REASERCH & TRAINING

A unique university reinventing cities and regions

Activity report 2020

> Université Gustave Eiffel



The fruit of a joint venture initiated more than 20 years ago,

6 training and research institutions with renowned specialisations in the field of sustainable cities joined forces on 1 January 2020 to form this new establishment, bringing together their expertise and knowledge to create **Université Gustave Eiffel**, a worldranking university of a new kind.

- 1 UNIVERSITY (UPEM)
- 1 RESEARCH INSTITUTE (IFSTTAR)
- 1 SCHOOL OF ARCHITECTURE (ÉAV&T)
- **O** 3 ENGINEERING SCHOOLS (EIVP, ENSG AND ESIEE PARIS)



ACTIVITY REPORT

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- How would you rate this first year in the existence of Université Gustave Eiffel?

Hélène Jacquot-Guimbal: We couldn't have imagined such a start. Like everyone else, the health crisis represented a real challenge for us, emerging just a few weeks after the official creation of our establishment. Numerous physical meetings and travel plans were cancelled and the progress of some of the key projects we had initiated was slower than anticipated. Dealing with the pandemic led to a form of general exhaustion, particularly in the first semester, but our community demonstrated impressive resilience and many research, training, management and communication projects forged ahead despite the context. If you can survive a first year like that, you can overcome anything.

Gilles Roussel: In spite of our differences in culture and a difficult context, 2020 confirmed that our merger was the right move to make. A relationship of trust was forged between the founding establishments and I firmly believe in the importance and added value of our union. Research and training projects, the bringing together of staff teams,

Develop potential and provide all the necessary conditions for success.





the pooling of processes and work methods and so on... not everything is visible yet, but there are numerous signs that we are heading in the right direction. Our task now is to pursue the growth of the university and inter-personal relationships in order to develop potential and provide all the necessary conditions for success.

- How did the merger take shape and what were the key events for the establishment?

H. J.-G.: We had to make numerous urgent decisions and commitments throughout the year, related to the purchase of masks, the recruitment of temporary teaching and research staff, student jobs, social welfare, or the extension of thesis deadlines, and so on. Thanks to the DGS [Directorate-General of the French Health Ministry], an effective management system and shared values, we managed to stay in the saddle. We also made good progress with the integration of ESIEE Paris and preparations to transfer the steering of I-SITE FUTURE from COMUE Paris-Est Sup to Université Gustave Eiffel. It's also worth mentioning that the first elections for the central councils, held in late November 2020, boasted a very high participation rate (85%) and that we received strong support from teachers and teacher-researchers.

G.R.: The integration went smoothly. UPEM and IFSTTAR merged fully and the process is continuing with the schools, at a specific pace for each establishment. The juxtaposition of departments wasn't always easy, but it worked. The aim at present is to find the most effective organisation possible, to drive our public service missions and facilitate the unification and simplification of our internal processes and tools in order to form a single establishment.

We can also highlight the rich student life across the campuses. The students share the same concerns and desire to work together. This momentum is strengthened by the Student Parliament, a unique body which raises new questions and expectations on issues such as environmental transition or gender equality. Its level of representation and permeation is highly encouraging.

- How was the university welcomed on the international scene?

H. J.-G.: Université Gustave Eiffel has enabled us to integrate new networks and has added new weight to each of our founding establishments. Our entry into the Shanghai ranking is proof of this, and it has provided our fledgling establishment with considerable visibility. Our participation in the Transportation Research Board (TRB) in Washington in January 2020 also helped to initiate new collaborations on the city of the future, particularly with the European Commission Research & Innovation DG, which partnered our Europe - Urban Research & Innovation Day last October.

G.R.: On a national and international level, Université Gustave Eiffel is clearly making its mark in the research and higher education field. Its name and originality stand out. Moving forward together under this identity adds visibility and readability to all the establishment's components. We've earned this reputation very rapidly and it's given us more significant weight. It contributes to consolidating our partnerships and developing new ones, via the pooling of our partner networks in both research and training.

- How did the research and training activity perform in 2020?

H.J.-G.: Our researchers and teacher-researchers submitted numerous projects to the French National Research Agency and collaborated on a great deal of activities, alongside co-tutoring laboratories with the CNRS, Lyon University, Aix-Marseille University or ENPC, etc. We also launched works to gain better insight into the health crisis and its impacts, in addition to research-action projects on the theme of the city. We pursued our partnership activities with industrial players such as the Vinci, EDF or Eiffage groups in the framework of the E3S project in Châtenay🔁 VIDEO



Our community demonstrated impressive resilience.

Malabry, for example. Université Gustave Eiffel fosters inter-disciplinarity and more specifically the integration of social and human sciences or political science in research projects. This is one of the assets of the Urban Futures Labex in particular, and the observatory for urban innovations, which is currently being set up.

G. R.: We pursued our training and research actions and synergies were formed, but given the context of the pandemic, certain projects were put on standby and will require more time. Co-operations between the campuses and academic and institutional players or local authorities have only just begun. One such example is the university diploma in road safety in Africa. Initiated at the Méditerranée campus, in partnership with CEREMA and CITA, it will open as of the start of the 2021-22 academic year. Our four Labex actively lead scientific events and the themes addressed by the European university project PIONEER, or by the Graduate Programs for Doctoral Studies (GP-DS) project, supported by PIA4, are all means of injecting new strategies, strengthening training via research and promoting our wide range of expertise in the field of the city, transport and regions.

HÉLÈNE JACQUOT-GUIMBAL,

Acting President of Université Gustave Eiffel GILLES ROUSSEL, 1st Vice President of Université Gustave Eiffel

A word from...

Enable students to gain a multidimensional vision of urban issues, on local and international scales.

MAGDA FUSARO

President of Université du Québec à Montréal (UQAM)

- How do you view Université Gustave Eiffel from an international perspective?

Magda Fusaro: The academic model offered by Université Gustave Eiffel is particularly promising. The federation of establishments of various vocations facilitates the integrated roll-out of research and training activities, in addition to the development of international partnerships with other universities active in the fields of the smart city, transport logistics or sustainable urban development and so on.

The pooling of viewpoints emerging from natural and human sciences is of great interest to UQAM, which also boasts centres where several fields contribute to the development of training programmes and research projects. This type of approach enables students to gain a multi-dimensional vision of urban issues and to develop the transversal skills sought after in professional sectors, on local and international levels. - As a newly-formed establishment, how can Université Gustave Eiffel contribute to the transmission of innovation and scientific knowledge, specifically in the field of the sustainable cities?

M. F.: The alliance of a research institute with a university and engineering schools hugely facilitates exchange between researchers from different fields, thus fostering creativity and innovation. There is a realisation that cities are playing an increasingly important role in the management of complex issues related to public health, technological integration, mobility and energy or ecological transition. Urban areas are becoming a laboratory where all the ecosystem's players must work together to find long-term solutions to the challenges that emerge. All forms of practical and theoretical knowledge thus play their part in the co-building of knowledge with public and private stakeholders and civil society. We can only welcome therefore the initiative of Université Gustave Eiffel, which focuses on collaboration between researchers, academics and engineers.



Potential for close and fruitful collaboration.

- What links does UQAM maintain with Université Gustave Eiffel?

M. F.: Prior to the creation of Université Gustave Eiffel, UQAM already had certain arrangements with three of its founding members, primarily in the field of student mobility. Our establishments share several common points. As an urban university located in the city centre of Montreal, UQAM has been designing and creating the city since its foundation. We offer numerous study programmes related to the city and its various challenges: urban studies, environmental science, tourism, design, urban agriculture, modern and heritage architecture or transport logistics and

so on. Several of our research units are also dedicated to this area, in particular three new research chairs created in collaboration with the City of Montreal; one in ecological transition, one in smart cities and one in urban forests. Lastly, our Environmental Science Institution deploys knowledge on the biological, physical, social and human processes at work in cities. These inter-disciplinary initiatives at UQAM are based on a philosophy which is similar to that of Université Gustave Eiffel and promises the potential for close and fruitful collaboration.

- What prospects does the framework agreement between UQAM and Université Gustave Eiffel open up?

M. F.: The framework agreement signed in January 2021 forms a bridge between our two establishments. It will facilitate student and faculty staff mobility in addition to joint research in common fields, with the complementarity of methods and expertise. This agreement helps to strengthen existing collaboration and to expand its reach to all the components of Université Gustave Eiffel.

A specific agreement to define the parameters for the setting-up of student exchanges is currently being finalised and various other projects can be envisaged, such as a faculty and administrative staff mobility programme, joint training programmes, communities of practice, summer schools and seminars or international cooperation schemes.

ightarrow UQAM in Montreal





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VALÉRIE DAVID

Director of Sustainable Development and Transversal Innovation at Eiffage

- What form does the partnership between Eiffage and Université Gustave Eiffel take?

Valérie David: Our Road activity teams have been working for many years alongside what was originally known as the Central Civil Engineering laboratory, before becoming IFSTTAR and presently Université Gustave Eiffel. Names change and organisations are transformed, but we share the University's appetite for scientific collaboration. On either side, the passion for our activity is what drives us. We have forged a relationship of trust with the University over time. This long-standing bond, a rarity in the business world, allows us to see projects through to maturity, which might otherwise suffer from the dictatorship of the short term. Among our landmark collaborations, we can mention the I-Street project launched in the framework of ADEME's Road of the Future programme, the ENA project to experiment self-driving shuttles and, more recently, the E3S programme led on the LaVallée project site in Châtenay-Malabry.

- What does the E3S programme represent for Eiffage?

V.D.: It was initially a gamble. Implementing a research-action programme around the sustainable city with 60 teacher-researchers and students, while executing a several billion-euro-worksite, represented an enormous

leap into the unknown. We threw ourselves into this venture because we believed it to be a relevant project, but also because we placed a great deal of trust in IFSTTAR. At present, we can only congratulate ourselves for having taken up this challenge. Carrying out research simultaneously with a worksite project enables us to implement innovations directly. What's more, this venture taught us a great deal about our maturity, our margins of progress and our ability for research and development on the sustainable city. I believe everyone is satisfied with this experiment and I hope there will be more to come in other regions.

- What prospects does your collaboration with Université Gustave Eiffel open up for you?

V. D.: The really interesting aspect of the University is its systematic approach to the sustainable city. It simultaneously integrates the field skills of human and social sciences, material science, digital science or physics

at the service of a living and evolutive object. Within the framework of the E3S programme, we organise workshops on water management or concrete re-carbonation, topics which could change the building economy. We are also working together on cool islands; on how we can capture the heat of the day and restore it at night through the choice of road surface materials, vegetation or the presence of water. The researchers provide us with reliable scientific data to guarantee results for our customers. Lastly, this collaboration with the University has given us an opportunity to refocus on the end recipients, i.e., inhabitants and their uses. With the students, for example, we looked into how to communicate on biodiversity issues with inhabitants. We also organised writing workshops around the question of well-being in Parisian suburbs. This would never have happened without the Sociology Department and teacherresearchers such as Florence Allard-Poesi. One of my current objectives is to work on well-being indicators for all our urban development projects.

Refocus on inhabitants and their uses.

—> Track tests for safety of standing passengers carried out at Transpolis as part of the autonomous
shuttle experiments (ENA) project. © Université Gustave Eiffel - Sophie Jeannin



Highlights 2020



Creation of Université Gustave Eiffel

1 January



12 January TRB2020 The 98th Transportation Research Board (TRB). Q Washington, DC. Find out more

PØRTES OUVERTES



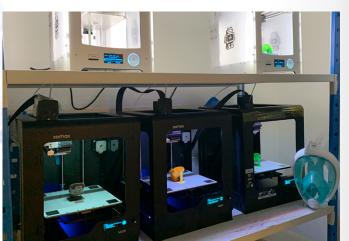
29 February Open Days

Université Gustave Eiffel organised its first Open Days (JPO) to present its courses and schools to future students. **Marne-la-Vallée and Paris**

campuses ▶ Find out more



9 April Covid-19 The University takes action to support medical workers. Find out more



8





15 April Maintaining teaching through lockdown

In spite of the crisis linked to the Covid-19 pandemic, heads of courses, teaching secretariats and teachers all continued teaching.

▶ Find out more



20 to 24 April

Student Sustainability Week

Members of Cité Descartes (student associations and projects, staff associations, local associations, etc.) proposed a series of initiatives for all local users to raise awareness of the challenges of sustainable development and promote concrete action.

▶ Find out more



8 May

Frédérique Vidal thanks committed students

In a videoconference, Frédérique Vidal thanked the students of Université Gustave Eiffel who provided psychological support to other students during lockdown.

▶ Find out more

1 June

Apprenticeship tax



contributors

Université Gustave Eiffel thanks its 493 generous contributors in 2020.

2 to 5 June Job dating at Cité Descartes

Université Gustave Eiffel, through ESIEE Paris and ESIPE, co-organised an online job dating event with the Descartes CFA and the Engineers 2000 CFA.

ATE	DU MARDI 2 AU VENDREDI 5 JUIN 2020	
ШD	JOBDATING VIRTUEL	
H	APPRENTISSAGE	
AVE	Réservez votre stand gratuit - Candidats pré-sélectionnés relation entreprises cfadescartes fr - Tél. 01.64,63,48.16	
S		

26 June All connected!

The awards ceremony for the 2020 entrepreneurial speed dating event for students from PÉPITE (Student Centre For Innovation, Transfer and Entrepreneurship) establishments was held online as part of the "All connected!" project.

▶ Find out more

13 July

Two Université Gustave Eiffel projects selected as part of the PIA



Two projects have been selected in the framework of the Investments for the Future Programme (PIA): "Graduate Programmes for PhDs (GP-DS)" and "Appartenance – Mutualisation – Integration (AMI UGE)"

► Find out more



28 August

Shanghai ranking

Université Gustave Eiffel has joined the prestigious list of the world's top 1,000 universities, coming in at no. 802.

Find out more

18 September

European Sustainable Development Week

This event highlights the many initiatives launched to raise awareness among staff and students about the challenges of sustainable development.

► Find out more



18 September

Start-of-term conferences on climate issues and urban engineering at EIVP

Paris School of Urban Engineering (EIVP) is organising a series of five start-of-term conferences on urban engineering for its students.

▶ Find out more





27 November

Signature of a charter for openness to society

The University and seven other establishments signed a charter of openness to society to strengthen society's trust in science and scientific expertise.

▶ Find out more

fête de la Science

Fête de la science

For its first year taking part in the Fête de la Science (French national science festival), Université Gustave Eiffel offered educational workshops for school pupils through interactive videoconferences.

► Find out more

23 to 27 November

European Week for Waste Reduction

On the occasion of the European Week for Waste Reduction, workshops and webinars were held to inform staff and students about better ways of consuming and producing, extending the life of products and reducing waste.

► Find out more

1 December FUTURE Days

Université Gustave Eiffel organised the 4th edition of the FUTURE Days with two partner organisations.

▶ Find out more

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11

Key Figures 2020

The creation of a university which is...

...unique, unconventional and pioneering, bringing together:

1 research body



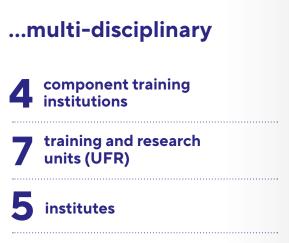
university



N°1

French university for apprenticeship

More than 20% of students with apprenticeship status



23 research components

1 scientific project

As a multi-disciplinary establishment, Université Gustave Eiffel supports the scientific aim of I-SITE FUTURE: to prepare the transformation and sustainable adaption of cities and regions.

A nationwide gateway to the issues surrounding cities and regions (self-sustaining resilient cities, etc.), the University is home to **1/4 of national research and development studies on the sustainable city.**



Resource-efficient cities

Designing, managing and developing urban spaces and facilities that consume low amounts of natural resources and energy, while guaranteeing quality of life for users.

3 key challenges



Secure and resilient cities Understanding and

managing "urban risk".



Smart cities

Studying and developing digital cities, making them a lever for social, environmental and economic performance.

A university on a human scale

Université Gustave Eiffel represents around:



8,300 undergraduates (DUT technology diploma, degree)

3,500 master students

4,000 student engineers

700 architectural students

> 500 PhD students



staff members

250 teachers

320 teacher-researchers

> 550 researchers

1,150 administrative and technical staff

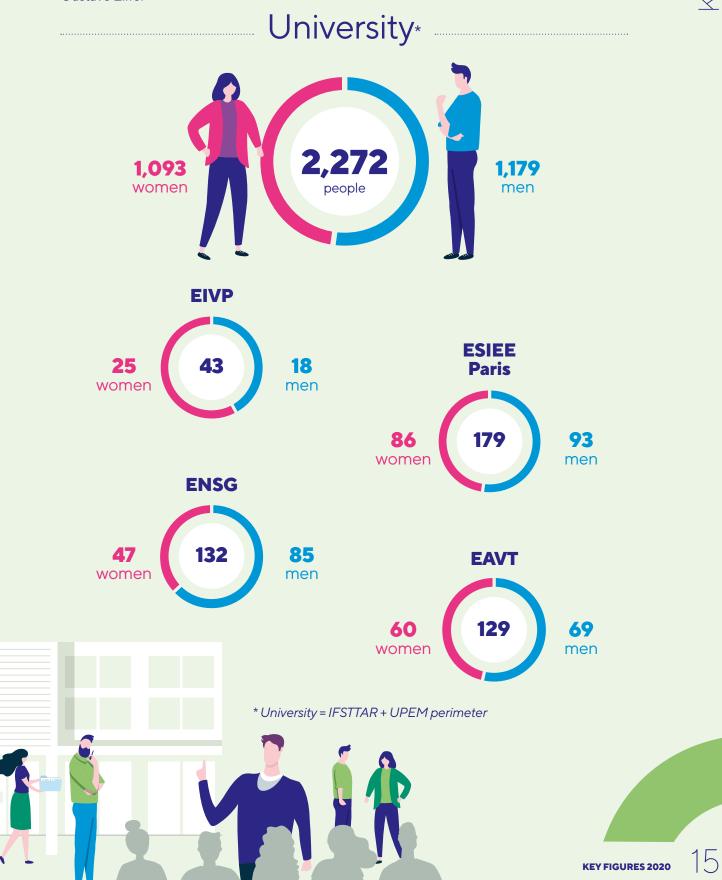
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Training

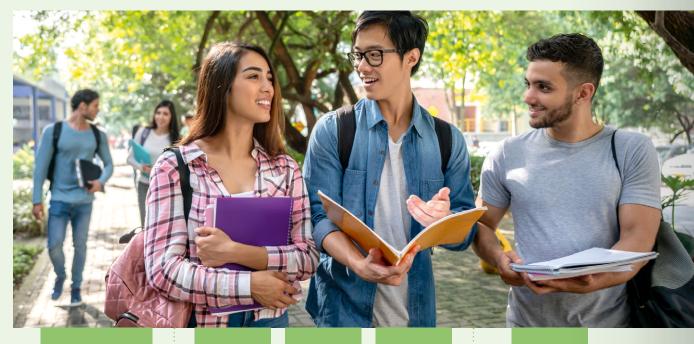


Human resources

Staff numbers at Université Gustave Eiffel



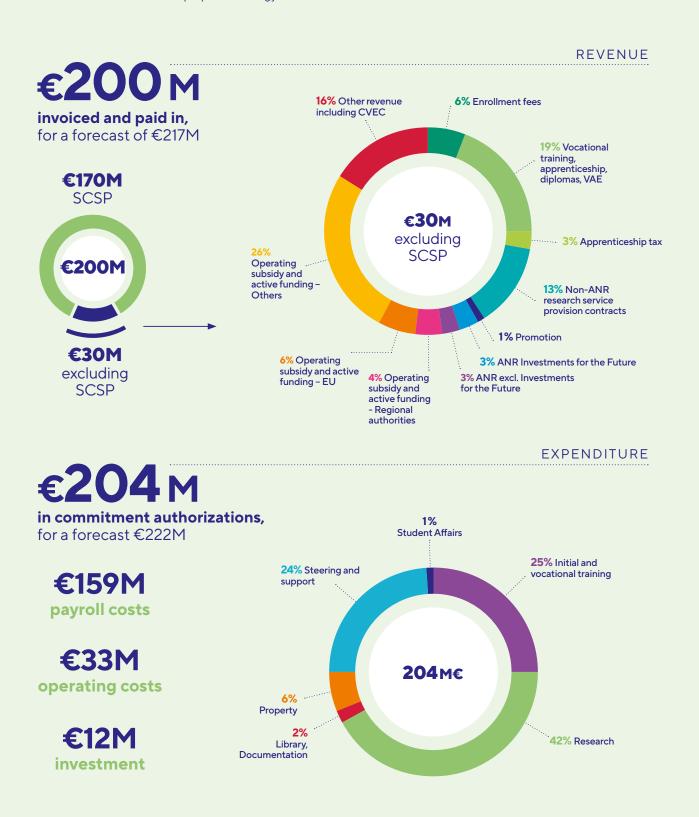
Doctoral studies



Number	University	EIVP	ESIEE Paris	ENSG	EAVT
Number of PhD students 2019-2020 2020-2021	197 179	5 5	146	30 37	10 12
Theses defense 2019-2020 2020-2021	134 44	3 3	-	9 6	0 4
HDR defense 2019-2020 2020-2021	20 3		← - n	1 3	

Revenue and expenditure

With regard to accounts, the 2020 budget was heavily impacted by the effects of the COVID-19 pandemic, in terms of both **revenue (92%) and expenditure (91%)**. Nevertheless, revenue prospects appear promising. Forecast at - \in 7.2M, the budget balance stands finally at - \in 4.5M and cash flow remains at a comfortable level (- \in 35.2M). From a pragmatic and prudent perspective, given that the health crisis has not yet ended, the 2020 data as a whole validates the proposed strategy for 2021.



Prizes and distinctions

Major Prizes

LICIT Ludovic Leclercq University of Lyon Grand Prix

LISAA Romain Menini 1 CNRS (section 35) Bronze Medal

COSYS-LISIS Halima Mouhib 2020 Descartes-Huygens Prize

Appointments at prestigious establishments

LISAA Juliette Azoulai IUF 2020

LVMT Nacima Baron Appointed Senior Member of the IUF for 5 years: 2020-2024. His research will focus on managing urban and energy transitions > focus p.38

<u>> 10cus p.50</u>

ERUDITE Yannick L'Horty 2 Appointment to the rank of Lieutenant-Colonel by the Army on 24 September 2020



PhD Prizes

ACP Louis Baldasseroni 2020 ASRDLF PHILIPPE AYDALOT Prize.

2020 UPE Thesis Prize - ED CULTURES&SOCIETIES

2020 City Thesis Prize - PUCA

Navier Laboratory Francesco Bonacci Groupe Français de Rhéologie Thesis Prize

IRG Anne-Claire Chêne Judges' prize in the international competition "My thesis in 180 seconds", University of Paris-Est

LASTIG Oussama Ennafii 2020 EuroSDR PhD Prize

LISAA Azélie Fayolle 2020 University of Paris-Est Thesis Prize for the CS PhD school

Navier Laboratory Gaétan Gerber 2020 University of Paris-Est Thesis Prize - ED SIE

MAST Beddaa Hamza Award de l'École Française du Béton reçu lors du fib PhD symposium

MAST-FM2D Marie Sereng French School of Concrete Prize received at the fib PhD symposium

MAST-LAMES Mohamad El Achrafi 1st prize for the Loire-Atlantique department in the competition "Flash sur ma thèse"

GERS-GIE Mickael Le Vern 3 2nd prize poster (Journées Techniques Routes)



LASTIG Yann Méneroux 4

Abertis Chair Prize in Transport Infrastructure Management and Road Safety - Road Safety Category

MAST-LAMES et MAST-MIT Rodrigo Siroma #JTR 2020 poster competition

MAST-MIT Domenico Vizzari 4th Best Paper Award at the International Conference on Smart Cities (ICSC 2019) July 17 – 19, 2019, Seoul, Korea (presented in 2020)

Julien Dario PhD Thesis Prize in geography "Geography of a fragmented city. Morphogenesis, lane governance and impacts of residential closure in Marseille"









Innovation/ Transfer prize

LVMT

Anne De Bortoli OCDE-ITF 2020 Young Researcher of the Year Prize

IRG

Mathias Szpirglas 5 PEPS Certificate of Excellence

COSYS LEOST PME Luxondes 2020 Technology Winners

Prizes from learned societies, associations and foundations

LAB'URBA Victor Bayard The French-Swedish Association for Research Prize

LBMC

Raphaël Dumas Christian Oddou Prize by the

Biomechanics Society (French-speaking community)

MSME Madge Martin Society of Biomechanics 2020 Thesis prize



AFGC Prize

LIPHA Corine Pelluchon 7 Günther Anders Prize February 2020 Bertrand Quentin Littré de l'Essai Prize in December 2019

Publications / Communications / Conferences

ERUDITE Philippe Adair Best Paper Award

Sylvie Chevrier, Philippe d'Iribarne, Alain Henry, Jean-Pierre Segal, et Geneviève Tréguer-Felten

EURAM – Prize for the best book on intercultural management in 2020 for Cross-Cultural Management Revisited -A Qualitative Approach

LAB'URBA Cécile Cuny HIP Prize for French-language Photography Books, Society Category

LVMT Charlotte Ruggeri APERAU Prize for the Best French-Speaking Scientific Article on Spatial Planning and Urban Development (12th edition)

LVMT Jérôme Monnet

APERAU Prize special mention for the best scientific article in the French language on spatial planning and urban development (12th edition)

ESYCOM

Yamine Leprince, Martine Capo Chichi, Tarik Bourouina et Frédéric Marty

Best Paper Award by the journal *Microsystems and Nanoengineering,* by Springer Nature (published in 2018) awarded for the number of citations: 40 citations in less than 2 years

MAST-GPEM

Anne Ventura B Carboval Poster at the final conference by the COST MINEA network

MSME Madjid Zemmouche HOT Article

Other

Geophysics and non-destructive evaluation laboratory Odile Abraham European INFRASTAR project wins

European INFRASTAR project wins "Stars of Europe" Prize

EIVP

Team of EIVP engineering students – EIVP – Syntec Ingénierie's Engineering of the Future Prize for a team of EIVP engineering students for the Ca Presse project, which aims to provide permanent access to toilets using biodigesters in a favela in Brazil.

Amina Beji-Becheur

Elected lected President of the French Marketing Association in 2020, mandate (2021-2023)









Research

The research laboratories of Université Gustave Eiffel were forced to adapt their activities in response to the health crisis, not only to maintain normal operations as far as possible, but also to seize research opportunities linked to the pandemic.

In spite of the crisis, numerous actions were led to begin aligning the working methods of various laboratories further to the creation of the University, to implement the I-Site Future project and to pursue the major tasks related to research, primarily the opening of our research to society and the support for public policies.

.....

- 22. Research in the COVID-19 period
- 25. Creation of the University and the alignment of working methods between laboratories
- 26. The implementation of the I-Site Future project
- 28. Roll-out of the Open Science policy
- 29. Opening up research to society
- 30. Excellence and multi-disciplinary research
- 31. Partnerships
- 32. Supporting public policies
- 34. Participative science
- 37. Spotlight
- 39. Testimony



© Myr Muratet



Research in the COVID-19 period

2020 marked both the creation of the University and the first waves of the health crisis. While the procedures linked to the University's creation were designed to have a minimum impact on research units, a virtually impossible task when the merger of organisations and certain information systems are at stake, the health crisis nevertheless had a major effect on research.

irstly, an unprecedented and long-term closure required a substantial effort on the part of research units to redesign a 'Business Continuity Plan', taking into account the impossibility of physical access (with certain exceptions) to laboratories. Although the networks remained active and video-conferencing facilities were impressively scaled up over a very short lapse of time, the consequences of the crisis seriously impacted certain laboratories, research staff and doctoral students, in particular those whose activities are essentially experiment-based (on site in laboratories or in the field for experiments and surveys), or reliant on external elements (field surveys, interviews with stakeholders, archives and libraries, etc.). Restricted access had a significant impact which was difficult to reduce fully, despite huge organisational efforts to maintain the conditions of ongoing, long-term experiments

The university Presidency remained in close and regular contact with the heads of research and training units through weekly meetings. Discussions were held on the implementation of measures to adapt to the health situation (business continuity plans, minimum access to experimental laboratories, ongoing contact with staff and students, followed by plans for the resumption of activity). Furthermore, ahead of the national campaign launched by the Ministry for Higher Education, Research & Innovation, the University released a $\leq 2M$ payroll budget for units in mid-May and undertook a census of the difficulties encountered by doctoral students in executing their thesis project (in particular those whose doctoral contracts were due to terminate in September 2020).





ightarrow Yannick Falaise with his printer and the one he took home from the laboratory

In coordination with Paris-Est Sup and the various doctoral schools enrolling the University's PhD students, the University was able to identify students' urgent needs and anticipate the extension of contracts, which had to be put in place rapidly (lockdown in March with finalisation of the thesis in June or September for a certain number of students) in order to facilitate the end of their doctorate. More than 220 cases were identified, and around 50 doctoral contracts were extended under university funding (Paris-Est Sup took charge of extensions to doctoral contracts for which it is the employer), with extension periods ranging from 1 to 7 months.

These factors helped to alleviate in part the shock of the first health crisis and to finish the year in somewhat easier conditions, despite the resurgence of uncertainty (due to the lockdown in late October). The end of 2020 saw the return of travel restrictions, but the research units had presumably better anticipated the preventive measures to implement.

Research for insight into the health crisis

The research laboratories engaged actively in understanding the health crisis. Crises often correspond to a period in which society evolves at a very fast pace. It is important to respond rapidly to the problems raised by the crisis, but also to understand the social changes taking place. **Some examples of research carried out on the crisis are presented here.**

\rightarrow TRANSPORT AND TELEWORKING The Smart Lab LABILITY

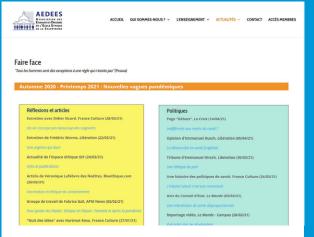
The Smart Lab LABILITY is an ephemeral laboratory composed of 9 young researchers involved in an innovative programme to respond to resilience issues in the Île-de-France region in the wake of the health crisis. Two focal points are being explored: the threats and opportunities related to the development of teleworking, and the methods for a resilient management of transport networks. LABILITY was the winning application in the Smart Lab Île-de-France call for projects.



\rightarrow LOGISTICS "Urban deliveries: an activity shaken up by the lockdown"

The first lockdown demonstrated how primordial certain activities are for the life of the country, such as those linked to transport and logistics. In late March, the Logistics City chair of Université Gustave Eiffel (research in urban logistics), launched an initiative to study the impact and development of this sector during the lockdown weeks.

▶ Read the paper



\rightarrow ETHICS Faire face [Face up], the website for ethical thinking

The Hannah Arendt interdisciplinary laboratory for political studies (LIPHA), a founding member of the Salpêtrière School of Ethics, contributed to the creation of a website for ethical reflection. The website, *Faire face*, is up dated regularly.

► Visit the site



→ URBANISM A closer look at street-level city life during lockdown

How were street-level areas occupied during lockdown and how did it affect mobility? Quieter neighbourhoods, new uses for building courtyards, more cyclists and joggers in the streets, etc. The lockdown led to a change in use of city streets.

► Read the paper



\rightarrow PHILOSOPHY Changing our behaviour and perceptions

Corine Pelluchon, Professor of Political Philosophy and Applied Ethics, evokes her study themes and latest publications, seen through the prism of the health and environmental crisis.

► Read the paper

\rightarrow ORGANISATIONAL MANAGEMENT

French universities in the face of COVID

The Institute of Management Research (IRG) is taking part in the ANR COVID-IN-UNI project, 'Crisis management in Universities: Observation of French Universities during the COVID-19 Pandemic', alongside the Centre for the Sociology of Organisations (CSO), a joint research unit affiliated with Sciences Po and the CNRS. This project forms part of a body of studies on the way organisations succeed or fail to anticipate and manage crises. Whether examining organisations at risk in the high-technology sectors, or analysing the organisations responsible for managing crises, all these studies highlight the effectiveness of 'weakly linked systems' in dealing with the crisis. What about organisations such as universities, which are characterised by weak functional inter-dependencies and flexible technologies? This research-action will provide new insight through its observation of French universities during the pandemic.

► For more information

Creation of the University and the alignment of working methods between laboratories

In 2020, the definition of work, consultation and discussion methods between research units relative to the building of the University's policies made major advances. This effort was already in preparation in 2019 with the setting-up of "meetings between Université Gustave Eiffel research bodies."

Provided for in the University's statutes, the 'Research College', which is not an elected body, was created in January. It acts as a discussion body, rather than a top-down information disseminator, around key topics for research units. The body is composed of delegates from these units and the opinions voiced serve to forge a consensus or, on the contrary, to take into account differing views on a given matter. The various phases of the health crisis did not prevent this body from meeting five times in 2020, mostlyvia full video-conference, thus ensuring balanced participation between delegates based on the various campuses and producing an unexpected but positive effect during the health crisis, even if in-person meetings allow for more insightful and humanised discussion.

Prior to the elections held in late 2020, several projects were dealt with, leading to the creation of elected bodies and in particular the Academic Board, whose statutory role is to adopt, among others, 'the allocation of University resources for training and research [...], the distribution of University posts per unit, component body and member-school [...], the allocation of University funding per unit, component body and member-school [...], research and teaching positions open to recruitment [...]'. Among the issues raised in 2020: the 'Univ Eiffel' signature

policy, the alignment of motivational research tools from predecessor establishments, consideration of the global attribution of doctoral contracts on establishment credits, the road maps for the University's 'Research open to Society' policies, the University's 2020-2022 road map drafted in association with the supervisor ministries and the scientific events to be implemented, etc.

Following the creation of elected bodies, certain projects are to be re-launched in 2021, based on work groups and regular discussions between the Research College, the Academic Board and its specialised commissions.

The implementation of the I-Site Future project

In terms of research, 2020 saw the launch of a new call for 'exploratory' projects. The specific orientation of the call for project framework in 2020 is support for young researchers and Support for Public Policies. 10 projects were selected out of the 24 submitted.

n 2020, the consortium also laid the way for the launch of a new form of call for projects, linked to the societal objective of the University, i.e. a "**Researcher-Citizen**" Call for Projects, designed to foster research projects in which research teams and 'citizen collectives' join forces in the co-building of knowledge. Furthermore, in the framework of the follow-up of research projects supported by I-SITE FUTURE and in order to promote the results and momentum, in anticipation of the assessment of I-Site, several scientific seminars were held on the supported projects, in particular **Impulsion and Exploratory**. An initial event day was held in June 2020, and a second in January 2021. The aim of these days was to share the knowledge obtained to date with the scientific community and I-Site's socio-economic partners.

In terms of training also, calls for projects pursued their momentum. The second call for projects devoted to training 'in' and 'through' research closed on 31 January 2020. Geared towards inter-establishment collaborations, the objective of the call was to support teaching projects in response to the Programme School of Excellence action, which aims to intensify research training in the Engineering, Architecture or Master cycles. Seven projects received funding. In addition, the call was also aimed at setting up BESTm, a multi-disciplinary bachelor degree in Economy, Science and Multimedia Technology, which is scheduled to open for the start of the 2021 academic year. The recruitment of the 1st class of students is ongoing. Lastly, on 3 November, the Université Gustave Eiffel Observatory for Teaching Practices organised the second edition of Teaching Day, under the title 'Reflection on and sharing of remote and hybrid teaching practices.' The event took place online and brought together some fifty participants. Throughout the day, each participant was able to share their experience of teaching continuity. Speakers presented various tools designed to accompany students and teachers in distance-teaching.

In the framework of its 'Partnerships' component, **I-SITE FUTURE** launched a new call for pre-maturation projects,



 \rightarrow LaVallée in Châtenay-Malabry (Hauts-de-Seine): the 1st eco-district demonstrating sustainable living in Île-de-France, entirely designed with a low-carbon approach, with Eiffage.

aimed at supporting the emergence of innovative projects, funding the development stages of laboratory-based projects and informing and supporting holders through to the maturation of their project, in association with the existing regional ecosystem. 3 projects received funding in this framework.

On the international front, a 2nd AIMCI call (Incentive Call for Mobility and International Cooperation) was launched in January 2020. 23 projects received support to strengthen or initiate new international collaboration. I-SITE FUTURE also launched a first 'Training School / Summer School' Call for Projects, aimed at supporting the organisation of summer schools in 2021. 3 projects were submitted and are currently being examined. Finally, Université Gustave Eiffel has become the French operator of F-SATI (French South-African Institute of Technology), alongside Paris-Est Créteil University, and of 2 host and co-host universities in South Africa:

- Tshwane University of Technology TUT (formerly Pretoria Technikon, since 1996)
- Cape Peninsula University of Technology CPUT (since 2008)

This role will contribute to the development of the training institute through international research





in South Africa, with perspectives for the creation of new Master (2 to 3 years) and research training programmes.

In terms of visibility, the annual event on the cities of the future, **FUTURE Days**, was held from 1 to 3 December 2020, online due to the health crisis. This edition attracted 700 participants, including 85 speakers from 70 local authority bodies or companies, who shared their knowledge and exchanged expertise through workshops and plenary sessions.

Regarding student affairs, the key event was naturally the setting-up of the student parliament. A unique body in the French university sphere, the task of this parliament is to contribute to the well-being of students, both in terms of their training and daily lives, by supporting in particular projects ranging from the organisation of cultural events to the installation of venues geared towards student life. The University's student affairs policy will form the subject of discussions within the Parliament and will lead to the drafting of a multi-annual master plan. The MAISON programme, based since September 2019 in a hall of residence on the Cité Descartes campus, was extended in 2020 to a second hall of residence, that of the Paris City and Paris-East School of Architecture (Eav&t), which helped to boost the recruitment of residents. The aim of this programme is to enable the scholarship students of the campus to avail of social accommodation in exchange for their involvement in collective projects with a social impact for the district.

Other events punctuated the academic year, despite the health situation. One example is the 'Rentrée Climat' climate programme. Around 25 teachers and staff, in addition to 15 students from the University received training in leading this workshop. The Fresque du Climat in particular was integrated into teaching programmes, to raise awareness for 1000 students. Lastly, preparations for the 1st City Hackathon got under way in 2020, for an edition postponed to the 1st term of 2021 (March). It was organised by Université Gustave Eiffel in partnership with the École des Ponts ParisTech, Comue Paris-Est Sup and the Paris - Vallée de la Marne Conurbation, to foster students' interest in entrepreneurship and the production of innovative services. The theme was "Imagine a day in the life of a person in Paris during the 2024 Olympic Game". Under the supervision of teacher-researchers, 48 students took part in 11 challenges organised by the event's partners, including BNP Paribas, Paris - Vallée de la Marne Conurbation, EDF, Google Cloud, GRDF, the **Descartes** Incubator, La Poste, Orange, RATP and the City of Paris.

FUTURE INVENTER LES VILLES DE DEMAIN

FUTURE Days 2020

An annual event around the cities of the future, the theme of the 2020 edition of Future Days was 'Science and support for urban-region public policies.' The vice-chairmanship team Support for Public Policies led a 'meet & greet' session to present an overview of its actions. It also provided a summary of the teachings gleaned from this edition of Future Days, currently available on video at:

D VIDEO



Roll-out of the Open Science policy

n the framework of publications on the <u>National</u> <u>Plan for Open Science</u> and in order to contribute to the generalisation of open access to publications, Université Gustave Eiffel continued to feed the open archives it uses, in particular HAL and Madis, in addition to theme-based open archives such as *arXiv* or RePEc.

Archives ouvertes	
L'université Gustave Eiffel dispose de deux archives ouvertes, Hal Upern-Upec et Madis. En fo êtres invités à déposer vos publications dans l'une d'elle.	nction de votre rattachement historique à l'un des deux établissements fondateurs de l'Université vous
Vous trouverez les informations et tutoriels nécessaires pour :	
vous connecter deposer vos publications	
Hal Upem	Madis
Archive ouverte utilisée par les personnels ex-UPEM	Archive ouverte institutionnelle utilisée par les personnels ex-ifsttar
connectez vous à votre profil ou créer un profil pour pouvoir déposer dans HAL Pour créer votre compte, consulter <u>ce support</u>	Connectez-vous avec votre adresse mail et votre mot de passe de session informatique Suivez les aides des tutoriets disponibles dans l'origiet "tutoriel" de la page d'accuel
 Pour vous accompagner dans l'utilisation de HAL, la documentation est à votre disposition <u>ICI</u> 	Se connecter à <u>Madia</u>
Se connecter à Hai Upem	
- ACHING	MADIS

In correlation with the visibility of publications on open archives, a communication action designed to strengthen the visibility of researchers via their personal pages (summary of research activities and access to lists of publications automatically generated by HAL or Madis for submitted publications) was launched during the Open Access Week 2020 event, organised at the University from 6 to 13 November under the theme **"Boost the visibility of your publications on Eiffel professional pages"**.



PLAN NATIONAL POUR LA SCIENCE OUVERTE

ightarrow National Plan for Open Science

Membership of the ORCID France consortium, which constitutes one of France's engagements in the *Open Government Partnership* (engagement 18: Build an 'open science' ecosystem), was confirmed in 2020 on the scale of Université Gustave Eiffel. The establishment is also taking part in an APC (article processing charges) survey, launched by Couperin in December 2020 and aimed at identifying the cost of publishing articles in open access or hybrid journals. It thus joins a European movement to foster greater transparency in the costs of scientific publishing.

2020 also saw the development of the Université Gustave Eiffel charter on publication signatures. The purpose of the charter is to boost the establishment's visibility and the identification of its areas of excellence, to facilitate the detection of publications for publishing houses or private and public organisations, and to position Université Gustave Eiffel in international rankings (Shanghai, Leiden).

A section devoted to **open science**, in addition to a horizon-scanning newsletter on this theme, went online via the Université Gustave Eiffel intranet site.

Science ouverte

 Elles pour objectif de rendre accessible et de partage te travai locentifique gublications, données, algontimes, est, pour de la contra de la eille Science Ouverte n.vers.la newsletter cin aux numéros antéceurs

Opening up research to society

The university wishes to open up its research to society and, to this end, is co-constructing a roadmap focusing on the following areas:

- Digital publishing and open access
- Opening data and research software
- Scientific, technical and industrial culture
- Participatory science, research and expertise

UNIVERSITÉ GUSTAVE EIFFEL'S FIRST ACTIONS IN 2020:



\rightarrow 27/11/2020 Signing of the Charter of Openness to Society

In order to address public concerns about health and environmental risks, Université Gustave Eiffel has joined forces with seven other public institutions to sign a charter of openness to society. By adopting this charter, they have renewed their commitment to sharing their values in order to provide a better understanding of risks and the means to prevent and reduce them.

> More information

THE CONVERSATION

\rightarrow 18/11/2020

Université Gustave Eiffel joins The Conversation

Université Gustave Eiffel has joined the online media website The Conversation France. This initiative allows researchers, faculty members and doctoral students to share their knowledge to enrich the public debate and shed light on current events.

> Find articles about Université Gustave Eiffel on The Conversation's website

Science festival poster



\rightarrow FROM 2/10/2020 TO 12/10/2020 Science Festival 2020

This year, the University organised events and making available several educational resources:

- > Discover the 8 workshops '1 class, 1 scientist, 1 hour' for secondary school students
- > Discover the stands and workshops organised on 7 October on the Descartes campus
- > En savoir plus

Université Gustave Eiffel

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UNIVERSITÉ À TOUT ÂGE CONFÉRENCES (2020/2021)

ightarrow 28/10/2020

Programme 2020-2021 University At All Ages

Université Gustave Eiffel offers adults in search of training, information and culture the opportunity to satisfy their thirst for knowledge and exchange by taking part in a series of conferences on various topics. > More information

RESEARCH

Excellence and multi-disciplinary research

RESEARCH PROJECTS SUPPORTED BY FUTURE: 2020 RESULTS

In terms of research, 2020 saw the launch of a new call for 'exploratory' projects. The specific orientation of the call for project framework in 2020 is support for young researchers and Support for Public Policies. **10 projects were selected out of the 24 submitted**.

Furthermore, in the framework of the follow-up of research projects supported by I-SITE FUTURE and in order to promote the results and momentum, several scientific seminars were held on the supported projects, in particular Impulsion and Exploratory. An initial event day was held in June 2020, and a second in January 2021. The aim of these days was to share the knowledge obtained to date with the scientific community and I-Site's socio-economic partners.

URBAN20: UNIVERSITÉ GUSTAVE EIFFEL MAKES ITS EXPERTISE AVAILABLE TO THE MAYORS OF THE WORLD'S MAJOR METROPOLISES

From 30 September to 2 October, the Urban20 virtual summit brought together the mayors of the main metropolises of the countries in the G20. The aim of this international meeting was to develop and share solutions to address the urban challenges of tomorrow, especially carbon neutrality and the circular construction economy, two subjects that are the subject of recommendations submitted by Université Gustave Eiffel. The white paper seeks to address this major challenge, and was coordinated by Jean-Bernard Kovarik the Vice-President for Public Policy Support at Université Gustave Eiffel, in colla-

ightarrow The virtual Urban20 Summit brought together the mayors of the major metropolises of the G20 countries



boration with cities in Mexico, Saudi Arabia and South Africa. Entitled Carbon-neutral Buildings and Recycled Materials: How Cities Want to Solve the Challenge, this 40-page document is one of the 15 position papers produced by some hundred experts, representatives of local and regional authorities, international associations and economic players involved in the international Urban20 (U20) initiative. Their work is now in the hands of the mayors of the world's major cities in order to help them put forward concrete policy recommendations to the G20 leaders and heads of state who are to hold their 15th summit in Saudi Arabia at the end of November.

> Press release

ENERGY TRANSITION ON A REGIONAL SCALE: THE ANR VITE! PROJECT

At the heart of the ANR VITE! project (Cities and Energy Transitions) 2015-2020, some twenty researchers from 7 member laboratories of the Urban Futures Labex (LATTS, LVMT, CIRED, SPLOTT, LAB'URBA and the AUSSER joint research unit) are exploring the progression of energy transition on the scale of the Île-de-France region.

By combining stakeholder surveys with the modelling/simulation of the impacts of planned measures, their research confirms the discrepancy between the targets set by public authorities and the observed regional energy path.

There are multiple explanations for this; the lack of active means available to local public players in terms of energy, overregulation which inhibits stakeholders and reins in their ability to innovate, the debatable effectiveness of property development measures, or the difficulties experienced by public authorities in approaching, let alone guiding, the inevitable change in social practices.

> https://anr.fr/Projet-ANR-14-CE22-0013

TAKING INTO ACCOUNT THE VULNERABILITY OF URBAN NETWORKS TO FLOODING: THE H2020 RESCCUE PROJECT

LAB'URBA is a partner in the H2020 RESCCUE project (RESilience to cope with Climate Change in Urban arEas – a multi-sectorial approach focusing on water). Led by the company Aquatec (Suez Spain), this project seeks to understand more fully how players on the ground could improve their resilience to climate change, by taking into account the direct and indirect vulnerabilities to flooding of their socio-technical networks. In a drive to optimise their local public action, the cities of Bristol, Barcelona and Lisbon took part in the project as 'active stakeholders', thus going a step further than simply providing areas for field research.

> https://cordis.europa.eu/project/id/700174/fr

Partnerships

SIGNIFICANT EXPERIMENTATION ON EQUIPMENT

n the framework of its 'Partnerships' component, I-SITE FUTURE launched a new call for pre-maturation projects, aimed at supporting the emergence of innovative projects, funding the development stages of laboratory-based projects and informing and supporting holders through to the maturation of their project, in association with the existing regional ecosystem. **2 projects received funding in this framework:**

- **BIOPHONICS**

Elastic meta-materials are phononic crystals made up of units which present localised resonance phenomena and behave macroscopically like elastic solids.

During the passage of an acoustic wave, when the elementary components of these materials are chosen adequately, the localised resonance phenomenon enables a transfer of acoustic energy towards an inlay which begins to vibrate. This group of insulating materials helps to attenuate low-frequency waves, where standard porous-type media are ineffective at reduced thickness and low frequencies. The project aims to replace the petroleum-sourced materials of these composites with non-polluting, bio-sourced materials, which contribute to a circular economy while optimising their structures and properties to reduce low-frequency and wide-band acoustics and vibrations.

- GEOLOCPVT

The aim of the GeolocPVT project is to produce an Android application capable of collecting and calculating an exact position using GNSS (Global Navigation Satellite System) raw data sent by satellites.

The advantage of this tool is its control of the entire calculation chain for geographical coordinates and tracking calculation, along with the addition of new quality indicators which are essential for critical mobility applications (emergency services, self-driving cars, etc.). Thanks to Geoloc PVT, anyone will be able to use the application or integrate it as an effective geotracking module to their own application. This would allow users to bypass the geo-tracking calculation engine provided by Google and thus gain control over the privacy of their personal data.

This project contributed to the GNSS Raw Measurements Task Force steered by the EU Agency for the Space Programme (EUSPA), launched further to the access to raw GNSS data by Android in 2016.

The current code is under LGPL-3 open-source licence and available on the GitLab of the GEOLOC laboratory. The

availability of GeolocPVT via Google Play Store will establish Université Gustave Eiffel as a pioneer in precise positioning via smartphone GNSS signal measurement and will democratise its industrial, educational and research use. It will also meet the requirements of the European Commission to disseminate knowledge of the Galileo positioning system. > For more information

ightarrow Model of the Android GeolocPVT application



Supporting public policies

Université Gustave Eiffel is engaged in supporting public policies. Several examples of projects with this aim in mind are presented here:

n the framework of its third action for openness to society, the University is providing its insight and expertise in support of public policies. On behalf of citizens, non-profit organisations and public decision-makers, the University carries out an analysis of public action, thus enabling an improved response to the challenges these groups face.

The University intervenes in several ways, via research projects, the drafting of standards and methodology guides, or surveys etc. Its expertise in multiple fields enables it to address a wide variety of issues, as the following projects illustrate.

RESEARCH, DEVELOPMENT AND TRAINING EXPERTISE TO THE RESCUE OF THE ILE DE RÉ BRIDGE

The break in one of the prestressing cables on the Île de Ré bridge in August 2018 led the MAST and GERS Departments (specifically via their respective laboratories SMC and GEOEND), in partnership with CEREMA (the Centre for Studies on Risks, the Environment, Mobility and Urban Planning), to intervene for the Charente-Maritime Department. A survey of the civil engineering structure was carried out while the Department implemented traffic restrictions once works to secure the facility had been undertaken. Among the assistance provided, GEOEND's expertise in the non-destructive assessment of cables was rolled out in the framework of scientific and technological support for the company Sixense Systems (Solétanche-Freyssinet Group), using USCAN® technology, based on GEOEND

ightarrow \widehat{I} le de Ré bridge. ${f ar C}$ Alouette



research into the reflectometry of guided ultrasound waves. GEOEND trained Sixense teams in the execution of on-site measurements, in addition to monitoring the instrumentation, processing and interpretation of all data.

This intensive measuring campaign (more than 2 months' work in double shifts) focused on the assessment of the 'structural health' of external prestressing cables in the anchoring zone (more than 1,600 strands of 7 wires were examined), using this technology. This enabled the securing of the repairs worksite by identifying precisely the strands presenting a defect. Following USCAN ® assessments, two 200m prestressing cables were removed (using a rapid de-pressurisation cutting procedure) and replaced by Freyssinet.

Feedback from the intervention was integrated in the development of new on-the-ground equipment, 'USCAN pre-stressing'. The University thus provided a scientific, methodical and practical contribution to prestressing cable inspections, in a strategic context marked by the major stakes of engineering facility stock management.

CONTRIBUTING TO SUSTAINABLE INNOVATION FOR 'SMALL FARMERS' IN SOUTHERN COUNTRIES

Several expertise missions were led by LISIS for the Food and Agriculture Organisation (FAO) on sustainable food systems. These works focused on the re-organisation of value chains, infrastructures and standards, by assessing in particular ways to contribute to sustainable innovation for 'small farmers' in Southern countries. The aim was to examine to which extent the terms of access to markets and the creation of niches and value chains led to innovations in food systems. An innovative form of researcher-stakeholder workshops had been running for several years in Columbia (2015), Thailand (2016), Panama (2017), India (2017), and Senegal (2018). These workshops led to the development of an analysis method and a collective posting. A scenario-based exercise was carried out and guidelines based on this method were published. These guidelines are now being used to support local governments and authorities (in India, Senegal and Burundi).

AUTOMATED CONTROL OF NOISE EMISSION LEVELS

An expertise task was carried out on the Nantes campus, with a view to developing and assessing a new automated control system for noise levels, in accordance with Article 92 of the French Mobility Framework Law (LOM). This task, executed by the UMRAE laboratory of the AME Department in partnership with CEREMA (Centre for Studies on Risks, the Environment, Mobility and Urban Planning) and with the support of the Directorate-General of Risk Prevention, will

continue into late 2021. EXPLOSION IN BEIRUT PORT: A MEASUREMENT CAMPAIGN FOR BUILDINGS IMPACTED BY THE CATASTROPHE

Following the dramatic explosion on 4 August 2020 in the port of Beirut, the ISTerre laboratory participated in an expertise task in the Lebanon to assess the structural integrity of buildings. In collaboration with Lebanese researchers, an online survey was launched in late August 2020 among people who had experienced the explosion in the Lebanese capital. Its aim was to gain clearer insight into the behaviour, travel movements and mobility of people during catastrophic events.

The Grenoble Institute of Earth Sciences (ISTerre), the Nice CEREMA, Lebanese University and the University of Notre-Dame Beirut led a measurement campaign in November 2020 on buildings impacted by the 4 August explosion in the port of Beirut, to assess the structural integrity of buildings using vibrations.

The use of ambient vibrations to measure the dynamic properties of buildings or bridges and the temporal monitoring of structural integrity (Structural Health Monitoring SHM) form a non-destructive method which provides an overall state of damage in a building after an extreme event such as an earthquake or explosion.

This experiment in Beirut Port, funded by the CNRS/INSU (National Centre for Scientific Research / National Institute for Universe Science) and IRD (French National Institute for Sustainable Development), consisted in measuring the dynamic properties of structures using ambient vibrations (resonance frequencies and dampening). Using a lightweight acquisition system of proven efficacy, developed by ISTerre in the early 2000s, within a few days more than 100 buildings located at varying distances from the epicentre of the explosion were tested. The modal parameters of these buildings prior to the explosion were already known.

In fact, between 2021 and 2014, ISTerre and Notre Dame University in Lebanon had carried out a similar measuring campaign in Beirut (Salameh et al., 2016) on 328 buildings, the majority of which were located less than 2km from the port. The evolution of dynamic properties between the state of the buildings before and after the explosion enabled us to analyse their variation according to the degree of damage, in relation to the distance from the explosion and the type of construction, to assess the most sensitive parameters to



→ Acquisition system (CitySharkTM and Lennartz 5s) used to measure ambient vibration in damaged buildings in Beirut, following the explosion of 4 August 2020.© C. Cornou, IRD/ISTerre

damage, to streamline characterisation methods and to break down the relative contributions of the explosion and resulting seismic wave to the damage.

Initial results confirm the effectiveness of modal parameters in detecting damage, but also reveal a wide variety of changes within a group of identical buildings.

HYDROLOGICAL SURVEY IN THE AFTERMATH OF STORM ALEX IN THE ALPES-MARITIMES REGION

Université Gustave Eiffel contributed to technical feedback coordinated by the Alpes-Maritimes Departmental Land and Maritime Authority (DDTM), in the wake of the severe flooding and damage caused by Storm Alex (October 2020) in the Tinée, Vésubie and La Roya valleys. Thanks to their experience in this field, University teams were called on specifically to analyse the hydrological response of headwaters of catchment areas and to gauge the maximum flows of flooding in these upstream sectors. The aim of these analyses and gauges was to document the event, establish reference values for development works and their sizing in these highly exposed valleys, in addition to assessing and enhancing flood forecast models.

For more details on

The wide range of public policy support actions provided by the University:

→ see the 2020 report on University Support for Public Policies

For all queries related to public policy support (PPS), contact: <u>vp-app@univ-eiffel.fr</u>

Participative science

In light of the complexity of current societal issues (climate change, energy transition and digital transition, etc.), the world of research, questioned by society, is aiming for broader sharing of scientific results, greater transparency in scientific processes and the emergence of new forms for the transmission and co-building of knowledge with society. Given its missions and numerous research and expertise themes, related in particular to the city of the future, Université Gustave Eiffel is actively involved in an opening to society which is illustrated notably by the steering of participative research and expert analysis.

THE ALLUVIUM PROJECT: SOLUTIONS FOR RAW EARTH, A BYGONE MATERIAL WITH A PROMISING FUTURE

In the framework of the Alluvium project, launched in October 2018 and funded by a call for projects under the FUTURE initiative, a participative action was organised on the southern forecourt of the Copernic building on the Champs-sur-Marne campus. As part of the sustainable development week, students and staff came together from 22 to 25 September to discover and test raw earth (mud) building techniques.



→ Demonstration of raw earth building, École d'architecture de la ville & des territoires Paris-Est.

n ancestral material, mud was used as far back as the Neolithic period in the fertile crescent to build the first cities in the history of humanity. Viewed as less noble and thus often discredited over the centuries, raw earth was gradually abandoned, particularly in the West, in favour of other materials. At present, there is renewed interest in the use of raw earth due to the availability of this soil matter and its ecological benefit. It must be pointed out that the works currently under way on the Grand Paris Express in the Parisian region will generate around 40 to 50 million tonnes of excavation earth by 2030. This soil is a potential resource for the raw earth sector, if feasible technical solutions for its adequate formulation and implementation are found. Clay-rich excavated earth is subject to swelling in damp conditions, which can lead to cracking.

Composed of 6 partners, Université Gustave Eiffel, LRMH, C2RMF, Ecole des Ponts ParisTech, FCBA and ETH Zurich, and funded by the FUTURE initiative, the Alluvium project will test formulas of raw earth combined with biosourced materials such as plant fibres (e.g., cotton or cellulose), starch (from cooked rice water for example) and food waste, etc. "With these additives, we're looking for solutions to strengthen the mechanical properties of raw earth and make it damp-resistant", Emmanuel Keita, a researcher from the Navier laboratory, explains. The addition of a surfactant-type organic molecule should 'render the earth insensitive to dampness'.

The participative workshop on the Champs-sur-Marne campus during Sustainable Development Week provided an opportunity for hands-on exploration of various mud-building techniques and to test the material-enhancement solutions developed by Alluvium. Over 4 days, participants produced several hundred adobe bricks (a hand-moulded brick made from very wet earth with a texture similar to mayonnaise). They were accompanied by Samuel Dugelay, a professional stonemason, instructor and engineer. *'If I want* to build a house, this workshop also helps me to understand which technique is best adapted to the region I live in and will have a real impact on my carbon footprint. If I live in the Parisian region, for example, building my house with rammed earth (relatively dry earth, compacted between two walls with the help of a tool) will not be a good choice, because this

Scheduled for a period of 3 years, the Alluvium project will end in December 2021.

technique is suited to the Rhône-Alpes region and does not exist in Île-de-France. 'After a drying period of 3 weeks under the tent housing the production, the bricks were transferred to the Sense-City climatic chamber and used to build walls. The aim was to test the mud formulas developed and study their behaviour in various climatic conditions, such as rain, wind, humidity or drought, etc.

3D-printed bricks produced in the framework of a student project at the Paris-Malaquais School of Architecture (ENSA Paris-Malaquais) were added to the adobe bricks produced during the workshop. The architecture students suggested various types of imbrication, using bricks with optimal shapes and variable thickness or mechanical resistance according to their position in the construction. In other words, bricks located at the top of the walls differ from those placed at the base, upon which the weight of the building lies.

Informative both in terms of building techniques and sustainable development, this participative workshop included a real educational aspect and also involved the École d'Architecture de la Ville et des Territoires (EAVT - City & Regional School of Architecture), located on the Cité Descartes campus. Students from EAVT brought their own project to the table, with the building of a fountain in rammed earth. They allowed the surface treatment solutions obtained via a henna (surfactant tested by the Alluvium project) and casein extract to be tested on their fountain. Certain layers and the angles of the fountain had to be reinforced with cellulose instead of the lime initially planned. We already knew from experience that the material used for the fountain can last for at least 2 years. We had tested it on a first construction dating from 2018. If it remains intact after this period, then we will have exceeded our building aim' says Camille Campos, an intern at the EMA Architecte agency, who collaborated on the rammed earth fountain project with Marc de Fouquet, lecturer at EAVT.



ightarrow Raw earth construction techniques

Taking an interest in these building techniques for the cities of tomorrow also implies looking to the past. In France alone, our builder ancestors have left us a raw earth legacy which represents 15% of built heritage, i.e., one million housing units. The maintenance of this heritage is a key factor for its socio-historical value. Julia Tourtelot, a student at Université Gustave Eiffel, has made this the subject of her thesis. She explores material science and is preparing her thesis in partnership with the Historical Monument Research Laboratory (LRMH) and the National Centre for Research and Restoration in French Museums (C2RMF). 'My work focuses on the maintenance of raw earth heritage. More specifically, I study the change in the properties of materials with the addition of bio-polymers (such as cellulose fibres), from the smallest scale to actual size. The aim is to understand, on the level of the structure, which form of assembly will work best for optimal reinforcement.' This research on heritage is essential in order to find sustainable techniques for the future. 'For example, this research allows us to examine why certain materials were used more than others by our ancestors', Emmanuel Keita adds.

Established for a duration of 3 years, the Alluvium project will draw to a close in December 2021. It will serve the raw earth building sector by providing innovative solutions and their multi-scale study and validation, from clay sheets to 1:1 building scale. This project will also provide solutions in terms of research & development, a key issue for industrialists. It should also contribute to the development of the National Project for Raw Earth (PN Terre), initiated by the Ministry for Ecological Transition.





'TERRITOIRE FRENCH IMPACT' FOSTERS SOCIAL INNOVATION

The Social and Inclusive Economy Chair (ESS), via the units UFR-SHS, UFR-SEG, IFIS and ERUDITE, brings on-theground support to the Paris-Vallée de la Marne conurbation public policy, '**Territoire French Impact**'. This policy, initiated a few years ago by the High Commission at ESS, takes the form of certification awarded to 20 regions in France. Through one of the three levels of intervention, the University's students support regional players in their social and inclusive economy projects. These projects are based on three areas: short food circuits, the circular economy and soft mode and shared mobility. In addition, the chair leads and coordinates the Regional Committee for Social Innovation around this policy.

PARIS OLYMPIC GAMES 2024: A BETTER UNDERSTANDING OF THE HERITAGE OF SPORTING EVENTS

What are the visitor paths in major international events such as the Olympic Games? What forms the obstacles and levers to sporting activity for disabled persons? The Lab'Urba and ACP laboratories presented the results of research, carried out in the framework of the ORME (Observatory for Research on Mega-Events), to the inter-ministerial delegation to the Olympic and Para-Olympic Games. By request of the Organisational Committee of the Paris 2024 Olympic Games, ACP also drafted a report to foster prospective thinking on visitors to the event.

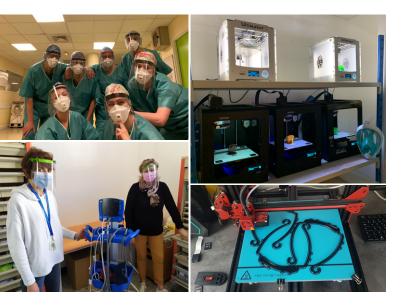
The MSME laboratory (multi-scale modelling and simulation) filed patents relative to the Paris 2024 games and developed applications geared towards the general public and companies specialising in the safety of people and property, based on the guiding and evacuation of crowds, digital twins or Internet of Things.

THE INTEGRATION OF THIRD-SECTOR RESEARCH IN THE AIMS OF THE LAW ON RESEARCH PLANNING

Via the University-managed Labex SITES and GIS IFRIS, LISIS and LATTS lent considerable support in 2020 to the ALLISS Science and Society network (http://www.alliss.org/) for the recognition and opening of the French research and innovation system to third-sector research (TSR), i.e., society and other stakeholders. On 20 January 2020 at the French National Assembly, these units took part in parliamentary debates aimed at integrating TSR in the aims of the Law on Research Planning. The units then supported and participated in the Third-sector Research Conferences organised by Rennes 2 University in late November 2020 (http://www. alliss.org/#assises-2020). This support consists in revisiting the knowledge resources produced in the last ten years by IFRIS (Île-de-France Institute for Research, Innovation and Society) around science and innovation policies, participative research and expertise for political purposes.

Université Gustave Eiffel mobilised for medical staff during the COVID-19 epidemic

3D-printed protective face shields, adaptation of sports masks for respirators, and more... an overview of the initiatives led by units, laboratories and campuses of Université Gustave Eiffel in support of medical staff and hospitals.



ESIEE Paris (Marne-la-Vallée campus)

Following a call by the Cochin Institute to offset the shortage of masks, ESIEE Paris responded by producing face shields with the help of a 3D printer, transparency film and elastics. These shields were produced for the medical staff at the Cochin Hospital in Paris. Under the initiative of a member of INSERM's Ethical Committee, the school also put together a list of open-source procedures to manufacture protective and medical equipment (e.g., syringe pumps) using 3D printing, for distribution to counterparts in the Southern countries.

ESIPE (Marne-la-Vallée campus)

In addition to 3D-printed face shields for medical staff, ESIPE also donated its personal protection equipment (PPE). Various batches were distributed according to the needs of freelance nurses.

MSME (Marne-la-Vallée campus)

Called upon by INSIS (Institute for Engineering and Systems Science) to carry out an inventory of equipment, the MSME

laboratory also responded to a request from the Henri Mondor hospital in Créteil. Its bio-mechanics team at UPEC - Paris-Est Créteil University developed a solution to offset the shortage of non-invasive ventilation (NIV) masks. The solution enabled the ventilation of patients via continuous positive airway pressure (CPAP). A 3D printer was made available. Following a week of computer-based design, 3D printing and tests on 15 versions, doctors (emergency physicians, medical physicians and surgeons) validated the 'Easy Mask' version which safely transforms Decathlon-brand sports masks into NIV masks with the same safety and effectiveness criteria as CPAP on a standard mask. The production of connecting tubes was carried out in the operating theatre with a specific 3D printer.

LBA (Mediterranean campus)

In Aix-Marseille University (AMU), the production of face shields for medical staff was launched by the Laboratory for Applied Bio-mechanics (LBA), with the support of its industrial partners: Shark, Biotech Dental, Pain de sucre, 3Dmedlabs and Initial. Four 3D-printed face shield production sites were set up in association with the Public Hospitals of Marseille body (AP-HM): The Saint-Jérôme Faculty of Science, the Luminy Faculty of Science, the Timon Medicine Campus (printing and logistics) and the Nord Medicine Campus (the LBA). Within a few hours, LBA became a production and logistics centre for the Nord hospital.

Nantes campus

In West France, solidarity 'makers', such as Yannick Falaise from Université Gustave Eiffel, also went into action for the non-profit group Visières de l'Atlantique ('Atlantic Face Shields'). Thanks to widespread mobilisation and fund-raising to buy consumables for 3D printers, the group was able to provide protective equipment to hospitals and medical centres.

LBMC (Lyon campus)

A medical doctor/PhD student from LBMC (Bio-mechanics and Shock Mechanics Laboratory) took part in a normative action by AFNOR (French Standardization Association) for protective masks. In addition to providing the model for the mask, AFNOR set up a **supply and demand link-up platform for protective masks**. LBMC delivered the equivalent of 5 carloads of protective equipment for medical workers.

Two teacherresearchers join the IUF

For a teacher-researcher, joining the Academic Institute of France (IUF) is an acknowledgement of the extent of their work in teaching and research. Beyond its honorific aspect, it is also a unique opportunity to forge partnerships with international counterparts. Below is a joint interview with two female scientists from Université Gustave Eiffel, appointed to membership of the IUF in 2020 for 5 years: Nacima Baron, teacher-researcher and co-founder of the City Mobility Transport Laboratory (LVMT) in 2002, and Juliette Azoulai, a young lecturer in French Literature at LISAA.

- What are your respective specialisations?

Juliette Azoulai: My thesis led me to work on the relation between medicine and literature and to explore issues of animality and life. I then delved further into this link between biology and literature and tried to understand the development of a cultural imagery common to both literature and life science in the 19th century.

Nacima Baron: My research combines geography and urban studies. I work in particular on the relation between the city and its natural and technological environments, from a geographical perspective. In the last ten years, I've been focusing on specific urban objects, i.e., mobility sites (transit points, major hubs, etc.)

- Which works specifically led to your appointment to the IUF?

Juliette Azoulai: My project examines the referencing of underwater life in the second half of the 19th century, when the field of oceanography was at its beginnings. The idea is thus to present the various values of living beings and life associated with the knowledge and imagery of the underwater world, from a philosophical, anthropological, political and aesthetic perspective.

géographie connaissances terrain politique acteursivistoire mobilité recherche périphéries comprendre philosophie sciences changement



Nacima Baron: My research consolidates ongoing studies around metropolitan centres and their outskirts. I work on the setting-in-motion of urbanism, in other words, the way, which is always unique and conditioned by local issues, in which institutional and private players as well as users collectively adopt resources to drive change.

- What new perspectives has the IUF opened up for you?

Juliette Azoulai: I'm going to avail of more time for my research, in addition to new forms of funding (for study trips, travel to scientific conferences, etc.). In particular, I'll be able to organise scientific events, make progress compiling my body of work and prepare my upcoming book.

Nacima Baron: This appointment is an opportunity to consolidate international partnerships that are already well under way. In addition, I hope to organise conferences and seminars with players in the field. I'm also very keen to put forward innovative teaching initiatives for Master and PhD levels.

- How do you feel about this appointment?

Juliette Azoulai: I'm delighted, honoured and very grateful to Université Gustave Eiffel. Without the encouragement and support of my colleagues in the Literature Department, I would never have had the idea nor the courage to apply.

Nacima Baron: I was very touched to learn of this appointment. I carried out all my studies and my subsequent career at this university. I've been on this campus for thirty years. It's an acknowledgement of a life devoted to study and research.

TESTIMONY...

Romain Menini awarded the 2020 CNRS bronze medal

Lecturer in French Language and Literature at Université Gustave Eiffel, affiliated to the Literature, Knowledge and Arts Laboratory (LISAA), Romain Menini was awarded the 2020 CNRS bronze medal for his work on *Rabelais, the Reception of Antiquity in the Renaissance* and humanist philology. The honour awards the debut work of a researcher in their field. We interviewed the medal-winner.



It's rare for the CNRS to award a medal to a teacher-researcher in literature. What does this award mean to you?

It's a great pleasure, especially since I'm one of the few academics this year to have been awarded a medal which is mostly reserved for researchers (as opposed to teacher-researchers). Scholarship, the history of books, philology and the study of ancient literature and languages still have a bright future ahead, perhaps! My warmest thanks to Section 35, which chose me. This means that the CNRS believes that you can do high-quality research while maintaining a teaching activity, managing a Letters department and looking after students. It also means that I have been lucky enough to work in the right conditions, here at Université Gustave Eiffel, in my research team (LISAA) and with my colleagues, whom I am very fond of.

- You studied Latin and Greek, two languages that have become rare options in education...

I began learning Greek towards the end of middle school, followed later by Latin. In high school, I was the only student in my class learning Greek, and fortunately my lessons were maintained by my school in Sèvres. I always wanted to continue learning these two inseparable languages. Things are a bit grim for ancient languages right now, especially Greek which is, alas, a rarity in secondary education. I've always been fascinated by the Greek world, its literature and philosophy. I read Rabelais and his contemporaries through this prism, and more particularly authors with a vested interest in Greek tradition. The Greek world is capital - a truism, but worth remembering - to understanding the evolution of Western society and the world we live in.

- What did you discover about Rabelais, an author who already seems to be so well-known?

We think we've known all about this author for hundreds of years, but Rabelais remains a mysterious figure. There are gaps in his bibliography; we know he travelled extensively, he used pseudonyms and had secret acquaintances. We discovered recently that, around the 1530s, he used an editor 'coat-of-arms' representing, in a crown of ivy, the silhouette of a bird (most likely a bird of good fortune), a chevron and *two cross pattees*. This 'coat-of-arms', complete ••• ••• with a Greek motto, ('To good fortune, with God') served to indicate an editorial intervention on the part of Rabelais. Three or four of us spent a certain amount of time hunting down books bearing this coat-of-arms; several publications had previously escaped everyone's attention.

- Which means that you do not work alone?

No, and it's a pleasure to quote the names of my colleagues and friends with whom I have always worked: Mireille Huchon, of course, Raphaël Cappellen, Claude La Charité, Nicolas Le Cadet, Myriam Marrache-Gouraud and Olivier Pédeflous. And the magazine L'Année rabelaisienne ['The Rabelais Year'] (5 editions published) is undoubtedly the most magnificent result of this collective entente. Personally, I spent several months in real and virtual libraries hunting for our incognito Rabelais. This investigation reaped its rewards; in a small Greek manual (oh good fortune!) the motto of Rabelais' editor coat-of-arms appeared, a sign of his editorial supervision. We were thus able to establish a longer list of the books that 'Master François' had edited. This sheds new light on a period of his life and his activities. In the last fifteen years, a great number of significant discoveries have been made; on his library, his editorial activity, his work as a doctor, etc. The Rabelais we know today is a little less obscure than the one we thought we knew twenty years ago.

- Is Rabelais still an accessible author for the students of today?

Rabelais is a rich but difficult author. The most difficult author of French literature, according to the late Michel Butor. Not just because of his ancient language; he was already relatively obscure for his contemporaries. But

The Rabelais we know today is a little less obscure than the one we thought we knew twenty years ago. Rabelais' language is above all a contrived language, full of linguistic inventions, neologisms and curious tricks, it's a casket of secrets and devilishly elusive just about everywhere. A scholarly form of madness. Yet it is this same relative illegibility which is an opportunity for the reader. Proust said 'Beautiful books are written in a kind of foreign language'. To read Rabelais is a literary experience 'without paragon', to quote the man himself.

We're currently working on a new translation of all Rabelais' works into modern-day French. I manage a team whose work will be published by Bouquins. Translation is a frustrating task, because you are condemned never to attain the quality of the original version. It is, however, an essential task at present, in an era where the non-specialist reader is unable to read *Pantagruel* in their language. Translation must be seen as a tool enabling the work of Rabelais to endure. The aim, obviously, is to draw the reader to the original text, with the help of a useful (and amusing) crutch.

- Have you observed a decline in the level of language?

First and foremost, I don't want to play the role of the *laudator temporis acti*, full of nostalgia for the 'good old days' and deploring the decadence of our times. That attitude gets us nowhere. I see that my students are just as intelligent today as in the past. There is admittedly a certain

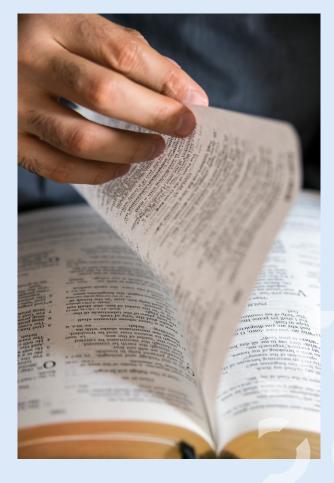


Attention to language is a way of life, of seeing the world.

culture of tradition which is disappearing, and increasingly faster, perhaps. But for me, that's not the most important aspect, at least not directly. What is definitely declining, to various degrees, is the quality of written expression. We're trying to remedy this at the University. The Letters team would really like to act on a problem which concerns all the training programmes. We'd like to participate in considerations which would enable students in all programmes to improve their writing. This is a project on the scale of society, however. It goes beyond the sphere of the university. Attention to language is not just a social imperative, the primary aim is not to distinguish oneself through language. Our leaders often see the problem from this angle, backed up by the Technolangue project. Attention to language is a way of life, of seeing the world. The richer and more accurate your language is, the less limited your life will be.

- Nevertheless, you've put initiatives in place to help students in Letters.

That's true. I've been head of the Degree in Letters for four years. My colleagues and I set up the 'Oui, si' training path in the first-language programme, with ParcourSup [French 3rd level education application process]. We were the first Letters programme in France to offer lower-level students adapted training in their first language, the aim being to help them to write, to speak, to express themselves, find their way and be aware of their weaknesses but above all their strengths. We restored a little Latin to the first year of all Letters degree programmes. The idea behind this is to set things straight, because it has to be said that secondary school offers only superficial training in ancient languages. Latin would appear to fare slightly better at high school level, for reasons we could consider as sociological; parents prefer to place their children in scientific rather than literary streams, but they advocate Latin, a vector of social distinction. So be it! Is that proof of humanism, in the Renaissance sense of the term? Not necessarily...!





TESTIMONY

A successful collaboration between In&motion and the LBA

Pierre-François Tissot, co-founder of the start-up In&motion. © Studio Alban Nieroz

> Joint interview with Pierre-François Tissot, co-founder of the start-up In&motion, and Pierre-Jean Anoux, director of the LBA (Laboratory of Applied Bio-mechanics). The two worked together in 2020 on the development of intelligent airbags for motorcyclists.

- Can you tell us more about In&motion?

Pierre-François Tissot: Founded in 2014 by 3 engineers from ECAM, [ECAM Lasalle School of Engineering], In&motion designs airbag protection systems for motorcyclists, horse-riders and skiers, to reduce the risk of injury in the event of a fall or an accident. Our flagship product is the airbag for motorcyclists. Our philosophy is to look for existing solutions and to adapt them to our imperatives, i.e., to reduce the number of injuries and fatal road accidents.

- How did you two meet?

P.-F. T.: We discovered the LBA through articles on the protection of motorcycles. We detected a considerable level of expertise at LBA, which incited us to contact them. There were only three of us then, the time we could devote to R&D was very limited, so we got in touch with Pierre-Jean Arnoux, the director of LBA, to call on their expertise. We were won over by their willingness to work with a small company such as ours. Thanks to their proactiveness, things move forward very rapidly.

- What are the advantages of working with a research institute?

P.-F. T.: Our project called on three areas of know-how: modelling, life-size crash tests and cutting-edge bio-mechanical expertise. All these aspects are very difficult to bring together under one roof. The multi-disciplinary knowledge of a research institute allowed us to take advantage of a broad range of skills which are rarely found all together in one company, even in a major group. It therefore corresponded perfectly to our needs.

In addition to that, Université Gustave Eiffel is fully connected to its ecosystem, which is a considerable advantage. It's true that our direct customers are not familiar with your university, but having the Université Gustave Eiffel 'stamp' was a key point in our dealings with insurers, for example.

Lastly, from a financial point of view, LBA contributed to the feasibility of our project, both in providing its help to obtain European funding, or in its flexibility in terms of invoicing, by waiting until we had the necessary cash flow to pay certain bills.

There is a very obvious difference between working with a design office and working with a research institute. When you work with a design office, you agree on a specifications brief and short-term lead times; when you work with a research institute, they are willing to invest in the long-term. Research can lead us down other paths than those initially chosen.

The laboratory can be more flexible and can allocate the right resources more rapidly to go further with matters which might not have been part of the initial plan. When you work on a disruptive product, you must also know how to take the time to explore things in depth and open new doors.

- What are the advantages for researchers of working with SMEs?

P.-F. T.: Researchers need to understand that a small company does not necessarily mean a lack of cash; on the contrary, for investment in R&D, SMEs have a capital raising leverage power that sometimes exceeds major groups. When it comes to a highly specific subject, the R&D teams of major groups are often smaller than those in start-ups. What's more, unlike major groups with legal departments and more restrictive confidentiality agreements, SMEs are perhaps less reluctant to entrust their ideas to the PhD students at LBA.

Pierre-Jean Arnoux: There are several advantages. Firstly, collaboration is essential, because it allows us to maintain the momentum of the laboratory in terms of research training, by providing funding for theses. Secondly, it enables us to support the implementation of practical and helpful solutions and thus play a useful role in society. This is a key factor for many of the laboratory's researchers.

– What are the drawbacks of working with a research institute?

P.-F.T.: Company time and research time are not the same, which is something which needs to be explained clearly to our partners. Profitability must be measured from a global perspective, it's irrelevant to take only the financial aspect into account. Working with a research institute also provides more weight in terms of credibility and opportunities, etc.

P.-J. A.: Researchers really have to accept the relationship with the SME as a partnership and be ready to show a certain degree of flexibility by providing a boost from time to time and by working on areas which were not initially planned.

When you work with a research institute, they are willing to invest in the long-term.



Training

With the roll-out of new training programmes, the creation of the CIPEN and the strengthening of ties between teaching and research, etc., 2020 saw the implementation of numerous projects and measures in favour of educational innovation, entrepreneurship and the success of our students. In the face of a health crisis and lockdowns, the University also succeeded in boosting its resilience and adapting its practices to ensure teaching continuity.

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Agence PWP



Training

INNOVATION IN EDUCATION IN 2020: THE CREATION OF CIPEN

he I-SITE FUTURE project included the creation of the CIPEN. The aim of this Centre for Educational and Digital Innovation is to support teachers and teacher-researchers in the setting-up of transforming and/ or innovative educational measures, to produce multimedia teaching resources, analyse teaching practices, lead research action in education and provide a language training service for specialists in other fields, in addition to certification in digital uses.

The goal of the CIPEN is to crystallise various teaching experiences thus helping to make Université Gustave Eiffel a reference in innovative teaching on a national and international level. The CIPEN serves a transversal vicedirectorate-general for the whole establishment, enabling the concrete transformation of the University's training programme through the support it lends to the various training units.

Further to consultations and discussions with member schools and units, University departments and agents in 2019, the CIPEN was created on 1 January 2020 in its initially-designed format. The 70 teacher-researcher, administrative and technical staff members joined the CIPEN, the result of a merger and/or pooling of existing departments such as CAPLA and the Digital Campus of the former UPEM (now the Digital & Media Department), but also through the creation of new departments such as the Observatory for Teaching Practices, the Transversal Training Department and the Educational Department.

The centre was hard hit by the health crisis in March 2020, forcing its closure. The teaching continuity plan had to be activated, which led the CIPEN to suspend its development and focus on the direct service to be provided to staff and students.





→ The Centre for Educational and Digital Innovation (CIPEN). © Jason_Sansol

In spite of this, the CIPEN was able to support teaching teams in the implementation of the New University Curriculum project, **D.Clic**, provide teacher training to new lecturers, offer general teaching and digital training courses, update digital teaching tools in collaboration with the IT Department (DGDIN), roll out the Zoom video-conference application, begin testing the PIX certification, recruit new staff on new projects, equip classrooms with audio-visual facilities, supply audio-visual equipment for the purposes of remote working and teaching continuity, support training courses for the implementation of the competence-based approach, and initiate a research action for the promotion of teachers' educational investment, etc.

CREATION OF THE BESTM BACHELOR COURSE

ESIEE Paris, in partnership with Université Gustave Eiffel, created an innovative 3-year programme, directly accessible at French high school diploma level: the Bachelor in Economics, Science and Multimedia Technologies (BESTm). This primarily scientific, 'dual skills' programme combines science, economy and human & social sciences.

The selective course, which is accessible to students leaving French high school with a general diploma, is geared towards those with an inquisitive nature who do not wish to specialise immediately after high school. Students can gradually specialise over the course of the programme in one of three areas: science, management & economics, or multimedia.



The first year is thus a core course to acquire fundamental knowledge. In the 2nd year, 20% of teaching is devoted to the chosen area, which increases to 50% in the 3rd year. The curriculum includes dedicated periods for personalised support and individual and collective projects. There are two compulsory work placement periods; one month in 2nd year and at least 4 months in 3rd year (France or overseas). A study period abroad is also organised during the programme.

Each year, students will spend one week on a 'learning expedition' to one of the partner laboratories or the research campuses of Université Gustave Eiffel. The aim is to enable students to discover 'research on the ground'. This broadrange training course will give graduates direct access to numerous professions, depending on their chosen path, such as developer, project manager, business manager, web integrator, assistant financial consultant, economic and statistical studies officer, sound technician or audiovisual assistant, etc.

Bachelor diplomas also open up a multitude of possibilities for continued studies, particularly in the masters and engineering programmes offered by Université Gustave Eiffel: ESIEE Paris (2nd-year engineering, ENSG (M1 Geomatics), EIVP, ESIPE (IMAC multimedia section), IAE (M1 HRM, Banking, SMM, IDL), Master in Arts, Letters and Civilisations, etc.

This bachelor programme is set to open for the 2021-2022 academic year.

STRIVING FOR STUDENTS' SUCCESS

In response to the "New University Curricula" call for projects launched by the French National Research Agency in the framework of the Investments for the Future Programme (PIA3), the University obtained the necessary lead times and means (Classification A+, €8.1 million) for the implementation of the D.Clic project. The aim of this project is to boost students' success by drawing on three intangible driving forces: the implementation of a skillbased approach, the diversification of study paths and the integration of schemes to promote career orientation and professional skills. Working from this basis, each teaching team will be able to design and develop an appropriate model, according to its context and the specific requirements of its students.

> Find out more about VAE





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BOOSTING THE IMPACT AND INTERNATIONAL ATTRACTIVENESS OF TRAINING THROUGH RESEARCH

In the framework of the call for projects by the Investments for the Future Programme (PIA) <u>"Structure training via</u> <u>research in excellence initiatives (SFRI)"</u>, Université Gustave Eiffel submitted the project 'Graduate Programs for Doctoral Studies (GP-DS)', for a budget of €9 million. The aim of the project led by Université Gustave Eiffel, in partnership with Paris-Est Créteil University, École des Ponts ParisTech and the CNRS, is to boost the impact and international attractiveness of training via research. Actions will be coordinated within a Graduate School and implemented via 'Graduate Programs'.

The first four Graduate Programs to be set up are:

- Urban Future;
- Digital Studies and Innovation for Smart-Cities;
- Mathematics and computer science ;
- Connected Objects, Devices and Systems (CODS): connecting and sensing the city.

Other Graduate Programs will be rolled out by the Graduate School at a later date.

TRAINING IN AND THROUGH RESEARCH

In terms of training, calls for I-Site projects also pursued their momentum. The second call for projects devoted to training 'in' and 'through' research closed on 31 January 2020. Geared towards inter-establishment collaborations, the objective of the call was to support teaching projects in response to the Programme School of Excellence action, which aims to intensify research training in the Engineering, Architecture or Master cycles. Seven projects received funding.

On 3 November, the Université Gustave Eiffel Observatory for Teaching Practices organised the second edition of Teaching Day, under the title 'Exploration and sharing of remote and hybrid teaching practices'. The event took place online and brought together some fifty participants. Speakers presented various tools designed to accompany students and teachers in distance-teaching.

Apprenticeship

AROUND 22% OF STUDENTS WITH APPRENTICESHIP STATUS.

In 2019-2020, approximately 3,500 of the University's students were under an apprenticeship contract, i.e., 22% of its students across 90 2- to 5-year degree courses, including the 2-year degree in technology, non-specialised degrees, professional degrees, diplomas and master's in engineering, diploma in architecture, etc. Apprenticeship concerns all fields of training, from human and social sciences to economic and management science, letters, arts and languages, mathematics, computer science or physics, etc.

«We work towards the rapid integration of our students on the labour market. We therefore place an emphasis on apprenticeship and the quality of the tasks assigned to our apprentices, which is a fundamental aspect for us, as is the quality of relations between students and apprenticeship managers. », Muriel Jougleux, Vice-President of Partnerships and Professionalisation at Université Gustave Eiffel, underlines.

Vocational education



Several actions were carried out in 2020 to strengthen vocational education:

- The listing of training courses on the 'My Training Account' platform for improved access to our diplomas for employees and job-seekers. In 2020, 107 applicants were able to activate their personal training account (CPF) in order to fund their training.
- Creation of the University self-diagnostic tool for the quality benchmark to obtain certification
- Setting-up of a Université Gustave Eiffel Vocational Training work group, which encompasses all the school's entities and led to the creation of the training catalogue.

For the 2019/2020 academic year, Université Gustave Eiffel established a total of 324 contracts for all forms of training.

> Find out more about the training courses on offer at the University

Apprenticeship tax: 493 contributors in 2020

Université Gustave Eiffel would like to thank its 493 contributors for their generosity in 2020! Thanks to apprenticeship tax payments, we were able to fund new teaching projects. In the difficult context of the health crisis, we also managed to enhance the study conditions of our students and the resilience of our training system. How?

Watch the video to find out:

O VIDÉO



VALIDATION OF SKILLS AND EXPERIENCE (VAE)

297 applications were submitted in 2019/2020. Out of 109 admissible applications, 86 were validated by the jury.

MASTER CLASSES

In the framework of the Circular Economy and Urban Metabolism Chair, coordinated by Université Gustave Eiffel and funded by the Métropole du Grand Paris, a training course was set up in 2020 to provide keys to the implementation of a regional-level circular economy.

These one-day sessions, organised around contributions from researchers, institutional stakeholders and socio-economic players having set up circular-economy practices, brought together participants in a format which fostered interactions with the speakers. The aim was to enable participants to discuss and find ways to tackle the issues/projects/prospects they are facing. Participants were able to build their own individualised training path, by following a session of their choice, or the entire course (9 sessions from September 2020 to November 2021).

The training course is geared towards agents from regional authorities and elected representatives, in addition to operator agents or design office staff, etc.

Δ9

Student entrepreneurship

By late 2020, Université Gustave Eiffel boasted 46 Student Entrepreneurs out of 109 within the PEPITE (between December 2019 and February 2021, the number of student entrepreneurs supported rose from 7 to 46).

OSEZ ENTREPRENDRE

De la découverte à la création d'entreprise, nous sommes là pour vous accompagner dans tous vos projets !

ut of the first 14 Student Entrepreneurs in late 2019 due for the renewal of their one-year status, there were: 10 renewals, 1 drop-out; 1 change of training site and 1 student who is pursuing his project elsewhere without PEPITE, but nevertheless thanks to the boost provided by PEPITE support.

Out of 36 returns, there were 14 business creations, mostly as micro-companies or simplified single shareholder companies (SASU).

> For more information on the support scheme for Student Entrepreneurs

WORKSHOPS

A new format of afterwork workshops has been created. On-site tests were carried out in February and March 2020 with 3 themed, interactive workshops including feedback and testimonies, in an informal atmosphere around a buffet meal designed to facilitate networking.

In all, 7 afterwork sessions were organised in 2020, either on site or remotely.

> For more information about the afterwork sessions



« Tous connectés ! », le speed dating entrepreunarial étudiant



Student entrepreneurship forms part of the national Pépite France scheme, with its regional sub-programme PEPITE 3EF, for which the coordination between establishments is managed by Paris-Est Sup.

Université

Gustave Eiffel

In the framework of PEPITE 3EF, Université Gustave Eiffel organises **2 major annual events:**

Tous connectés [All connected]

'Tous connectés' is a pitching contest before a jury of professionals, open to all students from PEPITE 3EF member establishments. The aim is to challenge and distinguish oneself.

- 33 entries were submitted by a total of 41 students or active young entrepreneurial graduates
- The 20 professionals on the jury panel examined these projects
- 3 training sessions in pitching techniques were provided by Tribu Agile CASDEN and the consultant Didier Poirier
- 7 candidates were pre-selected
- Award ceremony, 26 June 2020 818 votes for the Audience Choice prize!

Tous sensibilisés [All aware]

'Tous sensibilisés' is an entrepreneurship awareness challenge, the aim of which is to step into the shoes of an entrepreneur by getting to grips with a practical issue faced by regional stakeholders.

The one-day challenge, usually held on site, went fully digital this year due to the health situation.

- 7 teachers and 18 groups of students
- 3 jury members from the University career guidance department (SIO-IP) for the pre-selection phase
- 5 professional jury members to choose the winners after a pitching session on 5 November 2020
- 59 connections made during the prize-giving ceremony

Teaching continuity during lockdown

HOW THE UNIVERSITY MANAGED THE CRISIS AND MAINTAINED TEACHING CONTINUITY

niversité Gustave Eiffel drew on the experience of the Digital Campus of the former UPEM (now the Digital & Media Department of the CIPEN), which has been implementing digital training means and promoting open and remote teaching since 2008. This strengthened the resilience of the establishment.

Following its creation in January 2020, in March 2020 the CIPEN was forced to structure its services and the tasks of its officers differently, in order to respond to various imperatives and anticipate potential needs. In the weeks prior to closure, the CIPEN was able to concertedly re-organise itself, with a view to assisting, supporting and guiding teachers and teacher-researchers in the implementation of their teaching continuity measures.

Concrete actions were set in motion:

- The reinforcement, technically speaking, of the digital teaching platform thanks to the IT department (DGDIN)
- The creation of a remote-teaching guide
- The creation of remote training modules for teachers and teacher-researchers
- Individual support and training for teachers in the setting-up of remote classes
- O The creation of a temporary hotline for audio-visual and digital tool queries
- The promotion of user-friendly tools to maintain contact with students
- The setting-up of tools such as Zoom to enable teachers/ teacher-researchers to continue organising group sessions and deliver lectures
- The creation of a discussion group and hotline with a hundred volunteer teachers on Discord (The Monitors) and a discussion group with student delegates, also on Discord (Student Monitors).
- The setting-up of remote language teaching.



ightarrow Continuity of lectures with videoconferencing

Similarly, in readiness for the 2020/2021 academic year, the CIPEN wished to build a stock of audio-visual equipment (graphic tablets, webcams, microphones, headsets, etc.) in order to equip teachers individually. Given the international scale of the crisis, world shortages in audio-visual equipment did not allow for this stock to be made available immediately. This delay was rapidly offset by priority deliveries for our establishment by the holders of public orders.

The end of 2020 was also marked by the preparation of the 2021 calendaryear, mostly via teleworking and remote teaching for students.

Teaching continuity at EIVP

Feedback from Glenn Le Borgne,

educational engineer



The crisis was not all negative; it strengthened the ties between students, teachers and staff.



he whole school went into action to ensure teaching continuity for our 500 students: the teaching department, the IT Department, Student Affairs and of course the teaching staff. The transition periods to 100% remote generated a significant and relatively stressful rise in workload. We had to reassure the students and the teachers. We managed this through dialogue, the implementation of harmonised communication means, the use of the simplest software and procedures possible and personalised tutoring, etc.

Following the announcement of the first lockdown, we instinctively looked to our students and their online habits to ensure the continuity of lessons as rapidly as possible. Some of them were already working on their projects via Discord and there was great enthusiasm for this tool. We drew on their experience; the students created a server, replicated a virtual version of the rooms on the campus, including the cafeteria, and I then drafted a tutorial adapted to remote teaching techniques.

Within two days, all of EIVP was on Discord, and for the entire duration of the lockdown we only had to cancel two or three lessons! This said, remote teaching has its limits; attending six to nine hours of synchronous lessons per day is exhausting for the students and the MCQ format with limited response time creates extra stress. The teaching department rapidly adjusted the classes so that half of them took place asynchronously, with teachers providing commented PowerPoint presentations. For exams, homework assignments with longer submission deadlines were advocated. During the November lockdown, we maintained this form of organisation, but changed our video-conference systems to Teams and Zoom in response to the needs of professionals. From the user point of view, the shift was relatively simple; on the administrative side it required a more sustained effort. In terms of equipment, we lent thirty laptops to students and graphic tablets were bought for architecture and science teachers, to enable them to illustrate calculation breakdowns. The CIPEN rapidly provided its help in the form of webcams and Zoom licences, in addition to recommendations for teaching tools and procedures. We were nevertheless free to make our organisational choices. Throughout the entire crisis, the CIPEN was very proactive and responded to technical questions, in particular for Moodle, the platform which centralises asynchronous lessons and official school information.

The crisis was not all negative. It strengthened the ties between students, teachers and staff. The Discord groups, such as 'The Monitors' were also very helpful for exchanging ideas with other educational engineers, innovating teachers, technical and IT teams, etc.

KEY FIGURES ON TEACHING CONTINUITY AT EIVP

Ten guides and tutorials created

'How to make a video with PowerPoint', 'How to create several rooms on the same Zoom account', 'Data and energy saving', 'Chatrooms and videoconferences on Discord', etc.

- **1 Discord server**
- 17 Zoom accounts
- 555 official or private groups on TEAMS

More than 100 active classroom spaces on Moodle and more than 100 video-conferences recorded.

The Idea Designers' Laboratory (LabCI)

The Idea Designers' Laboratory (LabCI) is an innovative training and guideline tool for Université Gustave Eiffel students wishing to create a business activity.

his programme helps them to develop a product or service idea, to structure and design their idea, and even produce a first prototype thanks to the tools, content and network provided by the lab. This is an online course which offers lessons in addition to individual and collective activities, and is aimed at developing three skills:

- Obtain information and build a network during the development and design of an idea
- Design and define a 'value proposition'
- Structure and conceptualise a product or service idea

With a total duration of around 64 hours (2 hours' work per week), the programme is geared towards all students, regardless of level or field of study, and requires no theoretical baggage or professional experience. Students can work independently and are guided by a teacher-tutor. They must create a log book which will enable them to visualise the development of their idea into a product or service design, which is then presented during a final interview.

This programme was set up by Université Gustave Eiffel (formerly Université Paris-Est Marne-la-Vallée) in 2017 by the Centre for Educational and Digital Innovation, in the framework of a call for projects by IDEFI (Excellence Initiative for Innovative Training). Two sessions of the programme have

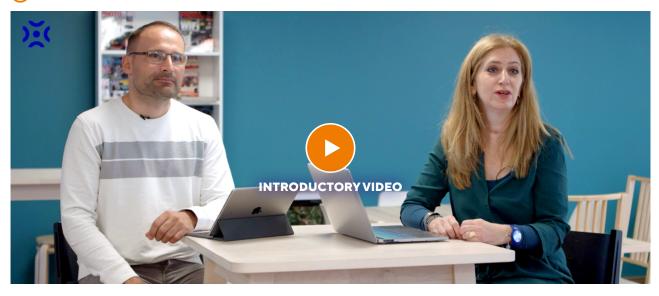


already taken place (the first from October 2019 to February 2020, the second from February to May 2020), with positive outcomes:

- A total of 52 students enrolled for the two sessions
- 4 video testimonies from entrepreneurs
- Students who have undertaken and pursued their entrepreneurial project by applying for student-entrepreneur status
- Students who met through LabCl and have decided to work together
- The integration of the PEPITE 3EF scheme as an inherent service offer for entrepreneurship

Download the presentation of the Idea Designers' Laboratory

DIDEO \rightarrow Interview with Julie Tixier and Pierre-Olaf Schut



A project for the future coastline in Grimaud

In the 1960s, Grimaud, a farming village on the Bay of Saint-Tropez, opened its doors to an architect seeking to break away from the trends of the time and build a tourist town counter to massively built-up seafronts. The dream was too good to last, and at present local authorities are faced with the threats of flooding, erosion and the privatisation of the coastline. In 2019 and 2020, a team of architecture students from ÉAV&T came to their aid. More details from Thomas Beillouin, architect and town planner, teacher-researcher at ÉAV&T.

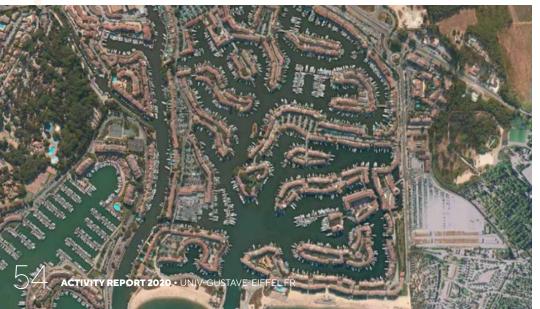
FRANÇOIS SPOERRY'S DREAM

In 1964, Mulhouse-born François Spoerry, an architect renowned for his love of the sea and his numerous marina projects, bought marshlands in order to build his dream: the lagoon town of Port-Grimaud (located at the mouth of a river). This ensemble of 2,200 housing units inspired by vernacular architecture and designed on the model of the fisherman's cottage, ran counter to the modernist canons of the concrete ensembles which sprawled along the postwar coastline. The town covered 75 hectares. With its small tile-covered houses built along 7 kilometres of canal ways, Port-Grimaud was a take on Venice with a Provencal twist.

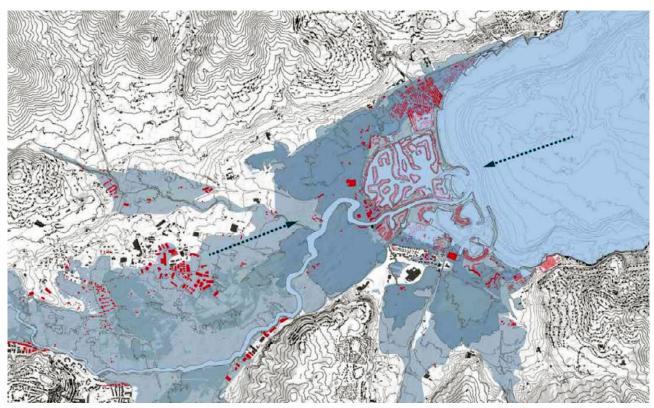
The architect imagined a pedestrian town which would restore a strong link between the land and the sea. The town, which is presently classified as Outstanding Contemporary Architecture, is a far cry from these initial intentions. It has become a vast co-ownership of secondary homes, the shops and craft-workers housed in the ground-level arcades are all geared towards tourism; access to this common heritage property is controlled by a security company and, around this gated community, none of the social housing initially planned came into being, due to opposition from the first owners. In addition to this failing from a social perspective, Grimaud is also facing environmental constraints. For Thomas Beillouin, Doctor of Architecture at Université Paris-Est, 'It's no coincidence that Port-Grimaud is out of synch with agricultural realities and climate issues; the original town centre overlooks a low-lying floodplain. At present, we must pinpoint the shortcomings of this form of town-planning and change paradigm.' The coastline needs to reinvent itself for the 21st century.

THE COASTLINE, A LAND FOR ARCHITECTS

Storm Xynthia in February 2010 heralded a turning point in public policies and universities. In 2018, ÉAV&T participated in the creation of a chair associating schools of architecture, a design office and an inter-ministerial body. Entitled 'The Coastline as a Project Ground', it is coordinated by Thomas



 \rightarrow The seaside town of Port-Grimaud at the mouth of a river



ightarrow Map of risks on the Port-Grimaud coastline

Beillouin: 'We need to hear the voices of the various fields of the project, such as architecture, town-planning and landscape, with regard to coastal threats, an area dominated up to now by geography and geophysics.' In 2019 a group of Specialised Degree (DSA) architecture & town-planning students from ÉAV&T were called on to carry out a study of Grimaud. In association with the Golfe de Saint-Tropez Community of Districts, Grimaud Town Hall and the Provence-Alpes-Côte d'Azur DREAL (regional directorate for the environment, town-planning and housing), their task was to put forward solutions to adapt the region to coastline dynamics and enable inhabitants to cope better with its associated risks. For Thomas Beillouin: *The idea is to enhance this* unique heritage while mitigating the errors of town-planning which ignores the ecological and social value of the region.'

In their study, published in 2020, the students proposed a new vision of the coastline and an approach to restore its depth, by relocating campsites away from the waterline, for example, or transforming agricultural pathways in to access lanes to the sea for soft modes. They designed light structures that can be dismantled, a 'soft' architecture in place of the solid buildings on the sea front. The lagoon city rediscovers its pedestrian vocation, opens to the public and restores its link to the water by adapting to the rise in sea We need to hear the voices of the various fields of the project, such as architecture, townplanning and landscape, with regard to coastal threats.

levels. The academic approach helps to shift boundaries and respond more freely to these prospective study orders', Thomas Beillouin believes. For the students, this on-theground experience taught them how to establish a dialogue with local authorities and related technical departments. 'Now it's time for local powers to act', the researcher in architecture adds.

> See the study Érosion du littoral et montée du niveau marin à Grimaud : un patrimoine architectural et sédimentaire en péril? [Coastal erosion and rising sea level in Grimaud: is architectural and sedimentary heritage in danger?]

Anthony Guerrée freelance designer and art director



Anthony Gueree, a graduate of the Master's in Innovation, Design and Luxury in 2011 (class sponsored by Shiseido), now a freelance designer, gave us an exclusive interview.

- What positions have you held since you left and in which companies?

I chose to go into furniture design because I enjoy directly influencing people's everyday actions. Thanks to my 6-month internship at Andrée Putman, I was able to join the eponymous studio as a Project Manager and Designer for 4 years. I then spent 5 years working as a Designer and Furniture Collection Manager at Christophe Delcourt. I worked with a portfolio of clients, mainly decorators, in their furnishing projects.

Last August, I decided to become a freelance Designer and Art Director. For example, I recently created chairs inspired by the characters in Marcel Proust's novel, À la recherche du temps perdu (see photo gallery).

– What are your various missions? What do you like most about your job?

Since I am now independent, I design collections for furniture brands but I am also developing my own collection. What I like is that I can develop my projects as I like, which allows me to create great relationships with both manufacturers and customers.





ightarrowSwann

ightarrowVinteuil



ightarrow Chair inspired by the character of Odette from the novel À la recherche du temps perdu by Marcel Proust

– What are your best memories of the Master's programme?

Eugénie Briot's class on the History of the Luxury sector was very well constructed and I have fond memories of it. As part of the course, we visited the Andrée Putman exhibition in Paris. It was after this visit that I chose to do my internship at the Putman Studio.

Alain Quemin's classes on the sociology of consumption were also very enriching. They gave me a taste for the discipline, which I knew very little about before.

- What is your funniest memory of the Master's programme?

Before the sales internship, we had to come in a suit to see if we had the right dress codes. It was quite comical to see some of my classmates, including myself, with suits that didn't fit!

– Looking back, what did the Master's degree bring to your career, and even in terms of your personal development?

It allowed me to do a 6-month internship, which was not the case in my previous course at Ecole Boulle. I was also able to acquire marketing skills, which help me to communicate with the people I work with on a daily basis. For me, the greatest asset of the Innovation, Design and Luxury Master's degree is that it offers a real professional springboard!

You can find Anthony Gueree's work on his website

Discover other graduates' portraits on the Graduate Network of the UFR of Economic Sciences and Management at Université Gustave Eiffel

ightarrowBergotte

ACTIVITY REPORT 2020 • UNIV-GUSTAVE-EIFFEL.FR

TESTIMONY Salacia start-up

Interview with two student-entrepreneurs under the PEPITE 3EF scheme.

- Tell us briefly about your project.

Salacia is a brand of ethical clothing. We reduce our environmental impact as much as possible, by limiting water use during the manufacturing process of our organic cotton clothing and banishing plastic from our products, for example. We also pay close attention to workers' conditions; we work with a subsidiary which aims to develop poor countries by paying workers decently and we ensure that safety standards are complied with in factories. To date, we have obtained 6 certifications proving that our clothing is respectful of the environment and human conditions.

- Where did your idea come from and how did you begin working together on this project?

We met at the university through a programme geared towards entrepreneurs. We realised we had two passions in common: the environment and clothing. One thing led to another, and we decided to create a brand of eco-responsible clothing together.

- Where is Salacia at today, and what are your aims for the future?

We recently launched our crowdfunding campaign on Ulule, where we've placed our clothing for pre-sale. Right now, we're trying to present our project to as many people as possible, so we can raise funds thanks to their support for the environmental and human cause.



ightarrow Salacia clothing





PARIS-EST

- What aspect of your entrepreneurial career are you proudest of?

We're proud to have found a way to produce eco-responsible clothing. At present, everything is ready, we have all our quotations and our calculations are done. We just need to find financial support to get started!

- How does PEPITE help your project to move ahead?

PEPITE offers us guidance and support which enables us to keep moving forward. It also provides us with visibility and access to competitions which will help to fund our project.

- What advice would you give to students wishing to launch a business project?

We would advise them never to be discouraged by the unforeseen events that can happen when you're creating your project. Keep heading for your goal because the satisfaction you'll get when everything is ready is worth it. It's an amazing experience, so take the trouble to see it through to the end!

> Link to article

Student A

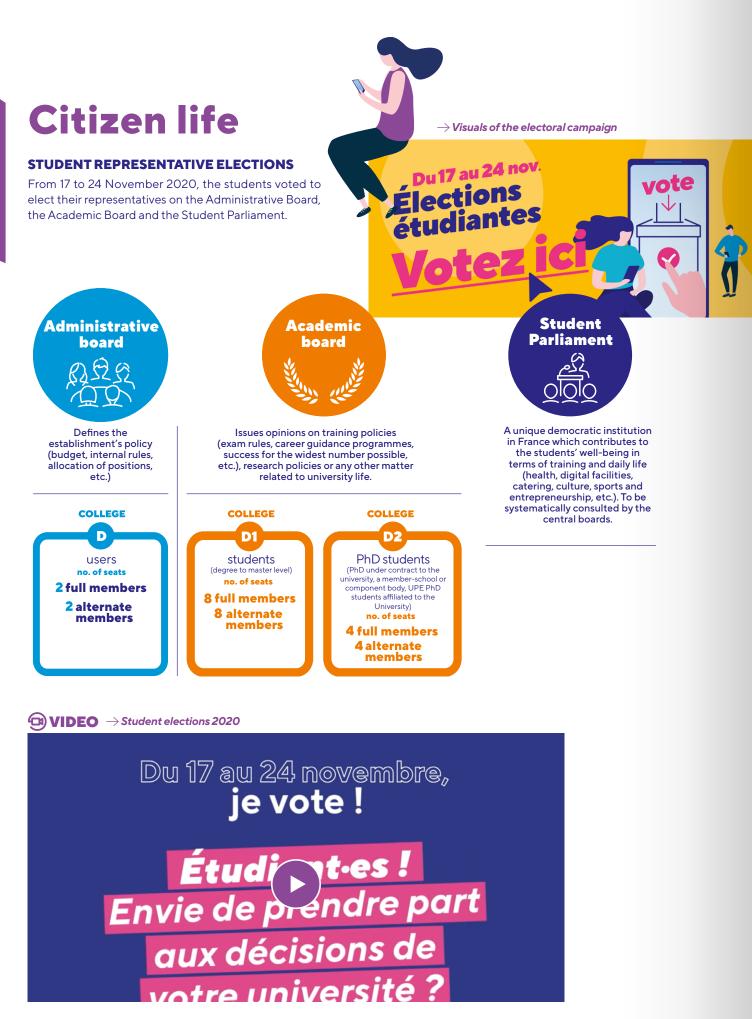
Disrupted by the pandemic, student life was the focus of specific aid in 2020. The aim was to support students, help them to follow their courses in the best conditions possible and maintain a sporting, cultural and community offer.

This challenge was met thanks to everyone's involvement, from teachers, staff and volunteer students to the University Health & Social Welfare Department, the Arts & Culture task force or the Sustainable Development & Social Responsibility task force (DD&RS).

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- 60. Citizen life
- 61. Community life
- 61. The University supports its students during the health crisis
- 62. Sustainable Development & Social Responsibility (DDRS) / Student events
- 63. Culture
- 64. Health and social welfare
- 65. Spotlight
- 66. Testimonies
- 67. Some figures for 2020





Community life

EVENTS AND ACTIONS IN 2020

- €10,000 were allocated to 11 student organisations to fund their operating costs.
- ◆ 43 applications were examined by the FSDIE fund for student projects (€128,156 allocated), mainly to cover the cost of equipment, the organisation of an evening, an event, or a short film, etc. One of the projects funded was the CinéKourt Festival, a Grand Paris event.

6 new student organisations were created at the University in 2019/2020: Solidaires Étudiant.e.s, Lecturia, BDE SHS, Les ptits génies, Meaux Junior Conseils and Études, Repair Café. Events organised by the Student Affairs Department in 2019-2020:

- DLAC Moonwalk evening, 07/02/20
- Film-debate: Digital Technology and the Future, 12/02/20
- Student organisations assembly, 20/02/20
- AS UPEM Sport Bar, 11/03/20
- 17/03/20 LOCKDOWN

The University supports its students during the health crisis

Université Gustave Eiffel implemented several actions to assist students during the health crisis.

LUGELINE: THE SUPPORT HOTLINE FOR STUDENTS

Lugeline is a support line for students, run initially by volunteer students, who subsequently signed a student contract as of 1 June 2020. The latter were trained in guiding and providing solutions to callers. This hotline was open to all students in difficulty for any reason (financial, health, accommodation, family, mental or connectivity issues, etc.). The hotline provided support to 577 students.

LOW-PRICE LAPTOPS FOR ALL STUDENTS

One of the challenges of the health crisis was to ensure that every student had access to a computer, regardless of their situation or income level, to facilitate remote lessons in particular. The University set up three solutions to enable everyone to obtain a computer at the lowest possible cost:



СІИÉKOURT Festival



1st edition of the CinéKourt festival

Bringing together student film buffs and film-makers from the Grand Paris region for a shared event in honour of the projects which do not always have the means to match their ambitions; such is the aim of the CinéKourt Festival, an event organised by student film buffs on the Champs-sur-Marne campus. With the aid of a grant of around €2,500 from the University's Solidarity & Development Fund for Student Initiatives (FSDIE), the event enabled budding film-makers from the Île-de-France area to screen their films before an attentive audience at an iconic venue in Seine-et-Marne, La Ferme du Buisson. The first edition was held on Friday 6 March, organised by the Cineko association in partnership with several audio-visual organisations in Ile-de-France. An audience of 180 discovered 12 films (selected from 116 entries), of which 4 received an award.

> <u>Facebook page</u>

- Partnership agreement with Ecodair: Ecodair is a company specialising in the reconditioning of IT equipment. Université Gustave Eiffel students availed of a 10% discount off the price of a laptop purchased on the company's website.
- Partnership agreement with DELL: the manufacturer offered discounts ranging from 5% to 30% on its new-product ranges (desktops, laptops, accessories, docking stations, etc.) with free delivery.
- Computer loans: the University lent laptop computers to students in the most difficult financial situations. 142 laptops were loaned out through this scheme, funded by the Student and Campus Life Contribution (CVAC), or via equipment lent by University departments or units.
- > For more information

TIPS FOR THE LOCKDOWN

See the **<u>short video</u>** by the University on 10 top tips for wellbeing and motivation during lockdown.

Sustainable Development & Social Responsibility (DDRS) / Student events

STUDENT SUSTAINABLE DEVELOPMENT WEEK

Organised by the French Student Network for Sustainable Development (REFEDD) since 2015, the Student Sustainable Development Week is the campus version of European Sustainable Development Week (ESDW). Held in the first week of April throughout France, this event is an opportunity for students to meet with sustainable development players acting for a more durable society and campus.

The aim is to promote the activities and engagements undertaken by student organisations, to rally students in all regions and raise awareness among the student world of the issues and solutions for sustainable development. This event also strives to increase awareness of the United Nations' Agenda 2030 and its 17 Sustainable Development Goals (SDG) across Europe. Participants gave the 2020 edition a score of 8.5/10.

EUROPEAN SUSTAINABLE DEVELOPMENT WEEK

European Sustainable Development Week (ESDW) is an initiative aimed at encouraging and showcasing actions to promote sustainable development and the Sustainable Development Goals across Europe. It takes place annually from 30 May to 5 June. In light of the health crisis, the 2020 edition took place from 18 September to 8 October and was merged with European Mobility Week (EMW). 20 workshops and webinars attracted 128 participants who gave the event a score of 7.9/10.







EUROPEAN WEEK FOR WASTE REDUCTION 3

Held from 21 to 29 November 2020 and coordinated in France by ADEME (the Agency for Ecological Transition), European Week for Waste Reduction (EWWR) highlights good production and consumption practices to reduce our waste. As a reminder, in France we produce an average of 590kg of household waste per person per year. At the University, this event took the form of 5 workshops for 116 participants. Participants gave this edition a score of 8/10.

THE 'RENTRÉE CLIMAT' [CLIMATE YEAR] 4

An event by the organisation 'La Fresque du Climat', **Rentrée** <u>Climat</u> is aimed at raising awareness among students on the causes and consequences of climate change, through a lighthearted collective intelligence workshop. Université Gustave Eiffel engaged in this process in September 2020 for the second edition of the 'Rentrée Climat'. In association with La Fresque du Climat, around 25 teachers and staff, in addition to 15 students, received training in leading this workshop and raising awareness among students. The Fresque du Climat was integrated into teaching programmes, to raise awareness for 1000 students. The long-term goal is to generalise this practice for all first-year students.

Culture

he role of the Arts & Culture task force is to enable access for the whole university community (students & staff) to culture in all its facets, to encourage artistic creation on campuses and foster encounters with artists. It informs university users on culture and art, and contributes to forging an institutional identity by creating a sense of belonging and reciprocal acknowledgement, in addition to boosting the attractiveness of the establishment through the showcasing of creativity.

Among the actions implemented by the Arts & Culture task force:

- January 2020: creation of an <u>Educational Opening Unit</u> (<u>UEO</u>). Cultural and artistic opening to discover cultural sites and partners: outings organised to the Comédie-Française, the Ferme du Buisson, guided tour of the Bibliothèque Nationale de France [National Library of France] at the François-Mitterrand site, etc.
- February 2020: development of action at the Meaux IUT site. Programme of film evenings on site.
- Spring 2020: resumption of partnership agreements with partner institutions for the extension of the new Université Gustave Eiffel with the Conservatoires de Paris-Vallée de la Marne network, the Ferme du Buisson National Theatre in Marne-la-Vallée, Les Passerelles and File 7 (contemporary music venue).
- September 2020: setting-up of half-year artistic workshops (10 x 2 hours) for students and staff, with activities such as drawing, photography, graphic novel design, theatrical improvisation, public reading and public speaking.

Certain sessions are open under UEO status (artistic activity), eligible for ECTS credit validation and enter into the students' average score for the term. These workshops continued online during the closure of university premises.

Culture at the University was impacted by the health crisis. Nevertheless, while numerous on-site events were cancelled, the constraints of remote activity gave rise to new ideas for online artistic cultivation and to maintain links with culture:

• 'Culture chez nous' operation [Culture for us]:

Launch of the Facebook & Instagram pages of the Arts & Culture task force in spring 2020, to promote cultural events in the framework of the 'Culture chez nous' operation. The aim of the 'Culture chez nous' operation was to provide staff and students with access to culture in spite of the lockdown, through ideas and free activities within everyone's reach (opera at home, virtual museum tours or live concerts, etc.).

- Writing workshops: Setting-up of remote creative writing workshops for the staff and students of Université Gustave Eiffel.
 - > June-July 2020: 2 series of 3 x 2-hour sessions on the theme of lockdown or its end and the controlling of our lives.
 - > September-October 2020: 1 series of 5 x 2-hour sessions on the themes of territory, travel, objects and expressions.

EVENTS & HAPPENINGS IN 2020

- Nuit de la Lecture [Reading Night] January 2020: public readings held at the George Perec university library by:
 - > The Drama class from the Conservatoire du Val Maubuée, with whom we renewed our partnership agreement
 - > Lecturia (student book club)
- Film evenings February/March 2020: Film screenings organised on the Cité Descartes and Meaux IUT campuses.
- Art & Culture Days (JACES) April 2020: The Art & Culture Days, initially scheduled as physical events, were cancelled due to the health situation. They were replaced at Université Gustave Eiffel by online actions which led to the creation of the 'Culture chez nous' operation on the Facewook page of the Arts & Culture task force.
- 'Escape Theatre' 18 November and 9 December: online performances of 'escape theatre' by the Isabelle Starkier Company ('Lockdown Murder').
- Concert 12 December: live streaming of a concert given by Peter May

→<u>New website of the</u> <u>Université Gustave Eiffel</u> <u>Arts & Culture Task Force</u>

Cuniversité Gustave Eiffel

Mission Arts et Culture



DDRS / CULTURE

Health and social welfare

The University Health & Social Welfare Department (SSU) consists of **three centres:**

- The Medical Centre
- The Social Action Centre
- The Disability Centre

TASKS OF THE MEDICAL CENTRE

Students have free access to the centre for all forms of medical visits:

- Health check-ups
- Implementation of adjustments relative to disability or health problems
- O Monitoring of students presenting a specific risk
- Booster vaccinations
- Contraceptive prescriptions
- Testing and treatment for STD
- Nicotine substitute prescriptions

The Medical Centre also deals with treatment and emergencies (treatment under prescription, medical advice and information, treatment for chronic illnesses, appointments with nurses, etc.) and carries out individual and collective preventive actions.

TASKS OF THE SOCIAL ACTION CENTRE

The Social Action Centre serves as a drop-in centre for advice and information on social rights (social security, energy vouchers, reduced-rate transport cards, etc.) and forms of welfare aid available to students.

Students may request an appointment with welfare officers for:

- Information, guidance and access to rights (legal, health, financial, family relations, harassment, etc.)
- Financial aid from various organisations (CROUS, FSDIE, CPAM, etc.)
- Budget management
- Social support for administrative procedures and relational difficulties

TASKS OF THE DISABILITY CENTRE

This year the Disability Centre assisted 330 enrolled students with disabilities, of which 180 also received support from the Medical and Social Centres with regard to disability adjustments (compensatory measures enabling the students to pursue their studies in optimal conditions).

Several actions were organised:

Relay for the national 'Tous HanScène' contest: Created by the non-profit group TREMPLIN Handicap, Tous



 \rightarrow Visit the University Health & Social Welfare Department (SSU) website

HanScène[®] gives students and administrations in undergraduate schools the opportunity to showcase disability via 2 to 3-minute videos. Through students' involvement and images, the aim is to change perceptions of disability in studies and employment and demonstrate that disability and higher education are compatible! Tous HanScène[®] has obtained 'Tous Concernés, tous mobilisés' [All concerned, all mobilised] accreditation from the steering committee of the French National Disability Conference. This accreditation promotes an outstanding practice, action or initiative around disability which facilitates life and is beneficial for all, thus helping to build a truly inclusive society.

The 2021 edition was a huge success with:

- > The involvement of 350 establishments
- > The participation of more than 1000 students and administrators
- > More than 200 video entries, generating tens of thousands of views
- DuoDay relay: DuoDay is an event during which a disabled person teams up with a professional with a view to discovering their activity
- Creation of an artistic expression competition for disabled students, to raise awareness among the academic community of disability issues, and federate students around a positive project
- Creation of a Facebook group for disabled students to provide a space for discussion between students and the Disability Centre
- Creation of a welcome guide for disabled students
- Launch of a poster campaign for high schools providing information on the support procedure for disabled students in our establishment
- Forming of a partnership with SESSAD (specialised home care and educational services), the FFDYS (federation for cognitive and learning difficulties) and other organisations offering their participation in disability awareness events and training for colleagues of disabled employees.

Karine Marot and Max Py awarded the Order of Merit

On 1 January 2021, the most recent decorations of the Legion of Honour and the National Order of Merit honoured those engaged in the fight against the epidemic. Université Gustave Eiffel is proud to announce that two of its colleagues are among the nominees.

Iong-standing tradition, the 2021 promotion also specifically honours people who have been actively engaged for many months in the health crisis. As the chancellor announced, a 'majority of healthcare workers' featured among the nominees, in addition to people invested in the production of medical equipment, support for businesses, volunteer work, decentralised State services or teaching and culture.

Ms. Marot Karine,

Associate Professor of Geography, Vice-president of <u>Student Affairs</u>, co-officer of the equality task force at Université Gustave Eiffel; 25 years of service.

- Karine Marot, Vice-president of Student Affairs, was involved from day one of the lockdown in responding to the difficulties encountered by students, whether for digital issues or those arising from their personal situations.

In order to act quickly and effectively, she steered the launch of a broad-scale survey of the University's 13,000 students, providing the latter with the opportunity to voice their difficulties. This survey helped to prioritise needs and respond to thousands of requests of all types, such as the lack of equipment, financial, mental, personal or medical difficulties, etc., in association with all services and stakeholders providing student assistance.

To counter the digital divide (non-equipped students), Karine Marot set up a computer lending service with a small dedicated team, and when necessary, travelled herself to students' homes with computers.

In order to provide ongoing support to students in need, she rallied a group of volunteer students to create the 'Lugeline' and ensure precious human contact and guidance. The scheme continued throughout the summer.

Thanks to her implication, professional skills and personal qualities, Karine Marot enabled many students to pursue their studies in decent conditions.



Marot



Ma Py

Mr. Py Max,

assistant engineer and head of experimental trials at the Laboratory for Applied Biomechanics at Université Gustave Eiffel; 23 years of service.

- Max Py engaged in responding to calls from hospitals for protective gear during the health crisis. Thanks to his expertise, his laboratory was able to launch the production of protective face shields for medical staff. The Laboratory for Applied Biomechanics (LAB) is a joint Université Gustave Eiffel/Aix-Marseille University research unit composed of 39 members. Located in the heart of the Faculty of Medicine on the Nord university-hospital campus, the specificity of the Laboratory for Applied Biomechanics is its multi-disciplinary and transversal approach between engineering science and medicine. It is in this framework that Max Py works, whether prior to, during or after trials (upstream design of experimental protocols, selection of acquisition equipment and appropriate sensors, data analysis and formalisation, maintenance of experimental equipment, etc.). Through his work, he has developed proven expertise in 3D printing in particular, a skill he put to use for hospitals during the lockdown. During this two-month period, 4 printing plants were set up in the Marseille area, including the LAB. For several weeks, Max Py was on site every other day to produce protective face shields for medical workers. This achievement was made possible thanks to the support of several of the region's industries, who supplied the components required for the production of protective gear.

An active and willing player in collective actions to improve working conditions, Max Py is a credit to public service, devoting time to the manufacture of protective gear for others in a period of high demand.

TESTIMONIES

Chloé Casaca et Prescillia Da Silva

students to the rescue during the pandemic

Students were hard hit by the 2020 health crisis. Numerous measures to assist students were put in place at the University, steered and run by the students themselves. Two such students share their experience.





Chloé Casaca

Prescillia Da Silva

nder the initiative of the Student Affairs Department, the Lugéline hotline was launched in April 2020 to help students in difficulty. When she was contacted to join the team running this service, Chloé Casaca, a 3rd-year student in History, accepted without a second thought: '*I just wanted to help, to lend my support.*'

STUDENTS TO STUDENTS

"The idea behind Lugeline is simple: a student leaves a message on the answerphone with their first and last names and possibly the reason for their call. Each message is then classified before one of us calls back. We speak student to student, which makes it easier for people to open up. Having the same age and informal approach also helps to create a stronger bond."

In spring 2020, most of the calls were related to issues of equipment, such as the lack of a computer, but as the crisis continued, other financial or administrative problems began to emerge. 'Students were calling us because they had lost their job. There were also foreign students facing issues related to visas or the administrative management of their studies.'

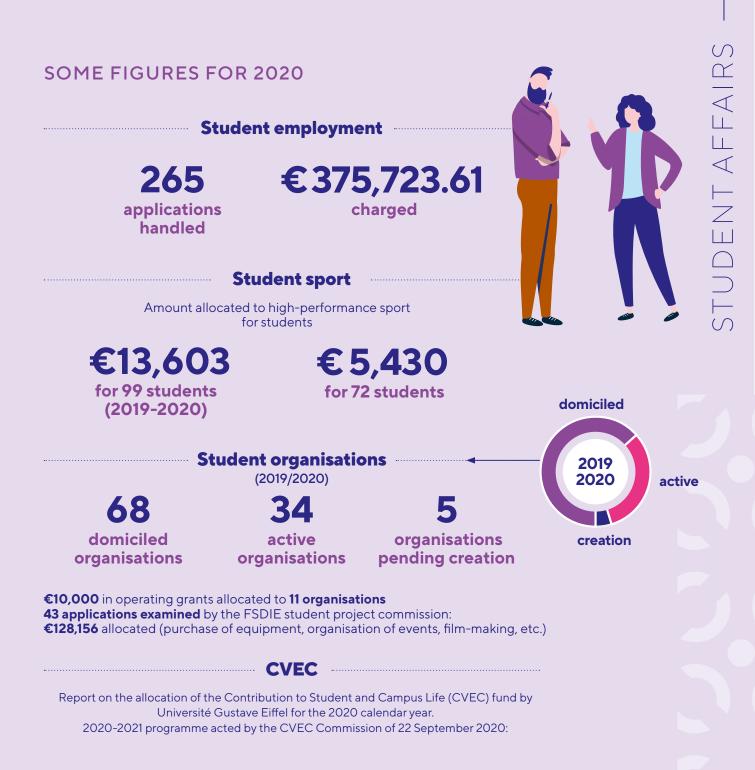
In late 2020, the isolation of a second lockdown led to 'emotional exhaustion for students, and we had to provide a lot of moral support.' Once they had identified the type of problem, the students running Lugeline searched for the most appropriate solution. "We guided callers towards the Student Affairs, social welfare or university medical teams and the CROUS." Within a year of its launch, Lugeline had brought its assistance to 577 students.

Our role to centralise and provide information was more vital than ever.

AYEAR OF SOLIDARITY

3rd-year History student Prescillia Da Silva is a proximity officer. This role as the intermediary between students and players of university life helped, in Prescillia's view, 'to bring out what people were feeling'. Her task became 'more vital than ever' during the health crisis. 'We found ourselves facing an unprecedented workload. Students, teachers, everyone was calling on us'. In light of the strong demand, 'the proximity officers had to get organised so we were reachable by SMS, on social networks, or via a Facebook group. Our role [was] to centralise and provide information.'

While many of her tasks involved ensuring teaching continuity (sharing of exercises, instructions, or teacher-student communication), Prescillia Da Silva and her colleagues also had to deal with new issues, 'in particular managing the risks of drop-out which emerged with the second lockdown.' Students who were already worn out by the first lockdown found themselves overwhelmed by the workload and remote lessons, 'but thanks to mutual help and solidarity, many of them managed to stay the course to the very end', Prescillia assures us. 'Our role came to the fore and gained in strength during this crisis', she concludes.



Central CVEC	€465,176	49%
FSDIE	€285,000	30%
Preventive healthcare	€142,500	15%
Student Parliament	€15,000	2%
Endowments to components	€42,324	4%
Total	€950,000	100%

Overall total of CVEC collected for 2020 stands at €800,786.69

This amount was paid in 2 instalments by the CROUS, following student head counts of 31 May 2020 (payment on 13 July 2020) and 15 October 2020 (payment on 16 November 2020).

Guntave Eiffel

MOVING

A new univerto imagine and region

Internationa

During its first year, the University set up several new collaboration agreements in Europe and internationally with the aim of internationalising courses of every level, with new PhD programmes, structural research programmes and bilateral international framework agreements. Scientific and institutional events were organised on site and then remotely to promote the University's work and offer, while maintaining a focus on funded programmes and pursuing the many existing partnerships. The collective dynamic unified the components and governance around a multidisciplinary, integrative vision based in different areas across the world.

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- 70. International ranking
- 71. New cooperations
- 73. Events
- 75. International mobility
- 77. Testimonies





International ranking

THE UNIVERSITY JOINS THE SHANGHAI RANKING

niversité Gustave Eiffel has been included in the prestigious ranking of the world's 1,000 best universities - a pleasant surprise for our new institution.

Good news for our institution as this summer draws to a close. Université Gustave Eiffel has joined the prestigious **Shanghai Ranking** of the world's 1000 best universities". It is ranked 701-800th.

"This entry demonstrates the success of the projects to bring universities together, driven by the Investments for the Future Programme (PIA). In the case of our university, bringing together UPEM, IFSTTAR and the four member schools, EAV&T, EIVP, ENSG and ESIEE Paris, has probably increased the number of publications in category Ajournals and thus significantly boosted the profile of our very young institution. It's obviously a pleasant surprise to appear in this ranking ", remarks a delighted Hélène Jacquot-Guimbal, the university's acting Vice-Chancellor. **> Find out more**

INTERNATIONAL TRAINING COURSES

The internationalisation of training is a key challenge for Université Gustave Eiffel and is the subject of several initiatives and projects that have been launched since its creation on 1 January 2020. Here are two examples:

- Creation of a university degree in road safety in Africa: the TS2 department designed a university degree on road safety in Africa composed of a 120-hour programme covering the five pillars of road safety: management, infrastructure, vehicles, users and post-crash response. The course will start in the academic year of 2021-2022.
 Find out more
- Université Gustave Eiffel has joined the ERASMUS+ Athena project, "University Goes Digital for a Sustainable Global Education", led in collaboration with the University Institute of Lisbon, the University of Florence and the Sigmund Freud University of Vienna. The project aims to increase digital skills among university teachers and their strengthen ability to take on challenges such as those facing universities during the Covid crisis. Thanks to active involvement from teaching staff and students during the initial phases of the project, Athena will design, test and launch innovative digital practices to create new teaching practises and provide better learning and teaching experiences. The project will develop models with which teachers can adapt their classes using different teaching methods: the new toolbox will include digital books, videos, games, quizzes, etc. The project is partnered by the French-Speaking University Agency (AUF), the University of Santiago in Cape Verde, the UFRJ in Brazil and ESSEC-Tunis in Tunisia, whose roles are to contribute to the wide dissemination of the project's results in order to maximise its impact.

→ Aerial view of the Cité Descartes © Epamarne - Éric Morency 2016

New cooperations

PIONEER ALLIANCE, A EUROPEAN UNIVERSITY PROJECT FOR THE CITIES OF TOMORROW

n 2020, Université Gustave Eiffel coordinated and submitted the PIONEER Alliance, a European university Erasmus+ project, with the University Institute of Lisbon (Portugal), Cologne University of Applied Sciences (Germany), Laurea University of Applied sciences (Finland), the National Technical University of Athens (Greece) and the University of Žilina (Slovakia). Although the project was rejected, despite receiving a good score, the alliance set up between the partners will provide a starting point for multiple Erasmus agreements and the preparation of responses to Horizon Europe calls for proposals.

The alliance will fundamentally transform the partner universities by creating a network of campuses in connection with cities and citizens' needs. The aim is to co-create and integrate personalised approaches based on challenges and practical learning in programmes related to research and innovation. The alliance is composed of 93,200 students, 8,500 members of staff and 17 campuses.

New Erasmus+ agreements signed in 2020

- Universidad Francisco de Vitoria (Espagne)
- Laurea-ammattikorkeakoulu (Finlande)
- Universita degli studi Roma Tre (Italie)
- Zilinská Univerzita v Ziline (Slovaquie)
- Technische Hochschule Köln (Allemagne)
- ISCTE IUL Instituto Universitário de Lisboa (Portugal), élargissement d'un accord existant

CLEAR-DOC: SUPPORTING INTERNATIONAL MOBILITY FOR 30 YOUNG RESEARCHERS

Similarly, Université Gustave Eiffel coordinated a proposition for a COFUND H2020 programme as part of the Marie Sklodowska-Curie Actions (MSCA). The PhD programme, called CLEAR-Doc (City Lab Education And Research DOCtoral), provides co-funding for the recruitment, training and mobility of 30 international doctoral students. It offers an original approach structured around three joint international challenges in line with several United Nations sustainable development goals:

- Challenge 1: design and develop resource-efficient urban spaces
- Challenge 2: understand and manage "urban risks" for resilient cities
- Challenge 3: develop digital cities, making them a catalyst for social, environmental and economic performance.

Alongside these three challenges, six multidisciplinary thematic fields have been identified, such as civil engineering for carbon-neutral zones, technological solutions for smart cities, sustainable urban life and tourism, etc. The PhD students will be given easy access to the major research facilities on Université Gustave Eiffel's campuses in order to carry out their research. To date, 35 academic and socio-economic partners have joined the project, providing co-financing for 21 PhDs and 75 mobility opportunities.

→ International cooperations-IRD MADATLAS © IRD Madagascar

MADATLAS : DIGITAL MAPPING COURSES IN MADAGASCAR

The MadAtlas project was designed by Université Gustave Eiffel in partnership with the University of Fianarantsoa (Madagascar), the University of Bordeaux Montaigne and the French National Research Institute for Sustainable Development (IRD) in response to a call for tenders by the AFD for higher education partnerships in Africa. The objective of the training programme planned in Madagascar is to provide Bachelor's, Master's and PhD courses of an international standard in digital mapping with a focus on sustainable development issues specific to the country. The programme will train technicians, executives and engineers able to use and design a variety of innovative mapping tools according to the requirements of spatial planning professionals. MadAtlas courses will be open to currently marginalised populations, particularly women and disadvantaged students. It will also promote the upskilling of employees in the private and public sectors through lifelong learning and career development among teacher-researchers in the fields concerned. Two-way mobilities for teachers and students, joint degrees and co-supervised PhDs will open up new perspectives for graduates and stimulate research in this innovative field, not only in Madagascar but for all the partners. AFD's response is expected at the end of June 2021 with courses due to start in September 2021.

Agreements signed in 2020, by geographical area:

- North America: framework agreement with the University of Quebec in Montreal (UQAM), a specific agreement on study exchanges will be signed in 2021.
- Maghreb: ESSECT University of Tunis (Higher School for Economic and Commercial Sciences of Tunis), Casablanca Central School (ECC, Maroc).
- Asia: IRN SINERGIE-GDRI with NTU Singapore; University of Tokyo; National University of Civil Engineering - Vietnam.

EUROPEAN NETWORKS

2020 marked a focus on the challenges of cities of the future within Université Gustave Eiffel's activities in the European networks. After reflection involving several vice-presidencies, the University joined the **POLIS** network of cities and regions and new Horizon Europe public-private partnerships: Connected, Cooperative and Automated Mobility (CCAM) and Towards Zero emission road transport (2Zero).

Events

TRB2020

he Transportation Research Board, held in Washington DC from 12 to 16 January 2020, was the first international event for Université Gustave Eiffel and was an opportunity to meet other American universities as well as academic and private actors in the transport sector. On the occasion of this annual event that saw no less than 5,000 project presentations and 800 workshops, and to promote itself and its exceptional facilities, Université Gustave Eiffel carried out numerous communication actions including a stand, a presentation during a showcase by Hélène Jacquot-Guimbal and the organisation of a workshop on "Multi-level approaches of innovation in cities".

FRENCH AMERICAN INNOVATION DAYS

After taking part in the Transportation Research Board in Washington in January 2020, Université Gustave Eiffel was nominated as a key actor to contribute to the <u>French-</u> <u>American Innovation Day (FAID)</u>, an event on the theme of "Cities of tomorrow: territories of trust", organised by the Office for Science and Technology (SST) at the French Embassy in the United States.

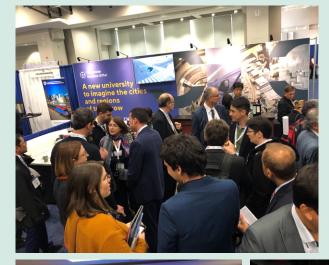
The aim of the event was to bring together actors of the city of tomorrow from every sector to promote initiatives for sustainable, secure and resilient cities and prevent dangers linked to the use of new technologies. It is a real opportunity for Université Gustave Eiffel to:

- Affirm its skills in research and innovation for the city of tomorrow on the international stage.
- Promote its training courses and programmes for hosting international students, PhD students and researchers among American universities.
- Set up a French-American network to promote scientific comparison, the exchange of good practices, co-publications, inter-doctoral collaborations and other opportunities.

FRENCH AMERICAN INNOVATION DAY



th Annual Meeting, January 12-16, 2020, Washing







Due to the health crisis, it was decided to postpone the FAID event in Washington until a later date and a series of French-American webinars on cities was organised instead to allow the French and American experts to meet each other and identify common topics of interest.

The first webinar, on 23 September 2020, focussed on the project "Re-enchanting the Champs-Elysée" by the architectural firm PCA Stream and MIT City Science Lab, the presentation of Université Gustave Eiffel and the I-SITE FUTURE project. This first event was attended by over 210 participants (45% in France, 45% in the USA and 10% elsewhere). The American audience included actors from academia (MIT, University of Virginia, University of Texas, Harvard University, Portland State University, George Washington University, etc.) and industry (Orange, Pepsi, NAVTECA LLC, Living Systems, Airbus, EDF, Valeo, NTT Data, etc.).

FIRST VIRTUAL SUMMIT OF THE JACQUES CARTIER CONFERENCES

Forthe first Virtual Summit of the Jacques Cartier Conferences, a colloquium on "**Sustainable research and innovation in engineering for health: science with and for society**" was co-organised by David Mitton (Université Gustave Eiffel), Françoise Peyrin (INSERM), Catherine Müller (ENSSIB), Lydia Maigne (University of Clermont-Auvergne), Jacques de Guise (ETS Montreal), Mickaël Bégon (University of Montreal), Neila Mezghani (TELUQ University) and Viviane Poupon (Brain Canada Foundation) in partnership with the University of Claude Bernard Lyon 1, the University of Lyon, PRIMES LabEx and the EVASYM International Associated Laboratory (Lyon – Montreal). During the colloquium, **five key ideas** were highlighted:

- The question of the free flow and sharing of collected data, with the development of massive data collection and its use in the field of science and medical research.
- Scientific data sharing is rapidly increasing, especially in the field of medical innovation, the development of open source software and open access to academic publications.
- The benefits and potential of this free flow of data are considerable: collaboration between researchers across the world, sometimes in real time (such as for Covid-19 research); sharing research results and faster progress in innovation.
- However, free data sharing is not without certain limitations: firstly, there is the question of intellectual property, secondly, the viability of economic models based on free access and, thirdly, the reluctance of certain actors.
- To allow free data access to continue to develop, this openness should be viewed more as an opportunity than as a threat and a stronger and more harmonious international framework should be created, in particular with regard to the standardisation of data collection.

RECHERCHE ET INNOVATION RESPONSABLES EN INGÉNIERIE POUR LA SANTÉ : LA SCIENCE AVEC ET POUR LA SOCIÉTÉ



NATIONAL INFORMATION POINT "CITY" (PIN CITY)

The aim of the National Information Point "City" (PIN City) is to increase joint and coordinated participation in European initiatives, programmes and networks in the urban sphere among French public and private actors, by providing summarised information on European politics, bodies and funding opportunities and promoting cross-domain knowledge and cooperation between different actors. Its aim is also to influence European policies and programmes by contributing to the creation of French positions within European institutions. PIN City is one of the international actions of I-SITE FUTURE, which is coordinated by Université Gustave Eiffel and led in partnership with the ENPC.

A national day on the theme of "Europe and urban R&I: future European programmes for 2021-2027 and citizen participation", organised by Université Gustave Eiffel and PIN City in partnership with European Commission's DG for Research & Innovation and the Ministries for Higher Education, Research and Innovation (MESRI) and for the Ecological Transition and Solidarity (MTES), was held remotely on Wednesday 21 October 2020. Of the 460 participants, around 30% were from academia, 30% from companies and 40% from local government. The event was also notably attended by Mrs Signe Ratso, Deputy Director of the DG Move.

The morning was dedicated to presenting new European programmes and instruments for 2021-2027 and associated priority themes in urban R&I (Horizon Europe, the "100 Climate-neutral cities by 2030" mission, the "Driving Urban Transition" Partnership, URBACT, UIA, LIFE, ESPON). This was followed by a presentation on the national policy for urban research and innovation and national support schemes for the actors involved (Sustainable City France and PIN City).

The afternoon was dedicated to citizen participation in innovative urban projects. The participants took part in one of three parallel workshops on methodologies and feedback from organisations that have tested citizen participation in innovative urban projects: a "sustainable city" workshop, a "business, circular economy, economic sectors" workshop and a "sustainable universities" workshop.

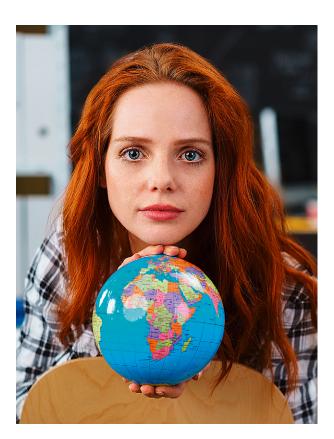
The minutes of the workshops and the presentation materials will be sent to the DG for Research & Innovation and the JPI Urban Europe. They are available here:

International mobility

Il mobility programmes were badly affected by the health crisis in 2020. Like all French universities, Université Gustave Eiffel invited its students who were abroad to return to France, which a lot of them did. Exceptional financial support was offered for those who needed it. For mobility trips that had been planned but had not yet begun, alternative solutions were found with the partner universities, notably through remote tutoring and online seminars.

The same was true for mobility trips among the University's researchers and teacher-researchers, who postponed their projects. Our ability to welcome guest professors was also badly affected and many of them had to cancel or return home early. Nonetheless, a few mobility trips were still able to go ahead despite the exceptional circumstances. Two examples are given in the following pages. Similarly, several LIAs (International Associated Laboratory) for staff and student mobility were able to be created in spite of the circumstances.





I-SITE FUTURE SUPPORTS 23 NEW INTERNATIONAL COLLABORATION PROJECTS

Following its second Incentive Call for International Mobility and Cooperation (AIMCI), which closed in March 2020, I-SITE FUTURE has selected 23 new projects out of the 36 that were evaluated. The budget for this call was approximately €360,000. The objective is to strengthen or initiate new international scientific and/or educational collaborations on the theme of the city of tomorrow. The long-term aim is to place the I-SITE consortium at the heart of the coordination of a network with international visibility involving top-level foreign universities in the field of urban issues.

The selected projects mainly concern the geographical areas of Europe (Italy, United Kingdom, Sweden, Netherlands), North America (USA, Canada), Asia (Japan, China, Singapore), South America (Brazil, Mexico), Sub-Saharan Africa (Madagascar, South Africa) and the Maghreb (Morocco, Tunisia). They focus on different types of activities such as setting up research projects (including jointly supervised PhDs), contributing to a European or international network, outgoing mobility (with or without a teaching role), organising international seminars and setting up an international associated laboratory.

The duration of the projects varies from 6 to 18 months and their launch has been severely impacted by the health crisis. A summer school call for proposals was also launched at the end of 2020. The submitted projects will be assessed in 2021.



© Archival City

Archival City was very active in 2020.

ARCHIVAL CITY: PLANNING THE CITY OF THE FUTURE BY INCORPORATING DATA FROM THE PAST

Archival City "Urban systems, archives and city heritage" is a springboard project financed by I-SITE FUTURE and a research programme in which ACP laboratory is strongly involved. The project was very active in 2020, with a study day on historical sources on Greater Paris attended by archivists and librarians (17 September 2020), a seminar on the "History and Archives of urban pollution" in partnership with the Lyon municipal archives (12 November 2020) and a workshop on news from research on the colonial world (12 October 2020) in conjunction with researchers and archivists from the French National Overseas Archives (Aix-en-Provence). Archival City bridges the gap between those interested in the history of the city and those who build its future: archivists, documentalists, historians, architects, geomaticians, etc. The programme aims to question the concept of urban archives at an international level and focuses on six major cities: Jerusalem, Quito, Bologna, Hanoi, Algiers and Greater Paris.

CONTINUING INTERNATIONAL COLLABORATION ON AUTOMATED VEHICLES

On the occasion of a visit by Anne-Marie Idrac, High Representative for the Development of Automated Vehicles, to Washington DC in January 2020 on the subject of "public policy, regulation, experimentation and deployment", the COSYS department organised and led the annual meeting between Université Gustave Eiffel, the Directorate General for Infrastructure, Transport and the Sea (DGITM), AASHTO (American Association of State Highway and Transportation Officials) and USDOT (US Department of Transportation).

As part of the French ministerial initiative "Robomobile Life", an international comparison focusing on the USA, Canada, Germany, China, Japan, Australia and other European countries was carried out. It identified similarities between current approaches, described their organisation and supported the Ministry for Ecological Transition in making initial contact. After the strongest players were identified, the DGITM worked on the matter with the American Transportation Research Board and wrote a policy brief for the G20 (via the T20 group): "Defining the role of automated transportation infrastructure in shaping sociotechnical systems".

TESTIMONIES

Jean de Sauvage

visiting researcher in geotechnology at Cambridge University

"BOOSTING EXPERTISE THROUGH COOPERATION"

researcher and engineer at the Geotechnical engineering, Environment, Natural hazards and Earth sciences Department (GERS) and specialist in soil mechanics, Jean de Sauvage studies the foundations, embankments and backfills of civil engineering facilities. In 2019 and 2020, via the international mobility programme, he travelled to the Schofield Centre at Cambridge University. "As a visiting researcher, I worked on the centrifuge modelling of geothermal foundations on a reduced scale", he tells us. "In order to carry out this experiment, we attached heat exchanger tubes to the reinforcement cages of foundations, to avoid digging wells to capture ground heat." The aim of this research was to determine, in this type of installation, if the thermal role of foundation piles can disrupt their mechanical role. "We are trying to develop geothermal installations which are less costly, emit less CO₂ and require less concrete in their construction, in order to gain more from the benefits of geothermics and locally-produced, non-intermittent renewable energy." The results of the studies the researcher contributed to will be published in September 2021.

The Schofield Centre provided Jean de Sauvage with his first international research experience. "Thanks to this exchange, we improved the structure of our cooperation with Cambridge University around our joint research topics in geothermics. It also boosted the expertise of my team in Nantes in these fields", he concludes. Jean de Sauvage

Herrie Schalekamp

visiting researcher in urban mobility at Université Gustave Eiffel

"THE OPPORTUNITY TO BUILD AN INTERNATIONAL WORKING NETWORK"

Researcher at Cape Town University (South Africa), Herrie Schalekamp was a visiting researcher at Université Gustave Eiffel between March and May 2020, in the framework of I-SITE FUTURE. His work focuses on the role of small-scale and/or informal transport in African cities, more specifically in East and South Africa. In these cities, despite the presence of high-quality road infrastructures, the public transport plan may be non-existent. "Small-scale private transport companies, in addition to informal operators, thus play a key role in urban mobility and growth. These players lack financial resources, which means they don't have access to less polluting forms of transport and so continue to use petrol or diesel", Herrie Schalekamp explains. In this context, research led notably by the French Development Agency (AFD) and the World

Bank on the green transition and electrification of transport in Africa addresses crucial sustainable development issues.

"My time at Université Gustave Eiffel was very enriching", Herrie Schalekamp comments. "Despite the pandemic, I had the opportunity to discuss matters with my peers and to help build an international working network around my research topics. We have to invent new ways of working together!"



Herrie Schalekamp

Organisation

A unique, unusual and pioneering university that combines: a research organisation, a university, a school of architecture and three engineering schools.





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EIVP

Éa v&t

École d'architecture de la ville & des territoires Paris-Est



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- 80. Shared governance
- 84. A citizen-based university
- 85. Research and training campuses
- 90. Training components
- 90. Research components
- 91. Remarkable facilities
- 92. Spotlight



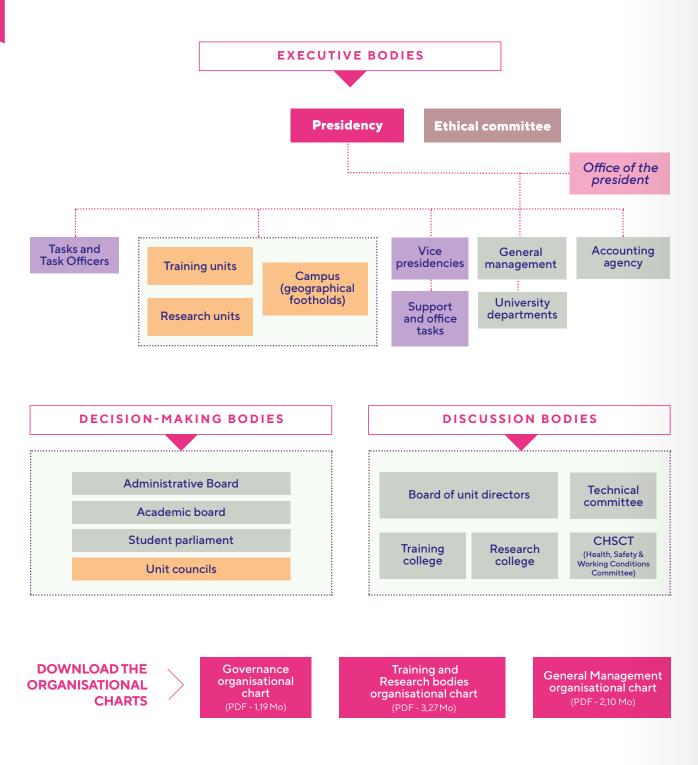
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Shared governance

ORGANISATIONAL STRUCTURE



INSTANCES

A representative Board of Directors

8 external members:

- I representative from the metropolitan district not within the Île-de-France area, where the smallest campus of Université Gustave Eiffel is located.
- 7 members elected by the other members of the Board, including at least:
 - 1 member from the regional authority where Université Gustave Eiffel is headquartered
 - 1 foreign member (or French with significant international experience) from the field of ESR
 - 2 members from companies
 - •1 member from a public utility association

15 elected members:

- 5 representatives of the university professors, research directors and equivalent
- 5 representatives of the teachers, lecturers, research fellows and equivalent
- 3 representatives of other staff
- 2 user representatives

11 ex officio members:

- O Ministry for Higher Education
- Ministry for Research
- Ministry for Sustainable Development
- Ministry for Transport
- Ministry for Road Safety
- Ministry for Culture
- The City of Paris
- The IGN
- Paris Île-de-France CCI
- The CNRS
- Île-de-France Regional Council

MEMBERS OF THE BOARD OF DIRECTORS (CA)

Elected staff representatives COLLEGEA

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- Mr Dominique MIGNOT (Member)
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- Mrs Sophie RIEUNIER (Alternate)
- Mr Thierry SERRE (Alternate)

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L'université en commun

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- Mr Philippe VEZIN (Alternate)

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- Mr Dominique REVUZ (Member)
- Mrs Katia LAFFRECHINE (Member)
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- Mrs Maud CHIRIO (Alternate)
- Mr Luc DELEAVAL (Alternate)

L'université en commun

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- Mrs Sandrine WENGLENSKI (Alternate)

CFDT-UNSA

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- Mrs Sandrine MARCEAU (Alternate)

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Université

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- Mr Dejan RISTIC (Alternate)

L'université en commun

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- Mr Olivier BURBAN (Alternate)

CFDT-UNSA

- Mr Fabrice VIENNE (Member)
- Mrs Nicole DA MOTA (Alternate)

ELECTED USER REPRESENTATIVES

COLLEGE D

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- Mrs Dorinne PAILLER (Alternate)

Assemblée Étudiante

- Marne-la-Vallée
- Mr Tanneguy ALLAIRE (Member)
- Mrs Floriane KERGUS (Alternate)

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- Mr Camille GALAP (Member) -Institutional Advisor to the Institutional Support Mission -DGESIP
- Mrs Anne-Sophie BARTHEZ (Alternate) - Director General of Higher Education and Professional Integration

Ministry for Research

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- Mrs Delphine PAGES EL KAROUI (Alternate) - SHS - DGRI - MESRI Officer

Ministry for Sustainable Development

- Mr Thierry COURTINE (Member) -Head of Research and Innovation
- Mrs Claire SALLENAVE (Alternate) -Deputy Director of Scientific and Technical Animation

Ministry for Sustainable Development

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 Mrs Perrine TOURNADE (Alternate) - Office Director for the Director General for Planning,
- Housing and Nature

Ministry for Culture

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- Mrs Stéphanie CELLE (Alternate) - Assistant to the Deputy Director of Higher Education and Research in Architecture

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- Mrs Manuelle SALATHE (Alternate) -Secretary General of the National Interministerial Road Safety Observatory

City of Paris, appointed by the mayor

- Mrs Marie-Christine LEMARDELEY (Member) - Deputy Mayor of Paris in charge of Higher Education, Research and Student Life
- Mr Antoine GUILLOU (Alternate) -Deputy Mayor of Paris in charge of Human Resources, Social Dialogue and Quality of Public Service

French National Institute of Geographic and Forest Information, appointed by its Director General

- M. Sylvain LATARGET (Member) -Deputy Director General
- Mrs Jeanne STRAUSZ (Alternate) -Secretary General

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- Mrs Muriel BARNEOUD (Member) -Elected member of the CCI -Director of Social Commitment at La Poste
- Mr Pierre LORY (Alternate) Elected
 member of the CCI

French National Centre for Scientific Research (CNRS)

- Mr Nicolas ARNAUD (Member) -Scientific Director for the Paris-Est site
- Mrs Clarisse LEFORT (Alternate) -Île-de-France Villejuif CNRS Regional Delegate

Île-de-France Region, appointed by its president

- Mrs Brigitte MARSIGNY (Member) -Regional Councillor
- Mrs Nathalie DELEPAULE (Alternate) - *Regional Councillor*

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Appointed by the President of Aix-Marseille Métropole

- Mr David YTIER (Member) -Metropolitan Councillor
- Mrs Marylène BONFILLON (Alternate) - *Metropolitan Councillor*

Elected member

- Mrs Geneviève SERT (Member) -Vice President in charge of Higher Education, Professional Training and Medical Presence, Seine-et-Marne department
- Mrs Valérie DAVID (Member) - Director of Sustainable Development and Transverse Innovation, Eiffage Group
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- Mr Gérard EUDE (Member) -Councillor in charge of Economic Development, Research and Higher Education - Paris - Vallée de la Marne Urban Community
- Mr Antonio GOMES CORREIA (Member) - Professor at the University of Minho, Portugal
- M. Georges YANNIS (Member) -Professor at the National Technical University of Athens - School of Civil Engineering
- Mr Jean-Robert JACQUEMARD (Member) - President of the Seineet-Marne CCI

MEMBERS OF THE ACADEMIC BOARD (CAC)

Elected staff representatives

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- Mrs Corine MAITTE (rank 3)
- Mr Dimitri DENEELE (rank 4)

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 Mrs Véronique BOUTEILLER
- (rank 3)
- Mr Pascal UGHETTO (rank 4)
- Mrs Melika BEN SALEM (rank 5)
 Mr Malal KANE (rank 6)
- Mrs Paola PELLEGRINI (rank 7)
- Mr Éric ALONZO (rank 8)
- Mrs Céline LEONARD (rank 9)
- Mr Jean-Christophe NOVELLI
- (rank 10) • Mrs Odile ABRAHAM (rank 11)
- Mrs Odile ABRAHAM (rank II)
- Mr Nicolas HAUTIERE (rank 12)

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- Mrs Eva DOKLADALOVA (rank 3)
- Mr Majdi HOCHLAF (rank 4)

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- Mr Matthieu DELAGE (rank 3)
- Mrs Aurélie DELEMARLE (rank 4)
- Mr Olivier BROSSARD (rank 5)
- Mrs Virgnie COLLINS-DENIAU (rank 6)
- Mr Éric INCERTI (rank 7)

CFDT-UNSA

- Mrs Anne-Sophie EVRARD (rank 1)
- Mr Bernard LATORRE (rank 2)

L'université en commun

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- Mrs Frédérique MOCQUET (rank 2)
- Mr Yoan PECHAUD (rank 3)
- Mrs Florence ROUYER (rank 4)

SUD RECHERCHE EPST - SUD ÉDUCATION

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COLLEGE B2

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- Mrs Ines DE DIEGO (rank 2)

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- Mrs Laurence VIGIER (rank 1)
- Mr Kheireddine REZIOUK (rank 2)
- Mrs Anne-Laure LOZANO (rank 3)
- Mr Oliver CALVET (rank 4)

COLLEGE C

Univercité

- Mr Fériel GOULAMHOUSSEN (rank 1)
- Mrs Amélie BENSIMON (rank 2)
- Mr Miguel ORTIZ (rank 3)

CFDT-UNSA

- Mr Laurent LEBOUC (rank 1)
- Mrs Hasnaa ANISS (rank 2)

SUD RECHERCHE EPST-SUD ÉDUCATION

Mrs Myriam EVENNOU (rank 1)

L'université en commun

- Mrs Aline ALAUZET (rank 1)
- Mr Guillaume ATGER (rank 2)

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COLLEGE D1

BOUGE TON CAMPUS, avec tes associations

- Mrs Clarisse LILLI (Member)
- Mr Louis DESPLANCHE (Member)
- Mrs Danae JEAN-JACQUES (Alternate)
- Mr Issam TOURE (Alternate)

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- Mrs Enora LORCY (Member)
- Mr Théophile GRAPPE (Member)
- Mrs Inès PASQUIER (Member)
- Mr Dorian BARITEAU (Member)
- Mrs Clémence VESSELLE (Member)
- Mr Thibault COLCHEN (Member)

- Mrs Prescilia DA SILVA (Alternate)
- Mr Diego MARTIN-REYES
- (Alternate)
- Mrs Juliette RAABE (Alternate)Mr Christophe DEGORGUE
- Mr Christop
 (Alternate)
- Mrs Emma PEILLARD-POVEDA (Alternate)
- Mr Jordan GAMAIRE (Alternate)

COLLEGE D2

Marne-la-Vallée Student Assembly

- Mr Roland PANZOU (Member)
- Mrs Margot CHATELET (Member)
- Mrs Rosa MASKRI (Member)
- Mr Robin MANEVY (Alternate)
- Mrs Eva CERIO (Alternate)
- Mr Idiris SATGUN (Alternate)
- Mrs Yasmine HADDAD (Alternate)

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Elected member

- Mr Frédéric AQUILINA (Member) -High School Headmaster
- Mrs Valérie BAUDOUIN (Member) Professor of Sociology / Director of Studies at Télécom Paris
- Mrs Céline BONHOMME (Member) - Scientific Director of CEREMA, in charge of Research, Innovation and International Affairs
- Mr Alain BOUSCAYROL (Member) -Professor of Electrical Engineering, University of Lille 1
- Mr Éric CHARMES (Member) -Director of research at ENTPE, University of Lyon; Director of the RIVES laboratory
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- Mrs Maria EKSTROM (Member)
- Professor of Economics, Laurea University, Finland, PIONEER

- Mrs Claire HANCOCK (Member) - Professor of Geography, UPEC; VP of Doctoral Policy and Open Science
- Mrs Éléonore LACROIX (Member) - Director of General Studies, Development and Territories at RATP

STAFF REPRESENTATIVE APPOINTED BY LOT

Drawn by lot

• Mrs Malika GRIM-YEFSAH (Member) - Geographic and Cartographic Engineer for the State

A citizen-based university

Université Gustave Eiffel proposes a new way of working together with a focus on the whole community, including staff, teachers, researchers, students and partners. It aims to be a citizen-based university that is committed to promoting social progress, gender equality, quality of social dialogue and work life and social and environmental responsibility. It contributes to the dissemination of knowledge and scientific outreach.

2020 ELECTIONS ELECTORAL PROCESS: VOTING TOOK PLACE FROM 17 TO 24 NOVEMBER 2020 AT UNIVERSITÉ GUSTAVE EIFFEL

uring the elections held between 17 and 24 November 2020 at Université Gustave Eiffel, the "Réussir ensemble l'Université Gustave Eiffel" lists obtained the majority of seats on the Administrative Board and the Academic Board in the electoral colleges where

→ Gilles Roussel. © Élie Séchan



they were present. These lists were supported by Gilles Roussel, first Vice-President of Université Gustave Eiffel. Gilles Roussel was nominated to become President of the University by the Board of Directors (CA). His candidacy was examined and he was interviewed during the first session of the CA on 17 December 2020. Gilles Roussel was the only candidate. He was appointed President of Université Gustave Eiffel by the President of the Republic by decree published on 13 January 2021. He succeeds Hélène Jacquot-Guimbal, acting President of the University since its creation on 1 January 2020.

> Find out more: Gilles Roussel appointed President of Université Gustave Eiffel (January 2021)

THE "APPARTENANCE -MUTUALISATION - INTÉGRATION" (AMI) PROJECT IS AN IDÉES WINNER

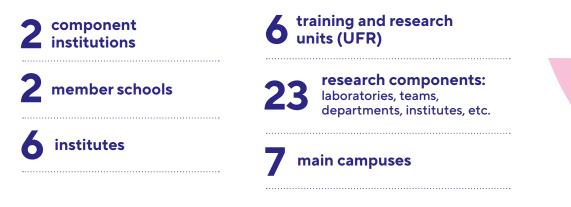
The "Appartenance – Mutualisation - Intégration (AMI)" project was submitted in response to the "Integration and development of IdEx and I-SITE" (IDéES) call for proposals organised by the Investments for the Future Programme (PIA) and was granted €3 million in funding. The project was submitted in partnership with the CNRS and aims to support the development of Université Gustave Eiffel through a gradual process of decompartmentalisation and integration of its resources, processes and communities. Its objective is to turn this decompartmentalisation process into a lever for added value for individuals and the institution. To begin with, the project aims to create a real sense of belonging and set up integrated shared management at every level of the new university.

Research and training campuses

Université Gustave Eiffel has several campuses across France, including Cité Descartes on the edge of Paris and regional campuses in Lyon, Nantes, Marseille, etc. Each site aims to offer a pleasant living environment for students, teacherresearchers and guest researchers.

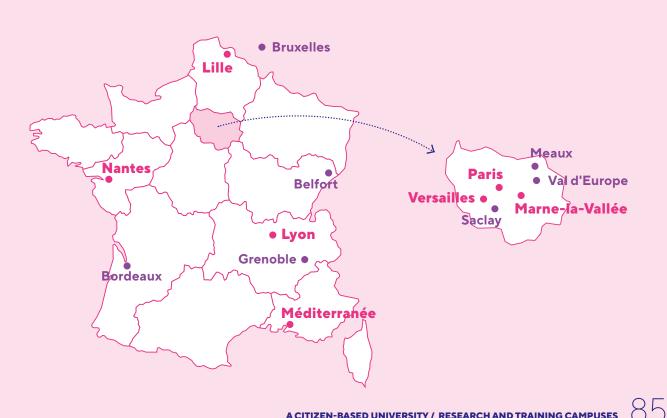
LOCATIONS OF THE CAMPUSES AND SCHOOLS

A national multidisciplinary university composed of various local facilities:



LOCATION MAP

CAMPUS INSTITUTE



MARNE-LA-VALLÉE CAMPUS

Université Gustave Eiffel headquarters 5, boulevard Descartes Cité Descartes 77420 Champs-sur-Marne 77454 Marne-la-Vallée Cedex 2 -France

Research laboratories: ACP, CPDM, DEST, DICEN, EMGCU, ERUDITE, ESYCOM, FM2D,

<u>GRETTIA, IRG, Lab'Urba, LAMA,</u> <u>LaSTIG, LATTS, PICS-L, LGE, LIGM,</u> <u>LIPHA, LISAA, LISIS, LVMT, MSME,</u> <u>Navier, OCS, SPLOTT, SRO, SV</u>

École d'architecture de la ville & des territoires Paris-Est (EAV&T)

12, avenue Blaise Pascal Cité Descartes 77420 Champs sur Marne - France Tel: +33 (0)1 60 95 84 00 Fax: +33 (0)1 60 95 84 47

ESIEE Paris

2, boulevard Blaise Pascal Cité Descartes BP 99 93162 Noisy-le-Grand Cedex - France Tel: +33 (0)145 92 65 00

École nationale des sciences géographiques (ENSG Géomatique)

6-8, avenue Blaise Pascal Cité Descartes Champs-sur-Marne 77455 Marne la Vallée CEDEX 2 -France

Val d'Europe

Institut Francilien d'Ingénierie des Services (IFIS) 6-8, cours du danube 77700 Serris

Meaux

IUT de Marne-la-Vallée Site de Meaux 17, rue Jablinot 77100 Meaux - France

PARIS CAMPUS

École des Ingénieurs de la Ville de Paris (EIVP) 80, rue Rébeval 75019 Paris - France Tel: +33 (0)156 026100

LILLE CAMPUS

Lille - Villeneuve-d'Ascq 20, rue Élisée Reclus BP 70317 59666 Villeneuve-d'Ascq Cedex Tel: +33 (0)3 20 43 83 43

Research laboratories: ESTAS, LEOST

LYON CAMPUS

Lyon - Bron 25, avenue François Mitterrand Case24 Cité des mobilités 69675 Bron Cedex - France Tel: +33 (0)4 72142300

Research laboratories: RRO, LICIT, LBMC, LESCOT,

UMRESTTE, UMRAE, DCM, ECO7

MEDITERRANEAN CAMPUS

Marseille

Faculté de médecine secteur Nord Boulevard Pierre Dramard 13916 Marseille Cedex 20 - France Tel: +33(0)4 9165 80 00

Research laboratories: LBA, <u>EMGCU</u>

Salon-de-Provence

304, Chemin de la Croix Blanche 13300 Salon-de-Provence - France Tel: +33 (0)4 90 56 86 30 Fax: +33 (0)4 90 56 25 51 **Research laboratories:** LMA, LEPSIS, Simu&Moto

NANTES CAMPUS

Nantes - Bouguenais Allée des Ponts et Chaussées Route de Bouaye - CS 5004 44344 Bouguenais Cedex - France Tel: +33 (0)2 40 84 58 00 Fax: +33 (0)2 40 84 59 99

Research laboratories: GéoEND, GMG, MIT, LAMES, GPEM, SMC, EE, GEOLOC, MACSI, SII, EASE, UMRAE

VERSAILLES CAMPUS

Versailles - Satory 25, allée des Marronniers 78000 Versailles - France Tel: +33 (0)1 30 84 40 00 Fax: +33 (0)1 30 84 40 01

Research laboratories: GRETTIA, LPC, LIVIC, LEPSIS, TEMA

OTHER SITES

Belfort

Fédération FCLAB Rue Thierry Mieg 90010 Belfort - France Tel: +33 (0)3 84 58 36 00

Research laboratory: FCLAB Federation

Bordeaux

Cerema DETER Sud-Ouest Rue Pierre Ramond - CS 60013 33166 Saint-Médard-en-Jalles Cedex - France

Research laboratory: ERENA

Grenoble

Maison des Géosciences 1381, rue de la Piscine 38400 Saint-Martin-d'Hères

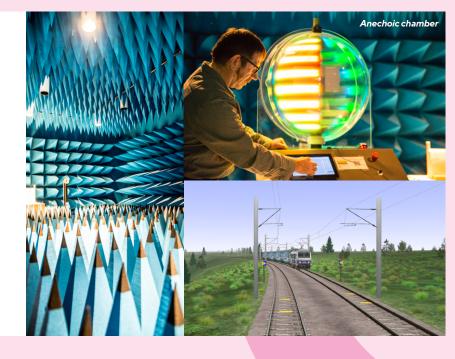
Research laboratory: ISTerre

LILLE CAMPUS

- Around 100 staff
- 2 departments on the site (COSYS and AME)
- 1 spin-off: Luxondes
- ERTMS simulator
- Railénium IRT staff

Subject areas:

- Spatial planning
- Waves and signals for transport
- Performance and Safety of Automated Transport Systems
- Logistics innovations
- Railway





LYON CAMPUS

- 260-300 staff
- 55 PhD students
- 4 departments
- 8 laboratories and EREs
- 11 departments of the DGS and 5 VP
- 🜔 8 ha

Subject areas:

- Environment and risks
- Health and Safety
- Urban worlds
- Infra and innovative mobilities

MEDITERRANEAN CAMPUS: MARSEILLE AND SALON-DE-PROVENCE

- Established in 1970
- Around 100 staff
- 2 laboratories (one UMR and one ERC), 2 laboratory facilities and one emerging team

Subject areas:

- Risk exposure
- Accident rate/Road safety
- Planning and Innovative Mobilities
- Health





MARNE-LA-VALLÉE CAMPUS

- Located 20km from the capital
- 🜔 120 ha
- 16,500 students
- 1,000 researchers and teacher-researchers
- Approximately 1,700 staff

Numerous infrastructures:

- Teaching buildings
- Research units
- Major equipment (Sense-City, test slab, clean rooms)
- The Georges Pérec Library, Maison de l'Étudiant
- Sports halls
- La Centrif

All training and research components are represented

- ESIEE Paris, EAVT and ENSG are hosted on the campus
- Premises in Meaux and Serris
- Two buildings in Noisy-le-Grand









Semi-anechoic room

NANTES CAMPUS

- 280-320 staff
- 40 PhD students
- 12 laboratories and EREs
- 🜔 145 ha

Subject areas:

- Urban worlds
- Infra and innovative mobilities
- Marine renewable energy
- Environment and risks
- Circular economy

VERSAILLES CAMPUS

80 staff

Fatigue test machine

- 10 PhD students
- 3 laboratories
- **0** 3 ha

Subject areas:

- Power electronics
- New urban cyclists
- Vulnerable transport users
- Simulators and virtual reality
- Driverless vehicles and shuttles



Training components

► Access the website page

16 training components:

schools, training units, institutes, etc. each with their own prerogative.

4 training component bodies

- National School of Geographical Sciences (ENSG-Geomatics);
- Paris-Est National School of Architecture, also called School of Architecture for the City and Territories (EAVT);
- Paris School of Urban Engineering (EIVP);
- Paris School of Electronic and Electrotechnical Engineering (ESIEE Paris).

7 Training and Research Units (UFR)

- Mathematics;
- Arts, Communication and Technology (LACT);
- Languages and Civilizations (L&C);
- Economics and Management Sciences (SEG);
- Human and Social Sciences (SHS);
- Sciences and Techniques of Sports and Physical Activities (STAPS);
- Paris-Est School of Engineering (ESIPE).

5 Institutes

- University Technology Institute (IUT);
- Gaspard Monge Institute of Electronics and Computer Science (IGM);
- Île-de-France Institute of Service Engineering (IFIS);
- Île-de-France Institute of Applied Sciences (IFSA);
- French Institute of Urban Planning (IFU), also called Paris School of Urban Planning (EUP).



23 research components:

laboratories, teams, departments, institutes

- Comparative Power Analysis (CPA);
- Architecture Urbanism Societies: knowledge, teaching, research (Ausser);
- Information and Communication Devices in the Digital Age (Dicen);
- Research Team on the Use of Individual Data in Economic Theory (ERUDITE);
- Urban Planning Laboratory (Lab'Urba);
- Techniques, Territories and Societies Laboratory (Latts);
- City, Mobility and Transport Laboratory (LVMT);
- Hannah Arendt Interdisciplinary Laboratory for the Study of Politics - Paris-Est (LIPHA-PE);
- Interdisciplinary Laboratory for Science, Innovation and Society (LISIS);
- Electronics, Communication Systems and Microsystems Laboratory (ESYCOM);
- Laboratory of Analysis and Applied Mathematics (LAMA);
- Gaspard Monge Computer Science Laboratory (LIGM);
- Geographic Information Science and Technology Laboratory (LASTIG);
- Navier Laboratory;
- Geomaterials and Environment Laboratory (LGE);
- Literature, Knowledge and Arts (LISAA);
- Institute for Management Research (IRG);
- Multi-Scale Modelling and Simulation (MSME);
- Planning, Mobility and Environment Department (AME);
- Materials and Structures Department (MAST);
- Geotechnics, Environment, Natural Hazards and Earth Sciences Department (GERS);
- Components and Systems Department (COSYS);
- Transport, Health, Safety Department (TS2).

Remarkable facilities

A MULTIDISCIPLINARY UNIVERSITY... REMARKABLE FACILITIES

 Philippe Avril, Head of University Property Policy, talks about the strengths, management policy and development plan of the university's property.

even campuses and 49 buildings across France, i.e. almost 200,000m²: this is the property managed by the Delegated General Directorate for Property and Logistics (DGDIL) of Université Gustave Eiffel. This heritage is composed of two types of buildings: "classic" university buildings used for teaching on the one hand and, on the other hand, research buildings dedicated to experiments. *"These diverse, heterogeneous buildings allow the pooling of skills and knowledge sharing*" says Philippe Avril. *"The surface area is due to increase by a further 30,000m² with the forthcoming acquisition of the ESIEE building*," explains the Delegated Director General of Property and Logistics.

Making our buildings as energy efficient as possible.

The DGDIL is implementing an ambitious energy policy for sustainable development: "we are working to make our buildings as energy-efficient as possible", explains Philippe Avril. This ambition is supported by **three million euros in funding from France Relance**, the recovery plan launched by the French government in 2020 that helps finance the thermal renovation of buildings. An energy audit was carried out on the Descartes campus in 2020 for the plan to connect to the GéoMarne heating network, a project which should take concrete form in late 2021 after completion of the technical and economic feasibility assessment of the geothermal substations.



ightarrow Clean rooms - ESIEE Paris







→ High: Fatigue test machine; middle left: Transpolis; middle right: Sense-City; down: Rhône register

The real estate sector of the University: **200,000 m²** for teaching and research

ightarrow Centrifuge



 \rightarrow Sense-City



Artist Rakajoo adds colour to the walls of IAE Gustave Eiffel

During the lockdown and the period when the students had to abandon the campus, Hall B of Bois de l'Etang in Marne-la-Vallée was given a new look. Artist Rakajoo spent a fortnight on the site in early December, during which he decorated the walls with two unique frescoes.



Artist Rakajoo © Stéphane Bisseuil

The IAE Gustave Eiffel team, the delegates and our team had been thinking for some time about improving the hall and the atmosphere of the building. I had an idea for a fresco and I suggested it to my manager, Christel De Lassus. I thought of Rakajoo because I know him through boxing, a sport we have in common," explains Barbara Georgiadou, Head of Communications and International Relations

Université Gustave Eiffel now hosts the work of up-an-coming artist Rakajoo ("stubborn" in Wolof), whose real name is Baye-Dam Cissé and who was included in the exhibition "Jusqu'ici tout va bien" by the Kourtrajmé school at the Palais de Tokyo in Paris last summer. The Senegalese artist and former top-level boxer is an autodidact who has made his own way with a little help from fate. On the occasion of the completion of the work, we asked him a few questions.

How did you feel about the invitation to create this mural? Did you accept straight away?

I'm not a "street artist" but more of a figurative painter in the classical sense of the term. It was tricky because, with my background in boxing, I prefer smaller formats, or at least "transportable" ones. I had also said I wouldn't do any more murals! I had already done a large one for my boxing club in 2008, funded by the Lagardère foundation which was a partner and supported the athletes. In spite of all that, the proposition was a welcome one and I agreed, although I had to find a time in my schedule. This time it really is my last mural!

ightarrow Mural painted by Rakajoo on the Bois-de-l'Etang building



As a self-taught artist, what are your sources of inspiration in general?

I have drawn since I was very young, but I never went to art school because it's expensive. I was interested in the art world but I didn't know how to go about entering it. In 2008, I met Arnaud Lagardère who came to the inauguration of the club's mural. He gave me the chance to have my first exhibition (editor's note: on the theme of sport in Paris, at the Théâtre du Châtelet). He got me this first exhibition and also offered me the opportunity of either going to art school or to an animation studio. I chose the latter.

I like different techniques: painting, cartoons and animation, which I learned along the way. My inspiration comes from Lucian Freud, Kerry James Marshall, Jenny Saville and Jacob Lawrence, artists I particularly appreciate.

What did you want to convey through the drawings of these new murals?

In the first fresco, you can see cogs. This is the idea of learning, that you control the workings of the future thanks to knowledge. In the second one, in parallel, you see the confrontation between the old world and the new. At university, the student leaves their old life behind and looks to the future. I wanted to express this idea of moving on with strong symbolism marking a transition to something new. There is also a sense of looking to the future for myself because I am moving on to new artistic adventures in 2021.

Did you have to adapt to the university environment in any way?

When you work in this kind of place, it's to fulfil an order. We discussed the project and I proposed several drawings to choose from. I had quite a lot of freedom. For the colours, I had to use those of the Université Gustave Eiffel and the IAE Gustave Eiffel. It suited me fine having fewer colours!

What are your plans for 2021?

I have exhibitions planned at the Société Générale foundation, another one in a gallery and I am currently working on an animated series.



Assert and coordinate the University's national ambition

A few words from Jean-Paul Mizzi, Vice-President of "Campus Policy Coordination" and Director of the Université Gustave Eiffel Méditerranée Campus.





Multiple footholds nationwide: a specificity and an asset.

My role is to ensure the setting in motion, synergy and coherence of actions between the campuses of Université Gustave Eiffel: Lille, Lyon, Marnela-Vallée, Nantes, Paris, Versailles and Méditerranée. The aim is to enhance the visibility and attractiveness of the establishment on a national and international scale, to establish shared strategy and positioning, and to promote our academic and scientific potential along with our abilities for regional action. We also ensure the principle of equal treatment is upheld, regardless of the student's campus, the support staff, the researcher or teacher-researcher.

The University's presence in various geographical regions serves as both a specificity and an asset in asserting the national ambition of the establishment in the field of research, higher education and innovation. Each campus integrates a regional ecosystem and fosters the creation of partnerships with State representatives (President-delegates at ESRI and DRARI), regional councils and reference healthcare institutions (ESR), etc. The University's campuses and branches lie at the heart of the AMI project ("Belonging - Pooling – Integration"). The project has been selected in the framework of the IDéES call for projects (Integration and Development of IdEX and ISITEs), and its aim is to create a genuine sense of belonging and implement integrated, joint steering on the scale of the establishment.

The University's regional footholds throughout France provide a broader view and contribute to an enhanced approach to a variety of regions, themes and ecosystems, etc. Our various campuses and branches serve as playing fields for a scaling-up and transversality of actions. As an example, following Storm Alex, which hit the Alpes-Maritimes region in October 2020, a technical feedback operation called on experts from the Méditerranée, Nantes and Marne-la-Vallée campuses, CEREMA and Côte d'Azur University. This pooling of skills represents an added value at the service of regions and public policies.

2020 also saw the operational launch of the college of campus directorates. During the health crisis, this college enabled us to coordinate and implement actions such as the regulations to follow on the various campuses, and to share local actions in aid of medical workers or students (e.g., protective gear produced with our 3D printers). The upcoming actions of the college will be aimed in particular at consolidating the brand image of campuses under the Gustave Eiffel name, founded on innovation and leadership.

Commitments and Values

The Equality mission deploys its action plan

Gender equality is one of the fundamental values of Université Gustave Eiffel and is the subject of a specific mission set up by the President of the University. In 2020, the Equality mission laid the foundations for the development of a professional equality plan and launched several schemes and actions for fighting a culture of impunity and promoting an inclusive society.

Are you a victim or have you witnessed sexist, discriminatory or sexual violence? The University is committed to fighting these forms of violence. The Equality mission will support and guide you in taking action." This message is now included in the University's welcome booklet for students. The Equality mission is led by two equality officers, Caroline Trotot, former Assistant Vice President for Research, and Karine Marot, Vice-President for Student Affairs, and is supported by representatives from each of the university's components. It has a clearly defined objective: "to ensure the promotion of gender equality within the institution and, more generally, respect for people of all sexes and genders, regardless of their sexual orientation »

Throughout the year, the Equality mission carried out support, prevention, training and awareness-raising actions to encourage and promote a culture of equality in conjunction with the presidency and the University's departments and governance bodies. Its actions are part of a plan for professional equality that was initiated in 2020. The analysis and diagnosis of HR data and the creation of a steering committee with three working groups (human resources, time balance, the fight against harassment and discrimination) has allowed collective progress to be made.

FIGHTING AND RAISING AWARENESS

vieetudiante.harcelement@univ-eiffel.fr and drh.harcelement@univ-eiffel.fr two University email



 \rightarrow A space dedicated to innovation in education, the La Centrif' building has been renamed after a female pioneer in computer science: Ada Lovelace.

addresses available to students and staff for reporting violence. "These addresses allow the University to deploy its whistle-blower system across the whole of the new establishment and to meet the new requirements set out in the Decree of 13 March 2020. They make it easier to collect and process complaints. Several people have already used it," says Thierry Fragnet, Project Manager in the President's office whose work supports the Equality mission. Four cases were reported in 2020, one of which led to exclusion after investigation. During the lockdown from March to May 2020, the Equality mission also distributed several publications including a brochure on cyberbullying and a memo for all staff on *What to do when you see a case of harassment*. Among its awareness-raising activities, the Mission also organised radio interviews, lunchtime conferences, training sessions for staff and a day of meetings on the subject of "**Thinking about gender equality and the fight against discrimination through research at Université Gustave Eiffel**", on 22 September. These materials, as well as many



A network of "watchmen and women" for a culture of equality

The "equality watchmen and women" scheme was also launched in 2020 and is based on the same principle as the one at EAVT. Designated members from the components and departments will work in conjunction with the Equality Mission to monitor, report, listen and raise awareness to promote the creation of a shared culture of equality across the establishment. The "watchmen and women" network is due to be set up on 2021 on a voluntary basis.

Sustainable Development & Social Responsibility

THE CHALLENGES OF SUSTAINABLE DEVELOPMENT AT THE UNIVERSITY WITH THE DD&RS

Reduce our environmental impact and take account of social issues at Université Gustave Eiffel: this is the aim of the Sustainable Development and Social Responsibility (DD&RS) mission and its actions. The team is composed of five members and its objective is to obtain the sustainable development and social responsibility label for higher education institutions. Clémence Garnier, Head of the mission, explains.

"Since its creation on 1 January 2020, Université Gustave Eiffel has wanted to take account of the social and environmental impact of all its components," says Clémence Garnier. Former Prevention Coordinator and Sustainable Development Officer at Ifsttar, Clémence

others, are all available on the Equality mission's website: https://mission-egalite.univ-gustave-eiffel.fr.

In the last quarter of 2020, the Equality mission team saw the arrival of two new members (a student on a student job and a project manager) and it has set itself the target of "boosting communication and training actions, for example among examiners, to fight against all forms of discrimination", between 2021 and 2023. The aim is to provide a safe and serene working environment and protect the physical and mental health of the university community.



 \rightarrow Clémence Garnier, Head of the Sustainable Development and Social Responsibility (DD&RS) mission.

Garnier is now in charge of the Sustainable Development and Social Responsibility (DD&RS) mission at Université Gustave Eiffel. She leads a team of four other people in conjunction with Corinne Blanquart, Vice-President for Transformational Projects and Social Mission. "Our aim is to obtain the sustainable development and social responsibility label for higher education institutions by 2023. It would give the University a higher profile, particularly among students, 78% of whom feel that an institution that takes account of environmental and social issues is more attractive."

The mission's team is currently working on structuring the university's DD&RS. The first step is to create a network of contacts across the different campuses and training and research components." Their role is to be actors and relays in the implementation of the DD&RS. These contacts may also take part in working groups and events," explains Clémence Garnier. "The network is still being structured and any staff or students who are interested can contact us." The actions carried out by the DD&RS mission are grouped according to the four focus points of the DD&RS evaluation criteria: governance and strategy, training and teaching, research and innovation, environmental management and social policy." For example, we will be initiating discussions with the different stakeholders (students, staff, clients, service providers) to co-construct our action plan and identify challenges, expectations etc. We will use multiple media channels to get as much feedback as possible, including guestionnaires, interviews and the University's collective intelligence platform." Université Gustave Eiffel has also joined major international networks to share advice and experience: the Sustainable Development Solutions Network, the Sustainable Development Club for Public Establishments and Companies and the Collective for the Integration of Social Responsibility and Sustainable Development in Higher Education.

The DD&RS mission has also begun a greenhouse gas emissions assessment and launched a mobility survey on the journey habits of staff and students. This survey should lead to the creation of a mobility plan to limit the use of individual cars. "We are also working with the Purchasing Department to establish sustainable development clauses and criteria for decisions concerning purchases and service providers," continues Clémence Garnier. "The aim is to prioritise Aid through Employment Establishments and Services (ESAT), insertion companies and companies that are careful about their environmental and social impact." This is the case of the company Ecodair, which reconditions computer equipment and with which the University has signed a partnership agreement to help students acquire computers. "In terms of social policy, we also promote diversity and parity in our recruitment policy and are working on a policy to improve the quality of life at work."

"As a university, we also place a lot of importance on teaching and raising awareness of sustainable development," continues Clémence Garnier. To this end, the DD&RS mission team organised multiple events at key moments in the year, such as the European Sustainable Development Week, the European Mobility Week and the European Waste Reduction Week." For example, we offered a webinar on waste recovery as part of the circular economy; zero waste workshops; awareness-raising events on harassment and homophobia; a presentation of researchers' work on sustainable mobility and the Rentrée Climat event. Thanks to this collective intelligence workshop, led by Fresque du Climat, 600 of our students (EIVP, ENSG, ESIEE and the University's components) learned more about climate change."

LISIS COMMITTED TO UN SUSTAINABLE DEVELOPMENT GOAL 12: "ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS"

The One Planet network's sustainable food systems programme is one of the five multi-actor programmes coordinated by the UN Environment as part of the 10-year framework programme for Sustainable Development Goal 12: "Ensure sustainable consumption and production patterns". ALISIS researcher is a member of the programme's administrative committee and contributed to writing the three positioning reports. She coordinates a task force on food systems knowledge and assessment tools.



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For more information, go to **www.univ-gustave-eiffel.fr**

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