies.

Thierry Foucault : The Center's main research topics will be established with the researchers affiliated with the Center and its governance. The goal is to bring together existing research from our institutions regarding, on the one hand, the development and use of AI techniques (e.g. applications for marketing, finance or law) and, on the other hand, the analysis of its economic aspects (e.g. impacts on employment, or the value of data for economic stakeholders), social aspects (e.g. the social acceptability of purely automated decisions), legal aspects (e.g. data ownership issues), and ethics. The goal is also to encourage researchers, through calls for tender, to propose research projects on AI and its implications, to support the development of these projects, and to increase the scientific impact of our institutions in the field of AI by recruiting researchers working on AI in the broadest sense.

### • How will the Center contribute to education and attractiveness for students?

Thierry Foucault : The purpose of Hi! PARIS is to both produce knowledge on AI and pass this knowledge on in order to allow HEC Paris and IP Paris students to use these techniques and understand all the potential risks and limitations. This is crucial because many of them will find themselves in companies in which data will play an increasingly important role. Why and how can data be used to create value while still contributing to the common good? To answer these questions, we must start by understanding AI techniques and areas of application and then control how these techniques can be used for commercial purposes, while maintaining an awareness of the societal and ethical problems linked to certain uses. HEC Paris and IP Paris are already working together for the Data Science in Business Master's program, which offers technical training during the first year and training on the managerial applications of AI during the second year. The goal is to increase our capacity to provide this type of training at various levels by increasing the number of research professors contributing to these training programs.

Another aspect is the education of researchers through PhD and post-doctoral programs. More and more, researchers in social sciences are using AI techniques for their research. For example, in my field of research, finance, researchers are increasingly using these techniques to test theories on the valuation of financial assets, develop techniques for managing financial risk, and define certain business strategies through the textual analysis of reports these companies provide to controllers or others.



**Eric Moulines :** We have very high potential in terms of students. But our students must be able to identify us, to see us as major stakeholders in the field. This is one of the key issues for the Center. We have a lot of very good students who go to Stanford and MIT. This perception among students is what must change. We are a major stakeholder, but it is not sufficiently well known. Why? If we look at the potential of researchers, who publish in the best journals in the field, we already form a very significant group. But we are divided in several institutions and there is not enough visibility for this research. There is visibility within institutions, but not enough for our students. We must be capable of attracting the best European and international researchers and the brightest students.

## INTERVIEW WITH GAËL RICHARD, EXECUTIVE DIRECTOR OF THE HI! PARIS CENTER





GAËL RICHARD Lien vers la biographie

### A Center with Innovative Ambitions, Governance and Funding Interview with Gaël Richard, Executive Director of the Hi! PARIS center

World-class centers exist in different countries, especially in North America and Asia. These centers greatly rely on sponsorship from individuals and businesses, which provides them with major funding and therefore puts them on the map with major AI stakeholders. We want to create a center for AI and data science that, in the short term, will be a European center and will eventually become a world-class center. The alliance between HEC Paris and IP Paris is emblematic because it covers AI in all its multi-disciplinary aspects, from marketing to economics, from finance to applied mathematics. Through the center, we want to benefit from corporate investment, through sponsorship on a different scale. This new approach should allow us to have sufficient funds available to clearly increase our capacity for research, training and innovation in the field of AI, and the possibility to recruit a major reserve of world-class professors.

Hi! PARIS is unique in France. It combines two key, symbolic stakeholders: IP Paris, an institute bringing together the leading engineering schools, and HEC Paris, one of the best business schools in the world. This lends even more credibility to the project that can be built on the existing foundation, which is solid both in terms of research capacity and students, who are among the best.

We also have significant expertise and experience working in an ecosystem combining academics and industry. Unfortunately, we still lack visibility, and our impact is not what it should be considering our current strengths. The creation of this center will help make these assets much more visible and will have a stronger impact. With the new means becoming available, we will be able to significantly increase our capacity for research and teaching by recruiting internationally renowned professors, increasing the number of PhD students, and enhancing and our ability to recruit young researchers. The goal is to transition to a new dimension, while continuing to build on our true strengths, with which we want to have an impact at the European and global level. When people think about where they want to study, where the centers for expertise in AI and data science are located, we must become one of the first centers to come to mind.

Our sponsors who are supporting us in developing this center are large companies with an undeniable international influence. We plan to recruit around 30 of the best international professors. A scientific committee, which will be affiliated with the center to help with recruitment, will be entirely international, with world-renowned researchers (Europe, North America, Asia).

## INTERVIEWS OF KRISTINE DE VALCK AND ADRIANA TAPUS, DOCTORAL DIRECTORS





KRISTINE DE VALCK Link to biography

### Kristine de Valck , Associate Dean | Associate Professor of Marketing at HEC Paris Director of the PhD Program at HEC Paris

### • Could you describe your area of expertise?

As Professor of Marketing I am specialized in online consumer behavior and social media marketing. My research broadly aims to understand the phenomenon of online word of mouth (social media posts, vlogs, reviews, influencers, etc.). My projects vary from understanding how consumers produce online content to how consumer-generated online content is consumed by others and how it affects their (purchase) behavior. Over the past months, I have also started a research project to understand how consumer rituals around important rites of passage (birth, graduation, marriage, and death) have been impacted by the COVID-19 crisis. In particular, we try to understand how these rituals have been adapted to be performed through online platforms.

Besides my roles as researcher and teacher, I am also part of HEC Paris' management team as Director of the PhD Program. My mission is to ensure that our 60 PhD students receive top-notch training and guidance to produce new knowledge at the frontier of management research.

I am also part of the Board of Governance of Hi! PARIS, which validates all actions related to the research and education strategy of the center and oversees their implementation.

### • What are your expectations for PhD students at this center?

Artificial intelligence and its related applications for research such as forecasting, machine learning, and automated text analysis are not new. Still, the progress that is made in these domains is currently so large that it is difficult for any researcher to remain up to date by him- or herself. For me, HI! Paris represents most of all a community that concentrates efforts to advance faster together and have more impact. An important expectation is that the center will help offer state-of-the art AI-related methods training to our doctoral students and give them the opportunity to collaborate on research projects with senior researchers. The fact that the center is supported by corporate partners will help our doctoral students gain access to companies and co-develop research projects that address relevant management and societal questions. In short, HI! Paris will allow our students to become experts in using AI for research that matters. In turn, this will help them land a job as Assistant Professor in the best business schools and universities around the globe and so diffuse the center's impact.





ADRIANA TAPUS Link to biography

### Full Professor at ENSTA Paris Director of the Doctoral School of Institut Polytechnique de Paris

### • Could you describe your area of expertise?

My name is Adriana Tapus and I am a Full Professor at ENSTA Paris, one of the member schools of Institut Polytechnique de Paris, in the Autonomous Systems and Robotics Lab. My background is in mobile robotics, artificial intelligence, social and assistive robotics. Since September 2019, I am the Director of the Doctoral School of IP Paris. An important part of our mission at IP Paris is to provide world-class graduate education in Computing, Data and Artificial Intelligence; Information, Communications, Electronics; Economics, Management, and Social Sciences; Physics; Biology and Chemistry; and Mechanical and Energetic Engineering. The doctoral School of IP Paris is a multi-disciplinary doctoral school with no barriers among the domains and is committed to scholarly excellence and student success. As the Director of the Doctoral School of IP Paris, I strive to ensure that doctoral training and research prepare the students for a productive and fulfilling academic or industry career.

### • What are your expectations for PhD students at this center?

In the context of the new center on AI and Data Analytics, it is important to mention that Artificial Intelligence is a broad field that involves extremely disparate disciplines. The HEC Paris and IP Paris' Center on AI and Data Analytics will create a favorable ecosystem for the graduate students by bringing together world-class researchers and by developing a community of AI stakeholders such as researchers, developers, large companies, SMEs, start-ups, public bodies, and society at large.

Graduate students are central to our mission at the Doctoral School of IP Paris and in the HEC Paris and IP Paris' Center on AI and Data Analytics through their partnership with us in research, teaching, and the maintenance of a dynamic and leading-edge academic community. By benefiting from all the advantages offered by the HEC Paris and IP Paris' Center on AI and Data Analytics and the Doctoral School of IP Paris, the PhD students will be able to easily contribute to the development of innovative research in AI and expand technology transfer. Students will also be exposed to the new AI platforms developed and in development at the European level. We count on our PhD students to be one of the main pillars that will highly impact large companies, SMEs, and public institutions by contributing to the scientific body of knowledge in research in AI and Data Analytics for business applications across all sectors. Furthermore, we also expect them to promote the research results, best practices, and methodologies through a thorough strategy reaching a large multi-stakeholder audience.

# HI! PARIS : IMAGE AND BRAND



### The new Research Center for Artificial Intelligence has a modern name and logo with a human touch

Hi! PARIS is first of all a name: "Hi", the most universal greeting, but also the H from HEC combined with the I from Institut Polytechnique de Paris, which have partnered to host, in Paris, the very best in global research, science, and technology on artificial intelligence and data, with the aim of serving the economy, society, and the world of tomorrow.

For Hi! PARIS, Paris is not only the host city for this new center, but also an acronym: Paris ARtificial Intelligence for Society.

Grounded in a blue-white-red color scheme, the French Tech colors, promoting French excellence internationally, the Hi! PARIS logo is modern and technological, with a human touch.

The dot-shape forming the line in the H and the exclamation point (an upside-down "i") interact to form a monogram using both high-tech code language and signage, with a fundamentally human dimension. The interplay between the two "i"s creates a unique graphic code that can be easily identified in the world of major international institutions.

The name and logo were designed by BETC and BETC Design.



### PARIS ARTIFICIAL INTELLIGENCE FOR SOCIETY

### **PRESS KIT**

Tuesday, September 15, 2020

