

The cover features a dark blue background with a collage of images and patterns. The images include a person at a computer, a woman in a meeting, and a group of people on stairs. The patterns consist of white dots and repeating circular motifs. The text 'ACTIVITY REPORT 2022' is centered in a large, white, sans-serif font.

# ACTIVITY REPORT 2022

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## THE PRESIDENT'S EDITORIAL

### We wish to confirm our position as a major institution in service of tomorrow's cities

After the pandemic period, a difficult time for all, 2022 was a year of confirmation and consolidation for our institution. We exited a stage of uncertainty around our organisation and experienced many successes.

The challenge is now to move out of the experimentation phase and stabilise our university in its current form: a major institution with a legitimate and clear focus on the cities of tomorrow. This requires further developing our collaborations with academic and socioeconomic actors, in both research and training, in order to provide territories and public authorities with innovative responses to address the challenges posed by major societal transitions.

### Our clear positioning around the cities of the future contributes to our success.

After receiving the I-SITE label in March 2022, our range of courses has become more coherent, with the ESIPÉ-ESIEE Paris merger, the new Gustave Eiffel Apprentice Training Centre for our apprentice engineers, and a consolidation of urban engineering courses at EIVP.



Furthermore, with the AVID project (Learning for Sustainable Cities) selected for the "Future Skills and Professions" call for expressions of interest, we will develop our undergraduate courses so that each student understands and can address global sustainable development challenges, as future actors of sustainable cities.

We also received other forms of recognition of our essential role for tomorrow's cities and our ability to steer major research programmes, namely, two PEPRs on cities and mobility, and the Sci-ty prematuration and



maturation project. These programmes are co-piloted with partners such as CNRS, IFPEN and SATT Erganeo. They provide us with additional resources to support national acceleration strategies around cities and mobility, as well as to develop our start-up creation and technology transfer initiatives.

This is also the aim behind creating the Université Gustave Eiffel Foundation, a subject of external communication and a way to consolidate our support for territorial and socioeconomic actors. This new development tool for the university is addressed towards businesses, local governments and associations, and will help create new partnership projects. It should scale up quickly.

I would also like to highlight the wealth of activity and expertise in our laboratories, which resulted in multiple projects supported by the ANR, EU funding programmes and the France 2030 Plan in 2022.

This post-Covid “return-to-normal” was also observed in student life. Following the various lockdown restrictions, it bounced back revitalised, in the areas of sport, culture, student associations, and so on. Initiatives relating to health, prevention and social assistance launched during the pandemic were also extended and increased for the most disadvantaged students. One of the key moments in 2023 will be the Student Parliament elections, as the current members have accompanied Université Gustave Eiffel since its creation.

## We have reached the level of maturity needed to become stable and established.

In this way, our university has reached the level of maturity needed to become stable and established. However, there is still much to do, particularly in order to prepare for the future assessment of our courses, research units and institutional plan by the High Council for the Evaluation of Research and Higher Education (Hcéres). We must also define our major strategic positions in terms of property, infrastructure and digital technology, and continue our work to make life and processes simpler for our staff. The goal is for all of us to work better together, in order to become even more efficient and attractive.

**GILLES ROUSSEL**  
*President of Université Gustave Eiffel*



# MUCH MORE THAN A UNIVERSITY

- .10 Our history and values
- .11 Challenges and ambitions:  
transforming lives and cities
- .13 Our strengths
- .16 Our organisation
- .20 The university in figures
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## Our history and values

### CONTINUING A COMMON HISTORY LAUNCHED MORE THAN 20 YEARS AGO

Our university was created in 2020 based on an innovative model bringing together for the first time in France the trio of university, schools and a research organisation.

We are the result of a common history launched more than 20 years ago between a university (UPEM), a research organisation (IFSTTAR), three engineering schools (ESIEE Paris, ENSG, EIVP) and an architecture school (Éav&t).

By pooling our many strengths in the fields of training and research, we create better synergy, broaden our range of skills and thus meet our ambition of transforming lives and cities. Université Gustave Eiffel is notably responsible for the FUTURE I-SITE project: preparing the transformation and sustainable adaptation of cities and territories.

\*UPEM (University of Paris-Est Marne-la-Vallée)  
IFSTTAR (French Institute of Science and Technology for Transport, Development and Networks)  
ESIEE Paris (Paris School of Electronic and Electrotechnical Engineering)  
ENSG (National School of Geographical Sciences)  
EIVP (Paris School of Urban Engineering)  
Éav&t (Paris - Est School of Architecture for the City and Territories)  
I-SITE FUTURE is a scientific and institutional project initially led by the Université Paris-Est (UPE), and developed alongside the 7 members and associates.

Aerial view of the  
Marne-la-Vallée campus  
© Myr Muratet

## Challenges and ambitions: transforming lives and cities

**By 2050, according to the UN, 70% of the world's population will be living in urban areas and we will have to face the pressing challenges of urbanisation while ensuring the social, economic, environmental and climatic balance of the planet.**

### OUR RESPONSES TO SOCIETAL, ENVIRONMENTAL AND CLIMATE CHALLENGES

....

**Looking to the different disciplines and breaking down barriers between them**  
Faced with these major challenges, at Université Gustave Eiffel we are breaking down the barriers between disciplines in order to produce innovative knowledge to serve future transformations.

We analyse, research and make deductions in order to propose solutions while constantly confronting and questioning all disciplines including science and technology, human and social sciences, economics and architecture.

....

**Training and supporting future generations to reinvent the world of today and imagine the world of tomorrow**

Training students, helping them to innovate and create with a view to reinventing the world of the future is an essential mission of the Université Gustave Eiffel project. In order to reflect on and solve these societal and environmental challenges, we are committed to supporting and accompanying future generations, the enlightened and committed generations of citizens, those who make up the world of today and are building the world of tomorrow.

**Training students, helping them to innovate and create with a view to reinventing the world of the future is an essential mission of the Université Gustave Eiffel project.**

....

**Acting as a bridge for our students to the socioeconomic world**

We provide a bridge between the academic and socioeconomic worlds, and are the leading French university in terms of apprenticeships. We adapt our courses to socioeconomic issues and offer them at all ages and stages of life.

....

**Developing high-level research and expertise**

We have a wide range of facilities throughout the country, enabling us to develop high-level research and expertise. As the leader in France in the field of sustainable cities, we alone represent ¼ of French research in this field. We are present in 15 international research and training networks.



.....

**Informing society and public policy decision-making and developing together with our partners**

We are knowledge brokers and have a mission to enlighten society as a whole. We work hand in hand with public and socioeconomic actors to invent cities in which women and men can live better, together, and become actors of change.

.....

**Bringing together committed and creative staff**

On our various campuses throughout the country, we bring together curious, creative and committed women and men who strive every day to create a better societal and environmental future.

Aerial view of ESIEE Paris, Université Gustave Eiffel  
© Descartes Développement & Innovation,  
Eric Morency 2021



## Our strengths

### NATIONWIDE PRESENCE

In addition to its main location in eastern Paris, Université Gustave Eiffel is also present in regional locations that enable it to fulfil its training and research mission. This multi-location presence is both a particularity and an asset in affirming the national ambition of the institution. Each campus belongs to a territorial ecosystem, allowing us to increase our collective capacity to be and to act with, on the one hand:

- a national perspective on subjects and objects;
  - an ability to promote scaling up and to support the development of industries;
  - an ability to provide learning spaces and attract partnerships;
- and, on the other hand:
- the power to bring people together and collaborate through interweaving ecosystems;
  - an ability to cross-reference needs and skills within a network;
  - an ability to support public action in the development of common actions and in the definition of their regulatory framework, as close as possible to territorial expectations.

### APPRENTICESHIP

Université Gustave Eiffel is the leading university in France in terms of apprenticeship training, with more than a quarter of its students on apprenticeships. For more than fifteen years, through its various components and institutions, it has been developing apprenticeships in many courses, promoting both a teaching method based on work-study programmes and the employability and professional integration of students.

### PEDAGOGICAL INNOVATION

Supporting pedagogical innovation: this is one of the ambitions of Université Gustave Eiffel. This action is based in particular on our Centre for Pedagogical and Digital Innovation (CIPEN), which works to develop internal competence in supporting teachers, the attractiveness and international scope of training programmes, entrepreneurship and courses of excellence.

**Supporting pedagogical innovation: this is one of the ambitions of Université Gustave Eiffel.**

### TRANSFORMATIVE PROJECTS

Transformative projects aim to support and promote the University's missions and the careers of its staff through an approach based on decompartmentalisation and synergy with the objective of building a community.

They are cross-disciplinary projects, creators of synergies between missions and/or individuals and leaders of development for individuals, missions and the local areas around the different campuses. Their transformative nature can also be appreciated with regard to the university's responsibility toward the local territories of its campuses and society as a whole.

Transformative projects include several major programmes in the framework of national strategies concerning higher education and research, such as the Investments for the





Fatigue test machine, Nantes campus  
© Myr Muratet

Future Plan. The I-SITE FUTURE project and its associated LABEX organisations, the “GP-DS” SFRI project, the “AMI” IDEeS project and the “City-Fab” ExcellenceS project are all transformative projects.

#### SCIENTIFIC PLATFORMS

Designing and manufacturing micro sensors? Experimenting with new technologies for urban mobility? Assessing the performance of urban equipment and materials?

Université Gustave Eiffel has a wide range of scientific facilities, otherwise known as platforms, which enable it to develop high-level research and expertise. Some of these are deemed to be “outstanding facilities”.

These are rare facilities that enable the university to conduct original research, experiments and/or trials, facilities that are linked to a significant scientific output (theses, publications, research reports, etc.), facilities that are essential to research structures in implementing their scientific priorities, facilities that bring together major partnerships or networks for the university, and facilities that back up training programmes with practice.

These platforms concentrate projects, skills and resources, and are at the service of students, researchers, local authorities, public authorities and companies (start-ups, SMEs, large groups, etc.). They provide them with high-level resources, promote collaboration and enable them to conduct

original research, experiments and/or trials in the following areas:

- infrastructure and materials;
- transport infrastructure and security;
- environment and territories;
- components and systems;
- mobility and simulation;
- driving simulators.

Their purpose: research, experimentation but also innovation and knowledge transfer.

Semi-anechoic room, Nantes campus  
© Sophie Jeannin



# Our organisation

## MANAGEMENT BODIES, THE DIRECTORATE GENERAL OF SERVICES AND COMMITTEES

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### Governance

Governance centres around the President and a set of vice-presidencies and missions. Among them, there are two flagship missions of social commitment:

#### • The Equality Mission

This mission is tasked with promoting gender equality within the institution and, more generally, respect for people of all sexes and genders, regardless of their sexual orientation, ethnicity or religion. This essentially involves support, prevention, training and communication.

#### • The Sustainable Development and Social Responsibility (DD&RS) Mission

Its objective is to raise awareness of environmental issues among the institution's staff and users and to work towards sustainable development. The University aims to obtain the DD&RS label (a CSR commitment accreditation for universities and graduate schools) in 2022-2023.

••••

### Board of Directors

The Board of Directors is the governing body of the university and determines its strategy and general orientations. It is composed of 34 members: 15 elected members, 11 ex-officio members and 8 external members.

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### Academic Council

The Academic Council represents the staff and users of the institution and deliberates on matters of education and research. In particular, it guarantees the link between research and teaching. The Academic Council

is composed of 71 to 75 members, including 60 elected officials, 10 external members and 1 to 4 staff representatives.

••••

### Student Parliament

This Parliament is a unique body in the French university landscape. It was created by and for students, and is composed solely of students elected within the components and other bodies, as well as students from the university's associations. Its mission is to contribute to the well-being of students, both in their training and in their daily lives, by supporting projects ranging from the organisation of cultural events to the development of student life.

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### The Directorate General of Services (DGS)

The DGS is responsible for the management, organisation and operation of the administrative, financial and technical services of the institution. It contributes to the development of the institution's policies and ensures their operational implementation. The DGS designs, implements and monitors the institution's performance indicators in the areas of administrative, financial and asset management, human resources and information systems.

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### Technical Committees and Health, Safety and Working Conditions Committees

The Technical Committee is a consultation body dealing with questions and draft texts relating to the organisation and operation of services, issues surrounding staff numbers, jobs and skills and special statute drafts.

The Health, Safety and Working Conditions Committee, another consultation body, is responsible for protecting the physical and mental health of staff and their safety in the workplace, and helps to improve working conditions.

Université Gustave Eiffel has a technical committee and a health, safety and working conditions committee for the institution, which are responsible for issues relating to the merged institutions, as well as a technical committee and a health, safety and working conditions committee common to the university, its component institutions and its member schools, which deal with common issues. For their own issues, the component institutions and the member schools are not covered by the joint technical committee and health, safety and working conditions committee and have their own bodies.

••••

### The Social Action Committee

Université Gustave Eiffel has a Social Action Committee responsible for contributing to the definition of the social action policy to be implemented for the university's active and retired staff.

This committee studies and proposes measures relating to the organisation and management of social action as well as its improvement and development. It is responsible for all matters relating to social action and is tasked with drawing up an assessment of the situation, carrying out a survey of social needs and making proposals to the administration.

## TRAINING COMPONENTS

15 training components, schools, training units, institutes, etc.

#### • 2 component institutions:

- Paris School of Urban Engineering (EIVP)
- Paris-Est School of Architecture for the City and Territories (Éav&t)

#### • 2 member schools:

- National School of Geographical Sciences (ENSG – Géomatique)
- Paris School of Electronic and Electrotechnical Engineering (ESIEE Paris)

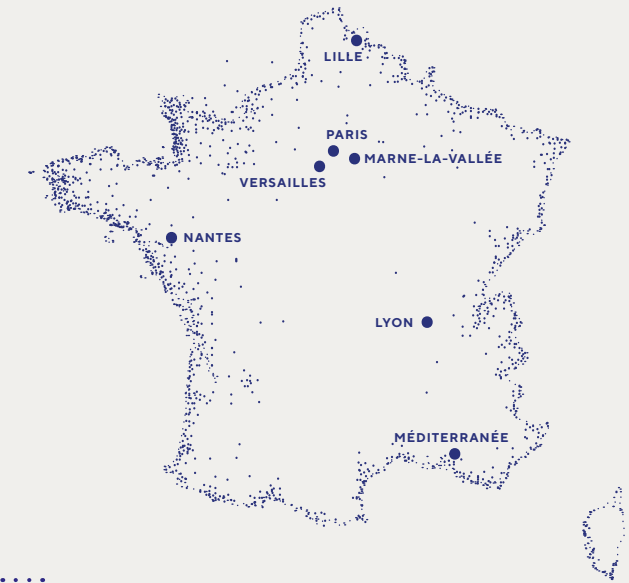
#### • 6 training and research units (UFR):

- Mathematics
- Literature, Arts, Creation and Technology (LACT)
- Languages, Culture and Society (LCS)
- Economics and Management Sciences (SEG)
- Human and Social Sciences (SHS)
- Sciences and Techniques of Sports and Physical Activities (STAPS)

#### • 5 institutes:

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





Campus de  
 Marne-la-Vallée  
 © Myr Muratet

## RESEARCH COMPONENTS

23 research components, laboratories, teams, departments, institutes:

- Comparative Power Analysis Laboratory (ACP)
- Observatory of Suburban Condition Team (OCS)
- Information and Communication Devices in the Digital Age Laboratory (Dicen)
- Research Team on the Use of Individual Data in Economic Theory (ERUDITE)
- Urban Planning Laboratory (Lab'Urba)
- Techniques, Territories and Societies Laboratory (Latts)
- Cities, Mobility, 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 Laboratory (LISAA)
- Institute for Management Research Laboratory (IRG)
- Multi-Scale Modelling and Simulation Laboratory (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 and Safety Department (TS2)

## 7 RESEARCH AND TRAINING CAMPUSES

Université Gustave Eiffel has several campuses throughout France, including the Marne-la-Vallée campus, just outside Paris, as well as campuses in Paris, Versailles, Lyon, Nantes, Méditerranée, Lille, etc. There are also branches in Belfort, Brussels, Bordeaux, Grenoble, Meaux and Val d'Europe.

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### Marne-la-Vallée Campus

Most of the training and research components are present here, as well as in Val d'Europe and Meaux. The main research themes are urban planning and transport. Also present are the major fields of study such as Mathematics, Humanities, Languages, Management, Human and Social Sciences, Sciences and Techniques of Sports and Physical Activities and some of the major facilities of our university.

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### Lille Campus

Research themes and contribution to training:

- Spatial planning
- Waves and signals for transport
- Performance and safety of automated transport systems
- Logistics innovations
- Railway

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### Lyon Campus

Research themes and contribution to training:

- Environment and risks
- Health and safety
- Urban worlds
- Infrastructure and innovative mobility

.....

### Mediterranean Campus

Research themes and contribution to training:

- Risk exposure
- Accident rate/Road safety
- Safe facilities and innovative mobility
- Health and engineering for healthcare

.....

### Nantes Campus

Research themes and contribution to training:

- Infrastructure and innovative mobility
- Marine renewable energy
- Environment and risks
- Circular economy
- Urban worlds

.....

### Paris Campus

The Paris campus is home to the Paris School of Urban Engineering (EIVP). It is the Grande École of urban engineering and a reference in terms of teaching and research on the themes of sustainable urban development and management.

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### Versailles Campus

Research themes and contribution to training:

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



# The university in figures

**1** atypical, pioneering and multidisciplinary university

**1** university on a human scale

- 16,238 students  
4,098 apprentices

- 2,947 staff members (1,401 women - 1,546 men)  
488 lecturers  
354 lecturer-researchers  
299 researchers  
1,547 support and service staff  
259 PhD students

**5** major challenges

- Climate change
- Urban resilience
- Economical and frugal urbanisation
- Inclusive and equitable urbanisation
- Sustainable urbanisation for health and well-being

**1** Ambition

Fairer and more equitable cities

# Revenue and expenditure

2022 was marked by the confirmation of the I-SITE label, showing that the French government recognises the strength of our university's project.

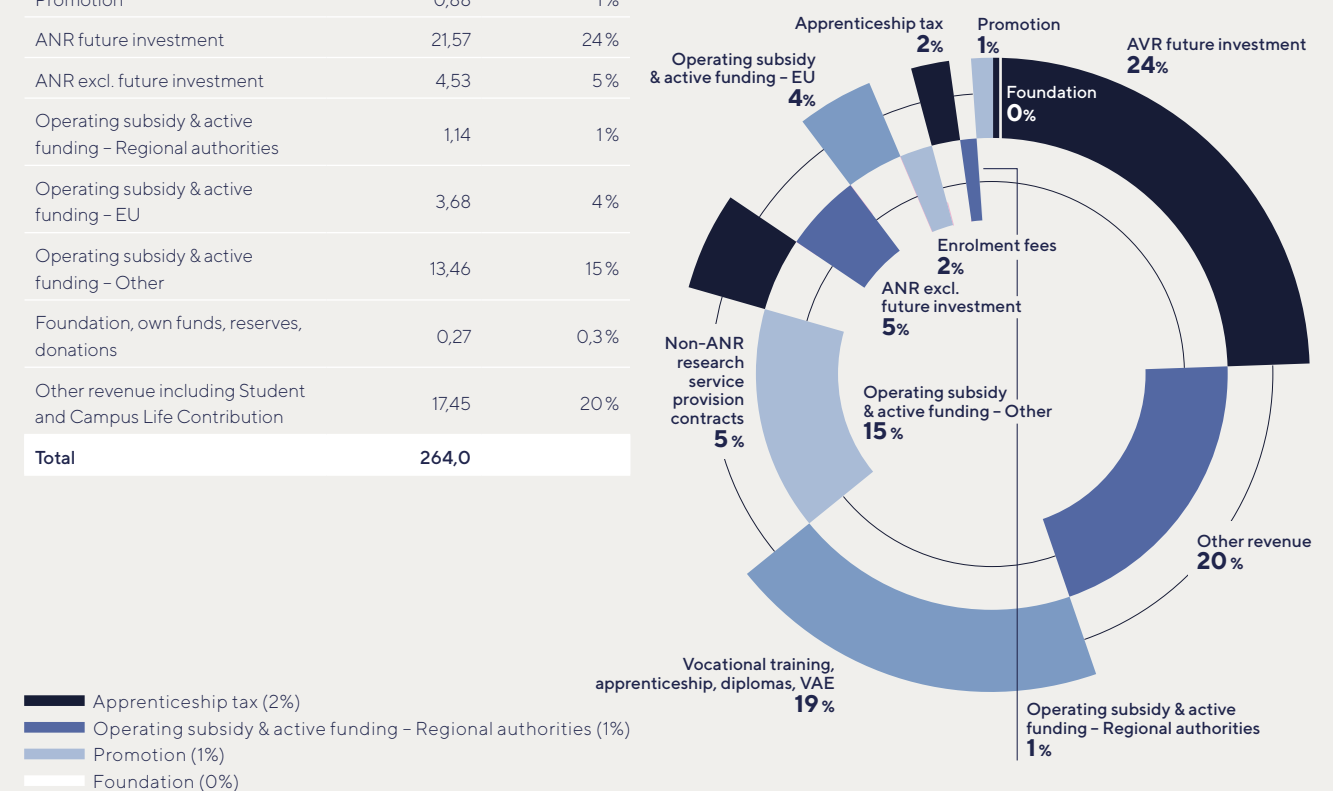
Origin of revenue in millions of euros	Received in 2021	% (excl. SCSP)
Subsidies in connection with public service	175,18	NS
Enrolment fees	1,99	2%
Vocational training, diplomas, VAE	17,28	19%
Apprenticeship tax	1,74	2%
Non-ANR research service provision contracts	4,83	5%
Promotion	0,88	1%
ANR future investment	21,57	24%
ANR excl. future investment	4,53	5%
Operating subsidy & active funding - Regional authorities	1,14	1%
Operating subsidy & active funding - EU	3,68	4%
Operating subsidy & active funding - Other	13,46	15%
Foundation, own funds, reserves, donations	0,27	0,3%
Other revenue including Student and Campus Life Contribution	17,45	20%
<b>Total</b>	<b>264,0</b>	

## REVENUE

Revenue increased by 9.5%. The budget balance was forecast at -€9.0m, but ended up at +€8.9m with cash flow at a comfortable level (€55.4m).

95.7% of the revenue forecast was fulfilled, i.e. €264 million, an increase of €23 million on 2021.

## DISTRIBUTION IN %



## EXPENDITURE

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### Operations

- Operations in millions of euros: €49.1m, 81% fulfilled

Operations in millions of euros	CA spent	%
Initial and vocational training	5,65	12%
Documentation	1,17	2%
Research	13,58	28%
Property	13,22	27%
Steering and support	15,06	31%
Student Affairs	0,42	1%
<b>Total</b>	<b>49,11</b>	<b>100%</b>

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### Investment

- Commitment authorisations in investment (€14.8m) 73% spent

Investment in millions of euros	CA spent	%
Initial and vocational training	1,61	11%
Documentation	0,02	0%
Research	4,81	32%
Property	7,76	52%
Steering and support	0,66	4%
Student Affairs	0,01	0%
<b>Total</b>	<b>14,86</b>	<b>100%</b>

....

### Payroll costs

- Expenditure (€255m in commitment authorisations) managed and 91% fulfilled
  - Payroll costs in millions of euros

Payroll costs in millions of euros	CA spent	%
Initial and vocational training	55,19	29%
Documentation	2,83	1%
Research	85,84	45%
Property	2,28	1%
Steering and support	43,54	23%
Student Affairs	1,71	1%
<b>Total</b>	<b>191,4</b>	<b>100%</b>

# Prizes and distinctions

## DISTINCTIONS



**YANNICK FALAISE**

**Unit**  
MAST-SMC

**Prize**  
Knight of the French Order of Merit



**MURIEL JOUGLEUX**

**Unit**  
IRG

**Prize**  
Knight of the French Order of Merit



**L'HORTY YANNICK**

**Unit**  
ERUDITE

**Prize**  
Officer of the French Order of Merit

## PHD PRIZES

### ISMAIL ALJ

**Unit**  
MAST-EMGCU

**Prize**  
Bronze medal, 2022 SMA Thesis Trophies

### FLORENT KOECHLIN

**Unit**  
LIGM

**Prize**  
Thesis Prize, 2022 Paris-Est Sup

### CLAUDIA-ANTONELLA WILFINGER

**Unit**  
ESYCOM

**Prize**  
People's Choice - Final of the "My Thesis in 180 Seconds" International Competition, Paris-Est Sup

### PAUL LECAT

**Unit**  
ACP

**Prize**  
2022 Thesis Grand Prize, PUCA, APERAU and Caisse des Dépôts Research Institute

## PRIZES FROM LEARNED SOCIETIES, ASSOCIATIONS AND FOUNDATIONS

### LULIN ZHANG

**Unit**  
LASTIG

**Prize**  
Best Thesis Prize, EuroSDR  
(European Spatial Data Research)



### ABDELKARIM AITMOULA

**Unit**  
LMA

**Prize**  
1<sup>st</sup> Prize, FIM (Federation Internationale  
du Motorcycle) Europe Young  
Researchers Awards



### VÉRONIQUE BOUTEILLER

**Unit**  
MAST-EMGCU

**Prize**  
2021 Prize, AFGC (French Civil  
Engineering Association)

### LOÏC DIVET

**Unit**  
MAST-CPDM

**Prize**  
Manuel Rocha Research Award  
(Sept 2022)

### EVA QUÉHEILLE

**Unit**  
MAST-GPEM

**Prize**  
2021 Youth Prize, SIM  
(Société Industrielle Minérale) (Sep 2022)

### VICTOR POUSSARDIN

**Unit**  
GERS-GIE

**Prize**  
2022 "René Houpert" Young  
Researcher Award at AUGC22

### BRUNO GODART

**Unit**  
MAST

**Prize**  
ICAAR Prize, International Conference  
on Alkali-Aggregate Reaction  
in Concrete (June 2022)

## PUBLICATIONS / COMMUNICATIONS / CONFERENCES

### BADRE BOUSALEM

**Unit**  
LIGM

**Prize**  
Best Demo Paper Award, IEEE  
International Conference on Network  
Softwarization



### CHRISTIAN SOIZE

**Unit**  
MSME

**Prize**  
2022 Alfred M. Freudenthal Medal,  
ASCE (American Society of Civil  
Engineers)

### LUCAS LETAILLEUR

**Unit**  
ESYCOM

**Prize**  
Best Paper in the "Microwave" Category,  
MTTW (Microwave Theory and  
Techniques in Wireless Communication  
Workshop), IEEE Conference

### JOSSELIN LEFEVRE

**Unit**  
LIGM

**Prize**  
Best Student Paper Award, 2022 DGMM  
(Discrete Geometry and Mathematical  
Morphology) Conference

### QUENTIN GARRIDO

**Unit**  
LIGM

**Prize**  
Ian Lawson Van Toch Memorial Award  
for Outstanding Student Paper

### MOHAND OUAMER NAIT BELAID

**Unit**  
LIGM

**Prize**  
Best Paper Award, ED MSTIC  
(Mathematics and ICTS Doctoral School)



### AMINA BÉCHEUR

**Unit**  
IRG

**Prize**  
2022 Best Collective Research  
Management Book, FNEGE (Fondation  
Nationale pour l'Enseignement de la  
Gestion des Entreprises)

### DIMITRI GOMINSKI

**Unit**  
LASTIG

**Prize**  
Best Article, EarthVision Workshop,  
CVPR'22 (Computer Vision and Pattern  
Recognition Conference)



### SYLVAIN CHERRIER

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**Unit**

LIGM

**Prize**

Best Demo Paper Award, 2022 NetSoft Conference

### RAMI LANGAR

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**Unit**

LIGM

**Prize**

Best Demo Paper Award, 2022 NetSoft Conference



### MOSTAFA AMELI AND JEAN-PATRICK LEBACQUE (GRETTIA), LUDOVIC LECLERCQ (LICIT-ECO7)

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**Unit**

LICIT-ECO7, COSYS-GRETTIA

**Prize**

Urban Transportation Outstanding Paper Award (INFORMS Conference) with Mohamad Sadegh Shirani Faradonbeh (Stanford University) and Hossein Abouee-Mehrzi (University of Waterloo)

### LOUISE BONFILS

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**Unit**

COSYS-GRETTIA

**Prize**

2022 Simon Regnier Prize, Société Française de Classification



### CLAIRE NAUDE

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**Unit**

LMA

**Prize**

Best Scientific Paper, ITS World Congress, Los Angeles, September 2022



### NICOLAS HAUTIERE

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**Unit**

COSYS

**Prize**

Road Award - TRA Visions  
2<sup>nd</sup> place



# HIGHLIGHTS

.30 Chronology

.36 Focus



# CHRONOLOGY

## FEBRUARY 2022



### Open Day

This day is one of the year's major events, dedicated to information and orientation. 7,000 visitors were able to speak with faculty members, students, and administrative and technical staff about the courses on offer, conditions for admission, the study experience, and student life.



### ONDES report on discrimination in Master's admissions

The National Observatory on Discrimination and Equality in Higher Education (ONDES) is a research facility led by Université Gustave Eiffel and France Universités, open to research in all disciplines. The only condition is that topics must shed light on the issue of equality and discrimination in the field of higher education and research. ONDES presented its first report on discrimination in Master's admissions at its official launch event in February 2022.



### Creation of a Mixed Research Unit dedicated to sustainable construction materials

After two years of work, Cerema and Université Gustave Eiffel decided to consolidate their partnership by creating a Joint Research Unit (UMR) under the scientific supervision of the two institutions. The UMR, named Sustainable Construction Materials (MCD), focuses on issues around the durability of construction materials for buildings and infrastructure in the cement and asphalt sector.

## MARCH 2022



### I-SITE FUTURE label

Université Gustave Eiffel received the I-SITE label in spring 2022. This recognition confirms the university's development trajectory and associated funding. As part of this new stage of I-SITE, the calls for projects from the probational I-SITE phase have been replaced by a new application process with a single point of entry.

APRIL 2022



International CWUR ranking

After being placed 802<sup>nd</sup> in 2021, Université Gustave Eiffel was ranked 660<sup>th</sup> in the list of the 2,000 best higher education institutions in the world by the Center for World University Rankings (CWUR). It also made progress on a French level, going from 35<sup>th</sup> position to 29<sup>th</sup>, and rose to 267<sup>th</sup> place in Europe.

SEPTEMBER 2022



Shanghai Ranking

Université Gustave Eiffel received a high ranking in 11 of the 54 disciplines evaluated, especially for the institution's main areas: Transport Science and Technology, Civil Engineering, Environmental Engineering Science, Water Resources and Atmospheric Science.

JUNE 2022



Creation of the Université Gustave Eiffel Foundation

To reinforce our strategic ambition and resources, our University has decided to create a partnership foundation: Université Gustave Eiffel Foundation. The objective is to imagine, design and build complex global places – our cities – with everyone involved, by offering them what they need to understand the associated challenges.

OCTOBER 2022



International mobility for inbound and outbound students

Université Gustave Eiffel welcomed a Canadian delegation from Université du Québec à Montréal, led by rector Magda Fusaro. A multi-faculty student exchange agreement was signed, strengthening the pre-existing partnership between the two universities.



Fête de la Science: let's talk about the climate

Fête de la Science is a major event aimed at all ages, organised each year by the Ministry for Higher Education and Research. For the 31<sup>st</sup> edition, which took place from 7 to 17 October 2022, Fête de la Science focused on a topic at the centre of citizen concerns and current affairs. For the occasion, the scientific community at Université Gustave Eiffel organised multiple events, both remote and in-person, on its various campuses.

NOVEMBER 2022



FUTURE Days

FUTURE Days is Université Gustave Eiffel's major event on the topic of cities and territories.

This year, the theme was transitions, and actors and experts in the field were able to open up the debate around the challenges that territories face nowadays.

For the first time since its creation, the event took place on the university's various campuses.



Sustainable and Smart Cities Day in Brussels

In collaboration with the CNRS, Université Gustave Eiffel co-organised a day-long event to present the challenges related to the Sustainable Cities and Buildings PEPR (Priority Research Programmes and Equipment) in Brussels on 20 October 2022, attended by multiple representatives of the European Commission.

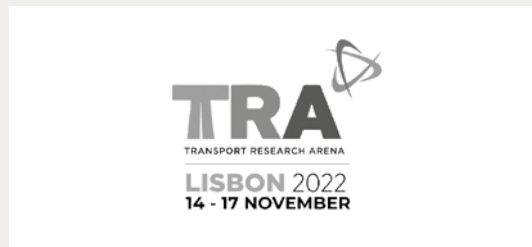


Project selected for "Future Skills and Professions"

The AVID project (Learning for Sustainable Cities) led by Université Gustave Eiffel won the second round of the call for expressions of interest for the France 2030 Plan. It will be one of the projects aimed at supporting emerging talents and accelerating the adaptation of courses in line with needs for skills in new sectors and professions of the future.



## JANUARY 2023



### Transport Research Arena 2022

Université Gustave Eiffel attended the international TRA conference, which took place in Lisbon. Jean-François Blassel, faculty member, engineer and Co-Director of the Post-Carbon Architecture DPEA degree, was chosen to represent the university, Eav&t and the field of architecture in the debates.



### ESIPE - ESIEE merger

2023 marked an important stage in the development of ESIEE Paris.

It was joined by Université Gustave Eiffel's internal school, Paris-Est School of Engineering (ESIPE), to form a single school.

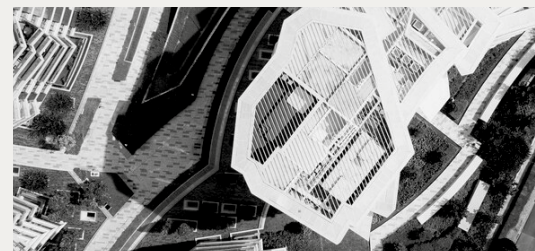
## DECEMBER 2022



### Creation of the Partners Club

To develop relations with the socioeconomic world, Université Gustave Eiffel has launched a "Partners Club" dedicated to its key partners. The objective of this initiative is

to bring together the actors with which the University has many research and training collaborations.



### "Innovation for tomorrow's cities and mobility" Sci-Ty project: winner of the France 2030 prematuration-maturation call for projects

The Sci-Ty project aims to support multiple innovation projects and facilitate their transfer to the socioeconomic world, by creating a community of experts and innovators at the national and territory level. These products and services for sustainable cities aim to accelerate our economy's transformation to become carbon neutral.

# FOCUS

## The I-SITE label “confirms and amplifies the university's dynamic”

The good news arrived on 10 March 2022, during a visit from the Prime Minister and the Minister of Higher Education, Research and Innovation to the Marne-la-Vallée campus: the FUTURE project, led by Université Gustave Eiffel in partnership with École des Ponts ParisTech, was granted the I-SITE label. Following a probational period from 2017 to 2021, this decision confirms Université Gustave Eiffel's development trajectory since its creation and makes the associated funding permanent. *“I-SITE gives us the resources to develop our missions and projects, with an annual budget of approximately €9 million. It will help support research and training activity, with the aim of being more interdisciplinary, innovative, and international, at the service of our students and staff, and in connection with territories, local governments and socioeconomic actors,”* says Corinne Blanquart, First Vice-President of Université Gustave Eiffel.

This new I-SITE phase will also involve changes in associated systems, with a new application process with a single point of entry, so as to simplify the project submission procedure for students, staff and collectives at Université Gustave Eiffel. This new service means requests for funding can be submitted at any time, not only during calls for projects.

In October 2022, three informational webinars were organised about the new process and conditions for submission and assessment of applications, aimed at supporting all kinds of projects in connection with university missions and the conditions for their completion. Projects can be related to research, demonstration or innovative pedagogy for example – the key factor is that they must involve multiple components and/or departments.

The I-SITE FUTURE scientific project is structured around three challenges: *“safe and resilient cities”, “resource-efficient cities”, and “smart and connected cities”*. *“The pandemic has reminded us of the importance of resilience for territories and the major challenges for urban territories in particular,”* says Corinne Blanquart. *“The responses are not the same in Lyon, Nantes, Lille and Marseille. Our institution's advantage is that we offer solutions at the intersection of different fields (engineering, architecture, social sciences, etc.) and approaches to sustainable cities as part of research on a territorial level.”*

I-SITE FUTURE  
[www.future-isite.fr](http://www.future-isite.fr)

*“We are extremely pleased to be awarded this label, which recognises our visibility in the field of sustainable cities and territories and represents a positive sign for all our initiatives in the areas of training, research, student life, international engagement and partnerships.”*

**CORINNE BLANQUART**  
First Vice-President of Université Gustave Eiffel





## The university launches its partnership foundation

On 15 November 2022, Université Gustave Eiffel took another step towards its goal of becoming a reference body for research and development around sustainable cities. This day marked the official launch of its foundation, with its first two sponsors: CCI Seine-et-Marne and the Seine-et-Marne Departmental Council. The objective of this partnership foundation is to **“build sustainable cities together”**. *“A city is a complex object, that not only requires combining multiple skills – which we have done, by creating our university, the only of its kind in France – but also draws on the ecosystem involved in issues related to sustainable cities: local governments, companies, associations and citizens,”* says Dominique Fernier, Director of the Foundation. *“Our aim is bring the university and city stakeholders closer together, so as to better understand each other and develop transdisciplinary research and collaborative innovation,”* says Michèle Pappalardo, President of the Foundation.

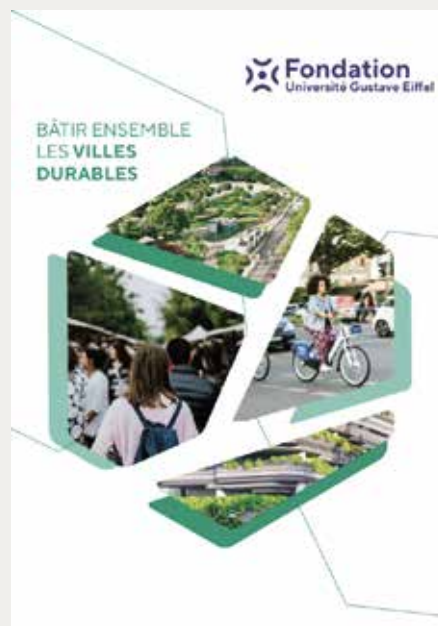
### RESEARCH BY AND FOR SOCIETY

*“Research developed by the Foundation will be at the service of society. The subjects addressed will serve the public interest and scientific results will be shared in their entirety,”* says Dominique Fernier. *“The Foundation’s research belongs to all. Sponsors submit their issues or needs and, in exchange for fiscal advantages, cede their intellectual property rights to the results.”* The Foundation’s research will be developed **as part of research chairs, think tanks, workshops and demonstrator projects** on the topics of climate adaptation and resilience for cities, urban logistics and mobility, resource preservation, inclusive cities and sustainable finance.

Though it was only recently created, Université Gustave Eiffel Foundation is already active. For example, it has launched working groups and a comparative study on **the adaptation**

**and resilience of cities and territories to the consequences of extreme events.** Chairs on land use transition and district cooling are also being created. Beyond research, the Foundation aims to improve students’ quality of life in addition to promoting equal opportunity. It will support student initiatives and has launched two academic scholarships to facilitate access to higher education for disadvantaged high school graduates, as well as two academic scholarships aimed at supporting the education of future sustainable city experts.

Université Gustave Eiffel Foundation  
<https://www.univ-gustave-eiffel.fr/en/university/support-us/the-foundation>



## The university’s property assets in the energy transition context

49 buildings across France, representing over 200,000m<sup>2</sup>: these are the property assets managed by the Delegated General Directorate for Property and Logistics (DGDIL). Each year, it undertakes multiple maintenance, renovation and construction projects. *“Thermal renovation and refurbishment works represent one of the major areas for the DGDIL’s projects,”* says Philippe Avril, Director. *“Such projects are part of the university’s green, sustainable energy policy.”* One of the projects undertaken in 2022 to respond to environmental transition challenges involves renovating the south façade of the Lavoisier building in Champs-sur-Marne and preventing leaks in the roof of the Champs-sur-Marne IUT building. Seven buildings at Cité Descartes were also connected to the GéoMarne geothermal power station.

One of the other projects for the year involved making the Copernic building on the Champs-sur-Marne campus more secure, with access control implemented at the entrance to the parking lot. Multiple components are located in the building, such as IGM, the Languages, Culture and Society research unit, and the Sciences and Techniques of Sports and Physical Activities and Mathematics research unit. It also houses the health service, the professional orientation and information service and the university’s central services. *“We have also installed a video surveillance system to ensure staff security. These works will improve occupants’ comfort on a daily basis,”* says the Director.

*“It should be noted that despite a context of reorganisation and the rising costs of energy and raw materials, the overall budget for the university’s property assets remained constant in 2022. It represented 10% of the university’s overall budget, at around €20 million,”* says Philippe Avril.

*“In 2022, we also started to draft the multi-year property strategy plan, which determines the investment projects for the 2024–2027 period. This plan involves multiple energy renovation projects, particularly for the Lyon, Nantes and Marne-la-Vallée campuses.”*



Renovation of the south façade of the Lavoisier building in Champs-sur-Marne





# REINVENTING THE WORLD OF TODAY AND IMAGINING THE WORLD OF TOMORROW

.42 Research with meaning

.54 Training, supporting, boosting

# RESEARCH WITH MEANING

We undertake multidisciplinary research through partnerships and in close connection with territories and their residents, to help make cities and mobility fairer, more equitable and more sustainable

## Innovating for cities and mobility of the future

In connection with socioeconomic actors and as part of national programmes, the university supports and facilitates the creation of innovative products and services, in order to respond to future challenges. Let's look at the example of Sci-ty, a large-scale project that aims to boost innovation around cities and mobility.

It was one of the biggest announcements of the year: after being submitted in early 2022, the "Sci-ty, deeptech for cities and mobility of the future" project won the "Maturation-Prematuration" call for projects as part of the France 2030 Investment Plan. The project is co-managed by Université Gustave Eiffel and SATT Erganeo and embodies the university's innovation strategy for its key themes. It represents a **consortium of 15 higher education institutions, six SATTs and nine partners**, including competitiveness clusters and environmental transition and technological research institutes of which the university is a founding member. "Innovation should be multidisciplinary", says Frédéric Bourquin, Vice-President of Innovation. "Sci-ty is deployed at a national level, on all campuses, and will support co-maturation with companies using major facilities and regional ecosystems made up of a wide range of high-quality partners."

Geo-sourced construction, rail mobility of the future, low-carbon and connected service infrastructure, new transport options using automation and decarbonisation... The projects supported by Sci-ty cover these topics and many others, in direct connection with **the themes of the two PEPRs\* co-steered by Université Gustave Eiffel** alongside CNRS and IFPEN, "solutions for sustainable cities and innovative buildings" and "digital technology in service of mobility

in territories". Each is a scientific pillar in national acceleration strategies around cities and mobility, respectively. "Working from the foundation of our laboratories' disruptive knowledge, Sci-ty will offer **solutions to respond to complex challenges around cities and mobility**, in the context of the carbon neutral transition," says Frédéric Bourquin. "Our laboratories benefit from strong human and financial support, and the companies from less risky and costly innovation." Sci-ty is based on a two-stage project support approach: pre-maturation, aimed at confirming the technological maturity and practical application of a portfolio of emerging projects from our laboratories; followed by maturation, providing support for technology transfer or start-up creation. The project partners have stated their aim to support 250 projects in five years.

\*Priority Research Programmes and Equipment





We are proud to showcase our highly valued innovation strategy, which is structured into two main areas: the first being deeptech, with start-up development, the second being territorial innovation, in connection with companies and local governments and with the support of our platforms such as Transpolis, the fatigue test machine and Sense-city. This strategy is what guides the E3S programme in the LaVallée eco-district in Châtenay-Malabry, in collaboration with Eiffage, as well as the “City-Fab - La Fabrique de la Ville Durable” project, one of the 15 winners of the national ExcellencEs call for projects under the PIA 4.

We seek to spread our innovation-based approach to all levels of the university, including laboratories, governance bodies, and research colleges. The institution’s potential for innovation represents an exciting scientific challenge as well as an incredible opportunity to create benefits for society.

FRÉDÉRIC BOURQUIN  
Vice-President of Innovation



## Sustainable mobility: what is the future for transport infrastructure funding?

Funding for transport infrastructure represents one of the major challenges for the coming years, to construct sustainable mobility and achieve the ambitious climate goals set by the European Union and France – to reduce greenhouse gases by at least 55% by 2030 and achieve zero net emissions by 2050. On 22 February 2022 at Maison de la Chimie in Paris, this subject was at the heart of the European conference titled “Decarbonising Mobility: The Future of Transport Infrastructure Financing”, organised by Université Gustave Eiffel and AFIT France in partnership with Cerema and think tank TDIE.

How can infrastructure be funded? How can we prioritise and put forward investment proposals? These two key questions structured the day, held as part of the French Presidency of the Council of the European Union. It was an opportunity to create dialogue between transport infrastructure funding institutions, scientists and public bodies.

Around a hundred participants from 15 European countries offered their perspectives to try and create innovative solutions to help decarbonise mobility. “Nowadays, the question of climate issues is omnipresent in considerations around mobility and infrastructure, which creates new requirements and additional costs,” said Philippe Duron, Co-President of TDIE, at a round table. “We often talk about mobility infrastructure for people and goods, but the subjects of data transport and energy infrastructure are increasingly important as well. As a consequence, our scope is expanding and we need to find new funding,” said Anne-Marie Idrac, President of France Logistique.

**The question of climate issues is omnipresent in considerations around mobility and infrastructure, which creates new requirements and additional costs.**

PHILIPPE DURON,  
Co-President of TDIE

Adapting to changes in our lifestyles and how we get around, active and shared forms of mobility, social and territorial equity... These themes and many others were discussed during this conference, the proceedings of which are available online. It emphasised the importance of innovation in all forms – both technological and governance-related – to decarbonise mobility. The event was planned during special sessions and the European hackathon, “What infrastructure is needed for low-carbon mobility in Europe?”, which was part of FUTURE Days 2021.

“Decarbonising Mobility: The Future of Transport Infrastructure Financing” conference website  
<https://conference.afit-france.fr/index-en.html>



## Better anticipation of flash floods

Alpes-Maritimes, Hérault, Gard, Aude, Haute-Corse... In recent years, many departments in France have been subject to significant flooding after heavy rains causing flash floods in small waterways. It is vitally important to create **anticipation and alert systems**, to address these phenomena that have often devastating consequences and are likely to increase with global warming. This was the challenge for the project titled "Immediate Integrated Forecasting of Flash Flood Impacts" (PICS). The collaborative project, funded by the French National Research Agency and coordinated by Université Gustave Eiffel, mobilised meteorologists, fluid mechanics specialists, economists and sociologists from Cerema, CNRM, Schapi and INRAE for a period of five years.

On 18 May 2022, at the Cerema Méditerranée facilities, the partners shared their results with nearly 350 people attending both in person and remotely.

Using around 15 case studies, the PICS teams applied digital models to describe each phase in the formation of a flash flood. *"The first link in the chain is a meteorological model, which forecasts the location and intensity of rainfall for the next six hours,"* says Olivier Payrastre, Deputy Director of the Water and Environment Laboratory and Scientific Coordinator of PICS. *"Then, a hydrological model shows how the rain will reach and flow into waterways. Lastly, a hydraulic model evaluates the scope of the zone flooded by overflowing waterways, as well as the height of the water and its speed across a highly detailed territorial network."* There is also a vulnerability model, which accounts for the socioeconomic impacts of the flood. Once combined, these models form a series of forecasts to **quickly evaluate the damaging consequences of flash floods**. The forecasts can be adapted to the specific needs of risk

management professionals, who were also involved in PICS all throughout the project: civil security, insurance providers, infrastructure managers, and so on.

*"The forecasting tools that we presented raised a certain level of interest from local governments, who wish to improve their flash flood management capabilities,"* says Olivier Payrastre. They should also help improve Vigicrues Flash, the Ministry of Ecological Transition's automatic warning system for flash flood risks.

The PICS project  
[pics.ifsttar.fr/en](https://pics.ifsttar.fr/en)

Flooding at the Cadereau  
d'Alès river in Nîmes  
on 10 October 2014



## Revolutionising mobility with driverless shuttles

In a constantly shifting world, mobility is a major challenge. Technological advances now offer new possibilities to respond to transport needs in more sustainable and efficient ways.

The ENA project was coordinated by Université Gustave Eiffel and completed in 2022. It involved the collaboration of two territories, as well as academic and industrial partners. This ambitious initiative aims to set up driverless shuttle services to complement existing urban transport networks and serve sparsely populated rural areas.

As part of this initiative, passenger transport operator Berthelet was responsible for running the shuttle in Cœur de Brenne, using its solid experience in rolling out new technologies and driverless shuttle tests. For this use case, the consortium selected a vehicle from the Milla Group, specifically the Milla Shuttle, which is capable of reaching speeds of 50 km/h. This shuttle was specifically chosen due to its ability to insert itself into traffic without disrupting flows or compromising safety.

The shuttle's route was developed by Eiffage Energie Systèmes, which installed the necessary infrastructure, including road signs, to ensure that it would run smoothly. At the same time, Université Gustave Eiffel and Sector Group (specialist in operations safety) worked together to analyse the route and design scenarios likely cause issues for the shuttle. This proactive approach made it possible to anticipate and resolve potential problems related to the security and smooth functioning of driverless shuttles.

On 13 July 2022, a second test shuttle was commissioned to transport elderly residents in the area.

....

### Key figures

- 9 academic and industrial partners
- 2 territories involved
- 6 months of testing
- 2 driverless shuttles
- The ENA project has a budget of **€8m**, including **€4.6m** of grants





## Using recycled concrete as a carbon sink

Could concrete and cement become sustainable construction materials? Though the road may be long, FastCarb has made it possible to make significant progress. Over five years, this research project, certified by the Ministry of Ecological Transition, brought together 23 partners: researchers from the Materials For Sustainable Construction Joint Research Unit (MCD UMR, Université Gustave Eiffel/Cerema), the CPDM and MIT Laboratories, industry bodies, and more. The objective of their collaboration was **to reduce the CO<sub>2</sub> impact of concrete construction by accelerating the carbonation** – a very slow natural phenomenon – of recycled concrete aggregate (RCA). *“With FastCarb, we recycle concrete – thereby saving natural resources – and we inject CO<sub>2</sub> into the aggregate during the manufacturing process,”* says Jean-Michel Torrenti, specialist concrete researcher at the MCD UMR and director of the FastCarb project.

To create RCA with accelerated carbonation, the partners tested the technical processes in the laboratory, then set up two demonstrators at cement manufacturers. *“Our results show that the process works well, even at the industrial level, for sand and fine RCA. We are able to store around 40 kg of CO<sub>2</sub> in each tonne of sand made from recycled concrete. For coarser aggregate, the environmental costs of transport outweighs the environmental benefits.”* Carbonated sand or fine RCA can then be used in controlled amounts to produce cement or concrete of the same quality as natural aggregate.

FastCarb also demonstrated that the accelerated carbonation process can be implemented *“without pre-treating [...] and with **timelines and quantities of materials in line with current industrial practices**”.*

*“It will soon be rolled out, and not only in cement manufacturing – gas plants, waste incinerators... There are lots of sources of CO<sub>2</sub>.”* The FastCarb project officially ended on 27 September 2022, at a seminar in which the results were presented to the Ministry for Ecological Transition. *“There will be recommendations issued, specifically on how to accurately measure the CO<sub>2</sub> stored, which will be necessary to promote this process,”* says Jean-Michel Torrenti.

FastCarb demonstrator  
installed at the  
LafargeHolcim cement  
plant in Val d’Azergues.  
[fastcarb.fr/en/home](https://fastcarb.fr/en/home)



## Creating a framework for future sustainable food systems



How can we implement a food system that is healthy and sustainable for all? In the face of many crises – climate change, drought, reduced biodiversity, political tension, inequality, and so on – it is a challenge that cannot be tackled alone. In late 2022, the European Union launched the European Partnership for Safe and Sustainable Food Systems\*. *“The aim of this partnership is to bring together all stakeholders – higher education institutions, companies, foundations, territories etc. – **to co-construct European innovation and research going into the future,**”* says Alison Loconto, Deputy Unit Director at the Interdisciplinary Laboratory for Science, Innovation and Society (LISIS, Université Gustave Eiffel/INRAE/CNRS). However, a partnership of such scope raises multiple questions: what form will its governance take? What strategic orientations should be chosen for research and innovation? How can it best be

funded? These questions will be answered by FOODPathS and its partners, which include LISIS, with the support of the Horizon Europe programme. *“FOODPathS is a coordination initiative aimed at preparing for the partnership that will be launched in 2024. It represents an opportunity to co-construct the next European framework for sustainable food systems,”* says Alison Loconto.

\* The European Partnership for Safe and Sustainable Food Systems is one of the 19 partnerships aimed at fulfilling the commitments of the European Green Deal, to “make Europe the number-one climate-neutral regional bloc by 2050”.

FOODPathS launch  
on 19 July 2022 in Paris.

**food|paths**

FOODPathS website  
[foodpaths.eu](https://foodpaths.eu)



## Innovating for the roads of the future

*“The programme numerous innovations to emerge from laboratories and trials to be performed on a real-life scale,”* says Nicolas Hautière, Director of the COSYS Department. *“It contributed to making roads and their future recognised as a true subject for research,”* says Pierre Hornych, Director of the LAMES Laboratory. These two scientists are talking about I-STREET, Systemic Innovations in Service of Ecological and Energy Transitions in Transport Road Infrastructure. This ambitious programme was dedicated to the “roads of the future”. Between 2017 and 2022, it brought together a consortium of four partners: Eiffage Group, Total, the start-up OliKrom and Université Gustave Eiffel, as the scientific reference body.

I-STREET received funding of up to €15 million from PIA 3 and was structured around five research projects: Enrobé du Futur, Globe, CUD-SF, SUSHIS and HERMES. These projects developed and tested bitumen granules (Globe), a road surface (Enrobé du Futur) with multiple advantages (sound absorption, non-slip, low tread resistance, durability, anti-pollution, etc.), a modular roadway that can be taken apart (CUD-SF) and a predictive road maintenance solution (HERMES). While some of these innovations are still at the experimental phase, others have already been **commercialised or are in the process**. This is the case for photoluminescent paint developed as part of the SUSHIS project by the company OliKrom.



In total, six laboratories (LAMES, MIT, EASE, EMGCU, PICS-L, ESYCOM) and around 30 experts from the university contributed to I-STREET. *“The programme mobilised a great deal of the university’s internal expertise, including specialists in road infrastructure, physico-chemistry of materials, geomatics and instrumentation,”* says Pierre Hornych. Two of the university’s major demonstrators – the fatigue test machine at the Nantes campus and Sense-City – were also used to test and validate the innovations before they were rolled out in real conditions. *“With I-STREET, we also gained experience in managing large-scale programmes,”* says Nicolas Hautière.

## Cities and territories in transition

The theme of transition, whether ecological, economic, social or energy-related, is profoundly anchored in the DNA of our institution. **The sixth edition of FUTURE Days** was an opportunity for speakers from the academic community and socioeconomic world to open up the debate around major transition challenges for cities and territories.

So as to remain consistent with the local dimension embodied by the theme of transitions, FUTURE Days were organised at each of the university’s campuses. In total, six events took place across the entire country, showcasing the territorial partnership dynamics at the various campuses.





## Household debt and organisation of debt recovery: the sociology of debt

“Fresh debt”, “natural payment”, “energy tourism”, “rate of recovery”, “the Marianne effect”... These expressions, used by debt recovery professionals, are sociologist Hélène Ducourant’s topic of interest. As a faculty member affiliated with the Techniques, Territories and Societies Laboratory (LATTS), she has been working on a research project on household debt recovery since 2018. She studies **debt recovery bodies, their practices and how they are received by French households in debt**. “My work is structured around two lines of research: I’m interested in the way in which economic actors (banks, companies, etc.) operate in reaction to late payments, outstanding funds and individual debts, and I document the effects of their ‘amicable debt recovery actions’ on the daily life of consumers or customers deemed to be at fault,” says the researcher. Her research is mainly based on Insee surveys relating to household budgets, observations in call centres for debt recovery agencies, and interviews with executive directors, social housing landlords, associations involved in tackling over-indebtedness, and of course, people experiencing debt.

“My research has produced three categories of results,” she says. “The first relates to the **reasons for the development of the individual debt recovery market in the 2000s**, in connection with the end of certain public monopolies (EDF, France Telecom, etc.). Other results relate to the handling of debt by debt recovery agencies, particularly the tools and processes that they use. Lastly, my work sheds light on the relationships between debtors and debt recovery agencies, especially the techniques developed by recovery agents to remove any ‘reluctance’ towards cooperating.” On 20 May 2022, these subjects were the subject of discussions with

sociologists, political scientists, legal experts and economists at Centre Emile Durkheim in Bordeaux, as part of a workshop dedicated to Hélène Ducourant’s research.

LATTS website  
[latts.fr](http://latts.fr)



## Reinventing and returning meaning to social protection

Making social protection a driver to create community and local connections – that is the goal of ProRe<sup>2</sup>Ter (Social Protection – Connections for Territorial Resilience), a project group from the Dicen-IdF Laboratory that combines around ten researchers in information and communication science, economics, sociology, computer science, management, psychology, and other disciplines. “ProRe<sup>2</sup>Ter focuses on social protection in a broad sense – health, family, dependency, retirement, etc. – with the aim of making it a tool for resilience, solidarity and connections,” says Christian Bourret, Deputy Director of Dicen-IdF and university professor in information and communication science. The aim of the ProRe<sup>2</sup>Ter researchers is to collaborate with social protection actors – CAF, CNSA, Mutualité Agricole, healthcare networks, local governments, and so on – to reinvent social protection and return meaning and value to it, in the spirit of the “Science with and for Society” label. “We wish to use the **experience-based knowledge of actors on the ground and turn it into scientific information for action**. Our aim is to support public policy, provide potential solutions and successfully return to an investment-based model of social protection, not solely focused on cost and deficit. It’s a project backed by conviction,” says Christian Bourret.

Social security and nursing homes of the future, healthcare deserts, changing health pathways, digital transformation of the health system, and the position and role of users are just some of the subjects that the ProRe<sup>2</sup>Ter group intends to explore by participating in seminars, publishing articles and responding to calls for projects. These initiatives will also be backed by a network of partners: Seine-et-Marne CAF, École Nationale Supérieure de la Sécurité Sociale, Codata France, GFII,

© Julien Poulain/CPAM 45



### Making social protection a tool for resilience and solidarity

CHRISTIAN BOURRET  
Deputy Director of Dicen-IdF

Académie de l’Intelligence Économique, RESER, the review Projectique and university researchers in Grenoble, Paris Nord, Bordeaux and Rennes.

# TRAINING, SUPPORTING, BOOSTING

Adapting to sustainable development challenges, developing apprenticeships, merging engineering schools, specialising in urban engineering...

In 2022, we consolidated our range of courses, always acting in service of our students' academic and professional success.

## An Apprentice Training Centre to support the rise in apprenticeships

With 4,300 apprentice students and nearly 300 courses offered as work-study programmes, apprenticeships are one of Université Gustave Eiffel's strengths, and we are the number-one French university in this area. 2022 was marked by a rise in apprenticeships at our institution, with new courses, an increase in the number of apprentice students, and above all, the creation of the Gustave Eiffel Apprentice Training Centre (CFA) on 1<sup>st</sup> June 2022. This new university service means that engineering apprenticeships at ESIEE Paris and EIVP are now managed in-house. At the start of the 2022 academic year, the university had 1,300 student engineers in work-study programmes, making it one of the biggest CFAs in France in terms of engineers in apprenticeships.

*"The objective of creating the CFA was to establish an internal expert unit within the university to facilitate the deployment and development of apprenticeship in our engineering schools,"* says Muriel Jougoux, Vice-President for Partnerships and Professionalisation at Université Gustave Eiffel. This shared service supports and collaborates with the schools' corporate relations teams. *"An in-house CFA also means that we have development teams at our own engineering schools,"* says the Vice-President. *"This means we can better understand the needs of our partner companies and offer more adapted missions to our students."*

Courses in work-study format are available at all levels and in all disciplines, including University Bachelor's degrees in Technology, Licence degrees, professional Licence degrees, Master's degrees, and diplomas in engineering or architecture. Some

were offered for the first time in the 2022 academic year. That was the case for the M2 in Social Sciences, Sport and Social Sciences programme (STAPS), and the Urban Engineering course at EIVP, for example. Other courses have been available in this format for a long time, such as the Master's in Innovation, Design and Luxury at IAE, a course that is at the top of the Eduniversal ranking of luxury management Master's degrees. *"Apprenticeship presents many advantages for students and the institution,"* says Muriel Jougoux. *"Above all, it's a wonderful way of learning and an extremely interesting way to enter the industry."* The rate of employment is higher for students from apprenticeships than those from traditional university courses (6 points higher for professional Licence graduates, 2 points higher for Master's graduates), as is their salary (5.4% higher for professional Licence graduates, 2.9% for Master's graduates). Their employment is also more stable, particularly for Licence holders (24 points higher). Apprentice students also have the tuition fees for their engineering degree covered.



*“Apprenticeship is an opportunity to create long-term dialogue and significantly increase our interactions with companies. This represents a major advantage, to identify the skills in demand for the socioeconomic world and consequently adapt the content of our courses and teaching methods.”* The final advantage of apprenticeship is its financial benefits. *“It represents over €20 million of own resources for the institution, which contributes to the existence of many courses,”* says the Vice-President.

\* Survey by France Universités on apprenticeship in higher education, June 2021.

Apprenticeship at Université Gustave Eiffel  
[www.univ-gustave-eiffel.fr/en/university/our-strengths/apprenticeships](http://www.univ-gustave-eiffel.fr/en/university/our-strengths/apprenticeships)



MURIEL JOUGLEUX

*Vice-President for Partnerships and Professionalisation at Université Gustave Eiffel*

#### KEY FIGURES FOR WORK-STUDY PROGRAMMES AT UNIVERSITÉ GUSTAVE EIFFEL

- Over 4,300 apprentice students, i.e. 25% of the entire student cohort
- 300 courses
- 1,870 apprentices in undergraduate courses
- 1,190 apprentices in Master's degrees
- 1,300 apprentices in engineering courses

## Increased visibility for our range of engineering courses

*“In 2022, we undertook major efforts to integrate and homogenise our engineering courses. First came the ESIEE-ESIPE merger, which was efficiently and diligently orchestrated by our teams and ensured that our engineering programmes would not compete with each other. With this move, the university now represents the second biggest engineering hub in Ile-de-France, with nearly 2,500 student engineers.”*

*The second major project for last year was consolidating urban engineering courses at EIVP. This included the creation of a Licence degree in Urban Engineering, which welcomed its first cohort for the 2023 academic year.*

*Lastly, the ENSG undergraduate course evolved, becoming a professional Licence. This allowed the school to gain visibility, particularly on the preferential allocation platform Parcoursup.”*

VENCESLAS BIRI

*Vice-President for Training and Pedagogical Innovation at Université Gustave Eiffel*





## EIVP at the frontline of urban engineering courses

Since 2022, Université Gustave Eiffel courses in urban engineering (from Licence to Master's) and the eponymous engineering diploma have been affiliated with EIVP, in initial training, vocational training, and apprenticeship formats. These courses offer a transversal, multidisciplinary approach to cities and urban projects, at the intersection between civil engineering, development and urban planning.

*"It increases the visibility and influence of the field of urban engineering and offers students a relevant and wide range of courses within a single component." That is how Franck Jung, Director of EIVP, summarises the advantages of affiliating all the university's urban engineering courses with the engineering school. The courses provided by EIVP include the diploma in urban engineering, the dual degree in engineering / architecture, the Specialised Master's in URBEAUSEP "Wastewater and Rainwater Management", and the university diploma in "Building Information Modelling: BIM". They combine **engineering sciences with humanities and social sciences**, in order to respond to the major challenges of the environmental and social transition.*

Another result of the consolidation of the range of courses is the creation of the first **Licence in Urban Engineering in France**, which will accept its first cohort in September 2023. Classes will address technical networks, urban geography, climatology, sociological approaches to cities, urban planning, development and more. *"This three-year course, accessible to high school graduates, will be a true pathway to an engineering course or various Master's degrees,"* says Franck Jung. *"While our various courses cover a range of multidisciplinary notions, sustainable development is key. We aim to educate students as much as possible on this theme. Our curri-*

*cula respond to the 17 objectives identified by the UN in the area of sustainable development. To give just a few examples, well-being, the fight against poverty and inequality, clean energy and the fight against climate change are all connected to cities and the urban world."*

*"Affiliating our courses with EIVP also enriches our dialogue with companies, who contact us with their various needs,"* says Franck Jung. *"Two thirds of our engineering students receive a job offer before the end of their studies. Six months after graduating, 90% of them will have found a job. It is also worth noting that 75% of our students are in apprenticeships. Our openness to industry strategy responds to requests from companies and students, who consider it a professional and financial advantage."*

EIVP website  
[www.eivp-paris.fr/international](http://www.eivp-paris.fr/international)

Department of Urban Engineering website  
[genie-urbain.univ-gustave-eiffel.fr](http://genie-urbain.univ-gustave-eiffel.fr)



The Licence in Urban Engineering will accept its first cohort of first-year students in September 2023. This course responds to high demand from new generations of students for transversal and multidisciplinary training that fully includes environmental aspects. The classes offer a holistic, concrete perspective, applied to urban issues, combining humanities and engineering science. They prepare students to work with all the actors involved in a city: users, local residents, design offices, project managers, and so on.

KATIA LAFFRÉCHINE  
Associate Professor at Université Gustave Eiffel,  
Head of the Licence in Urban Engineering  
in the Urban Engineering Department

## ESIEE Paris, stronger together

The merger between ESIPÉ and ESIEE Paris was launched in 2021 and finalised in late 2022. Let's look back at this unifying operation with Jean Mairesse and Luc Chevalier, respectively the Director General and Deputy Director General of the new major engineering school.

....

### Can you remind us of how this merger project came to be?

**Luc Chevalier:** Ever since Université Gustave Eiffel was created in 2020, it was inevitable. We wanted to move from healthy competition to close collaboration between the two schools. We just had to determine how it could be put in place.

**Jean Mairesse:** Given that the two schools had overlapping fields of study, once they found themselves brought together at the same university, it seemed logical for them to work together rather than to compete with each other. Discussions around the merger began in mid-2021 and bit by bit, the project took shape. In late 2022, it was approved by the various councils.

....

### How did you undertake the operation with your teams?

**Luc Chevalier:** The difficulty for ESIPÉ was mainly due to the differences in the statutes and the size of the structures. In 2022, we reassured everyone by organising meetings and seminars to get to know each other. We explained that the plan was not to reduce the range of courses but rather to reinforce it, by drawing on each structure's specific strengths. Any initial hesitancy soon departed and, on the ESIPÉ side, transformed into real enthusiasm.

**Jean Mairesse:** When undertaking operations of this kind, there are always potential obstacles. We were careful to propose a form of organisation that would have

enough room for everyone. The aim was not to impose the ESIEE model on ESIPÉ and make them fit the mould. On the contrary, we wanted to take the best parts of each way of working and create a harmonised school that would be more than the sum of its two parts. It's a project for the long-term.

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### Are you already noticing the benefits of the merger?

**Jean Mairesse:** It has allowed us to work more closely with colleagues who may have been near by, but with whom we hadn't had the opportunity to truly collaborate or have real discussions. It has also enriched the range of courses for the benefit of the students.

**Luc Chevalier:** This operation benefits everyone. ESIPÉ students are joining a school that is more visible, with a well-recognised brand, and that represented a major hub for engineering training through apprenticeship. The presence of this major engineering school within Université Gustave Eiffel is also an opportunity for the institution to position itself as the second-biggest hub in Ile-de-France in terms of engineering courses. At the same time, ESIEE Paris benefits from the fact that the university appears in the Shanghai ranking. Everyone wins.

....

### What major projects remain to be completed?

**Jean Mairesse:** The start of the 2023 academic year in September will be an important time. There are significant elements to be harmonised, like a single skills framework and the work-study programme schedule, which will be aligned from the next academic year. Another important part of finalising this merger, from an administrative point of view, is receiving approval from the Commission des Titres d'Ingénieur (CTI), France's engineering diploma authority. The application was submitted at the start of the year, the CTI audit committee visited in June and we expect the results in late 2023.

**Luc Chevalier:** The departments were reorganised so that they could accommodate the courses of both ESIPÉ and ESIEE. In the same way, we implemented a block of eight core skills for all existing courses. We also made sure that the governance would be balanced. The CTI has assessed all this work, but it's not finished yet. Now we have to work in more detail on the courses and the balance between the various clusters in terms of multidisciplinary classes, sector-specific classes, and core, scientific and technical classes. It's all very much on track.





## Giving a thoughtful welcome to international students

A warm welcome and individualised support – that is what earned Université Gustave Eiffel the “Bienvenue en France” label in 2021. This certification is awarded by Campus France and attests to the quality of the programmes for welcoming international students at higher education institutions. There are many initiatives that contribute to the quality of the welcome at Université Gustave Eiffel, including a buddy programme, the Online Welcome Desk aimed at facilitating administrative processes for international students, and a diploma in French university culture and methodology.

In 2022, the university’s range of classes in French as a Foreign Language (FLE) also received the “Qualité FLE” government label.

The institution also organises a Welcome Day each year for newly arrived international students. In 2022, it took place on 13 October at the Maison de l’Étudiant, bringing together around a hundred students from all over the world: Algeria, Morocco, Brazil, China, United States, Senegal, Ukraine, and more. The event featured performances, such as music and theatre, and was hosted by student buddies and associations, such as Bruit Du Kouloir and De L’Autre Côté. This event is also an opportunity to inform students about the services offered by the university, assistance available from French social security body CAF, healthcare body CPAM and how to open a bank account.

International students  
[www.univ-gustave-eiffel.fr/en/international/international-students](http://www.univ-gustave-eiffel.fr/en/international/international-students)



## Engineering students share their skills

In June 2022, the 17<sup>th</sup> edition of the ESIEE Paris Jour des Projets was held. It was an opportunity for the general public to discover the expertise and creativity of our engineering students. Let’s look back at the event with Sébastien Bois, one of the five winners of the Best Technical Project Prize, and Patrick Poulichet, faculty member at the school who supervised the students.

This year once again, ESIEE Paris students have stretched their inventiveness. Around a hundred projects were presented before a jury made up of faculty members, administrative staff and representatives of companies, including the industrial property consulting firm Novagraaf and French electronic giant Thales.

Sébastien Bois and his classmates Matteo Pépin, Maxime Bouet, Quentin Mur and Paul Intartaglia, third-year ESIEE Paris students, were awarded the Best Technical Project Prize for their **Braille Alpha project, a Braille printer** for visually impaired people. “This project involved multiple disciplines, including computer science, electronics and mechanics, as well as ethics,” says Sébastien. Throughout the creation phase for their printer, the five students were supervised by two tutors, faculty members Marc Braudel and Patrick Poulichet. “Our role was to guide them towards the creation of a simple, achievable device so that they could easily demonstrate its feasibility,” says Patrick Poulichet, specialist in electronics and electromagnetic compatibility. “Their support allowed us to simplify the process and create a prototype which, thanks to the use of recycled parts, cost €150, compared to €4,000, the average cost of Braille printers on the market”, says Sébastien Bois.

In December 2022, the Braille Alpha team was also awarded the “Tech For Good” and “People’s Choice” prizes at the **Future Engineers’ Trophies**, organised by L’Usine Nouvelle magazine. The students’ project was

recognised for its “public interest and common good approach” as well as its “consideration for three aspects of sustainable development: economic profitability, social responsibility and environmental protection”.

ESIEE Paris  
Jour des Projets  
[jdp.esiee.fr](http://jdp.esiee.fr)



## Including sustainable development issues in courses with AVID

*“The objective of the AVID project (Learning for Sustainable Cities) is to transform our undergraduate university courses – particularly Licence degrees and engineering courses – to adapt to development challenges for sustainable cities and innovative buildings,”* says Sacha Bensahel Mercier, Vice-President for Pedagogical Innovation and Success. AVID was one of the winners of the second round of the **“Skills and Professions of the Future”** call for expressions of interest (AMI CMA), as part of the France 2030 Plan. This project, led by Université Gustave Eiffel, is one of the initiatives aimed at *“supporting emerging talents and accelerating the adaptation of courses in line with needs for skills in new sectors and professions of the future”*.

It will work to transform programmes in connection with cities or urban activity (construction, transport, networks, management, personal services, etc.) as well as programmes in other disciplines (mathematics, literature, etc.). *“For the former, the aim is to support future actors of sustainable cities to develop specialised skills in their fields, by training our students in new materials, big data, information systems management, innovative economic models, and so on... For the latter, we wish to increase the level of multidisciplinary, to raise students’ awareness of international sustainable development challenges and give them the tools to tackle these challenges.”* Apprenticeship-based courses will also be included in the project, as the CFA Descartes is a partner of the initiative.

To launch this series of changes in the university’s courses, a team of staff from CIPEN and the DD&RS Mission will be created at the start of the 2023 academic year. The team, led by Anne-Laure Lozano and Valérie Malavergne, aims to **identify training components’ needs and practices**, support teaching and research faculty members, and develop and share pedagogical content, using an approach based on dialogue and cooperation. *“These resources are designed in connection with our laboratories, major facilities and partners, Efficacy and the association, France Ville Durable,”* says Sacha Bensahel Mercier.

AMI CMA on Anr.fr

<https://anr.fr/en/call-for-proposals-details/call/f6b65d72c5b875f28cf432b1391ac6ac/>

**We wish to increase the level of multidisciplinary, to raise students’ awareness of international sustainable development challenges and give them the tools to tackle these challenges.**

**SACHA BENSACHEL MERCIER**  
Vice-President for Pedagogical Innovation and Success

## Vocational training in close connection with needs expressed by the socio-economic world

One of Université Gustave Eiffel’s main missions is to train professionals throughout their entire career, helping them to upskill, have their experience recognised or change professions. The university’s vocational training department represents a window to the socioeconomic world, supporting people to return to study or undertake a VAE to have their professional experience recognised. It also creates **custom courses, either at the request of companies or in connection with the work of the institution’s researchers**. Since 2018, five University Diplomas (DU) and four short courses have been created, such as the DU in Common Spaces-Design, Implementation and Management and the Life Cycle Analysis Short Course.

A 2022 satisfaction survey of students of vocational courses demonstrated the quality of the university’s support: 97% were satisfied with their course and 99% appreciated the availability of teaching staff. Students are also satisfied with the university’s VAE programme. *“We have an incredibly effective team: only 2.7% of candidates quit the programme in 2021-2022 and 95% passed the assessment before the jury on the first go,”* says Karine Lambert, head of the vocational training department.

DU SRA  
[ts2.univ-gustave-eiffel.fr/enseignement/du-sra](https://ts2.univ-gustave-eiffel.fr/enseignement/du-sra)



Visit to an emergency medical services control room with the “Nefertiti” cohort (2022) of the DU in Road Safety for Africa.

### TRAINING AFRICAN ROAD SAFETY PROFESSIONALS

*“The lack of road safety is a major challenge for Africa: depending on the country, the road fatality rate is sometimes over 30 deaths per day for 100,000 residents,”* says Michel Behr, researcher at the Applied Biomechanics Laboratory (LBA). To respond to this issue, the university has been offering a DU in Road Safety for Africa (SRA) since 2022. The course is aimed at professionals working in transport and transport safety in French-speaking African countries, and offers a full overview of road safety. *“We emphasise Africa-specific issues, such as accidentology of two-wheeled vehicles.”*

The course includes more than just classes, with highlights such as a crash test workshop, a visit to an emergency medical services control room, and more. *“They acquire expertise to create significant change in their country,”* says Michel Behr. *“This DU aims to create connections and form sustainable networks of collaboration”*.



## EAV&T “Grand Tour”: review of architecture student projects

**At the end of each semester, the Paris-Est School of Architecture for the City and Territories (EAV&T) organises the “Grand Tour”, a review of projects produced in student workshops. This special event is an opportunity for students to present their work, from first-year Licence through to post-Master’s, to teaching and administrative staff and partners, and to receive feedback from international experts invited by the school.**

On 1 July 2022, the work of EAV&T students once again testified to the diversity of urban and peri-urban territories, seen through the lens of architectural projects using various materials and operating at various scales. They included the development of ancient Breton ruins, an environmental and hydrological project to fight water pollution and drought in the Yonne region, and the creation of a climate and water campus in the dry Estaque quarries in the greater Marseille urban area, to name but a few.

*“Demonstrating the diversity of cities from every perspective – that’s part of our DNA, and each student project brings its own take,”* says Léonard Lassagne, lecturer and President of the Educational and Scientific Council at EAV&T. *“The Grand Tour highlights our school’s pedagogical programmes, as well as its research work. Firstly, it offers an internal perspective: students and teaching staff get the chance to present their work, share their knowledge and receive feedback. But the Grand Tour is also an opportunity to receive an external viewpoint, from the two international experts who will write a specialist report on the programmes and organisation of our school after their visit.”* For the 2022 edition, students presented their research to the experienced eye of Irina Davidoci, Director of Archives at the Institute for the History and Theory of Architecture (gta) at ETH Zurich, and Louis Léger, from Bureau Architectures Sans Titre (BAST).

Léa-Catherine Szacka, Associate Professor of Architectural Studies at Manchester University, was invited as an expert in 2020, and said on the topic of writing the report: *“Our assessment is based on three main criteria: diversity of possibilities offered to students during their course, relevance of programmes with relation to our societies’ current and future challenges, and consideration for the guiding principles that outline the School’s general identity.”* From this report came multiple recommendations, which highlighted EAV&T’s strengths and possible areas for development. *“Thanks to reports from the Grand Tour experts, we have included ideas around sustainable development and climate change to a greater extent in our curricula,”* says Léonard Lassagne.

**The Grand Tour,  
1 July 2022**  
[www.paris-est.archi.fr/  
agenda/le-grand-tour-2-  
semestre-2021-2022](http://www.paris-est.archi.fr/agenda/le-grand-tour-2-semestre-2021-2022)

© Gilles Raynaldy



## University co-accredited at six new doctoral schools

One of Université Gustave Eiffel’s key differentiators is that it allows doctoral students to have better access to the local scientific community. The doctoral school co-accreditation policy, which has been one of the university’s commitments since its creation, aims to do just this. In 2022, it resulted in the institution receiving co-accreditation for six new doctoral schools at three campuses: Mechanics, Energy, Civil Engineering and Acoustics (MEGA - ED 162) and Neurosciences and Cognition (NSCO - ED 476) in Lyon; Engineering Sciences and Systems (SIS - ED 602), Matter, Molecules, Materials and Geosciences (3MG - ED 596), and Mathematics and Sciences and Technologies of Information and Communication (MaSTIC - ED 641) in Nantes; and Sciences of Human Movement (SMH - ED 463) in Marseille.

The university is now co-accredited in 14 doctoral schools, located across all of France. *“Alongside researchers, doctoral students embody the national dimension of our institution, which is unique in France,”* says Laurent Gautron, Vice-President of Research in charge of Doctoral Policy. *“The challenge of the years to come will be to bring together the Gustave Eiffel community of PhD students and create a feeling of belonging among all these young researchers in Marne, Lille, Nantes, Lyon and Marseille.”* According to the Vice-President, a working group is collaborating on the expectations of Gustave Eiffel PhD students and potential solutions to bring the community together: themed seminars, a joint start to the academic year, day-long PhD events with past doctoral students and potential recruiters, and so on.

There were 418 PhD students in 2021, which rose to 440 in 2022, with 32 enrolled at the

six new doctoral schools. This increase is crucial for a university that is internationally-focused and home to high-level research, as Laurent Gautron says: *“A strong doctoral policy contributes to the university’s international reputation: a PhD is a diploma that is well-recognised overseas, and publications by young researchers help increase the university’s renown. Furthermore, the work of PhD students is essential to advance research in France, through the experiments they undertake, the data produced and the new knowledge that they contribute.”*

PhDs and HDR  
accreditation to direct  
research  
[www.univ-gustave-eiffel.  
fr/en/research/phds-and-  
hdr-accreditation-to-  
direct-research](http://www.univ-gustave-eiffel.fr/en/research/phds-and-hdr-accreditation-to-direct-research)

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# INFORMING DECISION- MAKING AND ENRICHING PUBLIC DEBATE

.70 Societal openness

.76 Evaluating, assessing  
and informing decision-making



# SOCIETAL OPENNESS

Open science is one of our institution's founding principles, as a way to help democratise access to knowledge and facilitate the dialogue between science and society.

Let's take a general look at the tools, initiatives and programmes used to pursue this goal.

## Sharing university knowledge: a daily mission

The university is committed to an open-science approach, promoting scientific and industrial knowledge, and undertakes many actions aimed at promoting access to knowledge, equal opportunity and development of critical thinking: conferences, debates and workshops for the general public, podcasts, contributions to The Conversation, Fête de la Science, and more. In late 2022, a new tool was created to support this goal of making science accessible to all – Reflexscience, a web portal for spreading and co-constructing knowledge.

Whatever your age, level of education, gender, or social background... We all have the right to learn about science and access the latest scientific advances. Reflexscience is a project that supports equal opportunity. It is designed to facilitate knowledge sharing and make science accessible to as many as possible. In the face of misinformation and a lack of interest in science, it also represents an opportunity for scientists to transmit reliable, high-quality information beyond their communities, presented in a way that non-scientists can understand. Looking more long-term, Reflexscience will also be a portal to co-construct knowledge that reflects our society. It will evolve to allow scientists and citizens to interact and discuss.

CORINNE BRUSQUE

Head of the Knowledge Sharing and Openness to Society (DSOS)  
Department at Université Gustave Eiffel



How can we encourage as many people as possible to appropriate knowledge? How can we help scientists and citizens enter into dialogue with each other? These questions guided the design of Reflexscience. The project aims to connect science and society, under the coordination of the Knowledge Sharing and Openness to Society Department of the university's Research Vice-Presidency. It was officially launched in October 2022, in the form of a web portal to share and co-construct knowledge.

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It is targeted at students, young people, professionals, associations and local governments, inviting them to watch, read, or listen to knowledge coming out of the university. Scientists use it to share their research and knowledge in the form of articles, books, project packs, podcasts and animated movies. All this content wherever possible is published under a free licence, in the same way the university's laboratories share data, algorithms and source code as part of this open-science

approach. The portal also allows scientists and citizens to connect through specific events, such as conferences, debates and educational, participatory workshops.

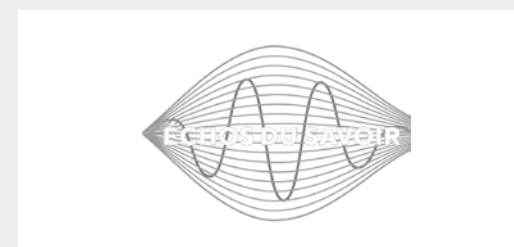
Reflexscience  
[reflexscience.univ-gustave-eiffel.fr](https://reflexscience.univ-gustave-eiffel.fr)



### THE 3 REFLEXSCIENCE VALUES IN FAVOUR OF EQUAL OPPORTUNITY

- Encouraging as many people as possible to appropriate knowledge through simple, fun and free-to-access content.
- Support cultural and social diversity through the choice of subjects covered.
- Fighting gender stereotypes through research shared on this topic, balanced representation and the scriptwriting for content produced.

## A bridge between science and society



### “Disability as a research topic”: season two of the Échos du Savoir podcast

The podcast series presents topics related to science and society, explained by the institution's research and teaching faculty and produced by the Knowledge Sharing and Openness to Society Department of Université Gustave Eiffel.

The second season explores all aspects of disability, including hiring discrimination, difficulties related to hearing impairment, communication, philosophical reflections around identity and difference, and adaptation of our environments. It invites reflections on the way in which social and environmental barriers can be overcome, to promote a more inclusive society.

The season features five episodes, 10 to 18 minutes long in duration, where different experts take the floor, including Yannick L'Horty from the ERUDITE Laboratory (Research Team on Individual Data Use in connection with Economic Theory), Laurence Paire-Ficout from LESCOT (Ergonomic and Cognitive Sciences for Transport Laboratory), Aline Alauzet from the MODIS Laboratory (Sustainable Mobility, Individuals, Society), Lucile Desmoulins from DICEN-IDF and Bertrand Quentin from LIPHA (Hannah Arendt Interdisciplinary Laboratory of Political Studies).

### THE CONVERSATION

#### The Conversation

In 2022, the scientific community from Université Gustave Eiffel published 28 articles covering subjects in connection with current affairs and the institution's major themes. They were published as part of a collaboration with the online media platform, The Conversation France, where over a hundred French higher education and research institutions publish articles aimed at the general public, written by scientists.

This collaboration between scientists and journalists shed light on current affairs, while providing reliable, research-based expertise. The articles aim to share Université Gustave Eiffel's scientific advances and knowledge with the general public, thereby contributing to spreading academic expertise beyond the university world.



## Close ties with local residents and territories

### “La Fabrique des Savoirs”

Université Gustave Eiffel is working with the Paris-Vallée de la Marne urban community to co-create a programme of conferences, debates and workshops named “La Fabrique des Savoirs”, aiming to bring science and society closer together. The programme covers multiple municipalities in the urban community and actively involves the local network of associations.

By allowing residents of the region to take part in stimulating discussions and practical activities, “La Fabrique des Savoirs” encourages active participation and promotes better mutual understanding between residents of Eastern Paris and the university’s scientists.

Some of the 2022 workshops were focused on the environment, such as the one titled “How to produce your own seeds?”. This workshop, facilitated by the Pensée(s) Sauvage(s) association, had the goal of teaching participants how to gather and store seeds depending on the season. In June, Denis Morand, Head of the Master’s Degree in Urban Engineering and member of Lab’URBA at Université Gustave Eiffel, also led a discussion around the discovery of geothermal energy.

### Fête de la Science: let’s talk about the climate

Fête de la Science is a major event aimed at all ages, organised each year by the Ministry for Higher Education and Research. Families, schoolchildren, students, and science-lovers come together at thousands of free events organised throughout France over ten days.

For the 31<sup>st</sup> edition, Fête de la Science focused on a topic at the centre of citizen concerns, both

current and future: climate change. In response to this key theme, Université Gustave Eiffel organised multiple events, both remote and in-person, on its various campuses: laboratory visits, conferences, workshops, and more. All who attended were able to ask questions, learn new things and meet the institution’s scientific community.

### University for all ages and university of time regained

For adults wishing to learn new things, educate themselves and develop their general knowledge, Université Gustave Eiffel offers opportunities to sate this thirst for knowledge and discussion through its lecture series on various themes. The lectures are free and open to all, with no age limits or requirements for previous study.

Around fifteen conferences throughout the academic year are offered by the university’s faculty members.

In 2022, themes such as African-American literature, the political history of the internet, the transformation of the theatre world, the history of Latin America, and Roman civilisation were explored.

Other lectures were also given in direct connection with current events, such as “The Contraception and Abortion Movements”, which focused on feminist activism to defend women’s rights to contraception and abortion in the early 20th century through to present day, presented by Mathilde Larrère, faculty member at the Comparative Power Analysis (CPA) Laboratory at Université Gustave Eiffel.

## “Providing proof of the existence, scope and forms of discrimination in higher education”

### We ask three questions to Yannick L’Horty, Director of the National Observatory of Discrimination and Equality in Higher Education (ONDES).

....

#### Can you tell us about ONDES?

ONDES was officially created in 2022, as part of the university’s Action Plan for Equality. It was the result of a shared ambition – from researchers, from France Universités, and above all, from our institution, to truly focus on this issue.

The Observatory has three objectives. The first is to bring together research, from all disciplines, around discrimination in higher education and to undertake research projects. Our second objective is to highlight this research through awareness-raising initiatives and events. Lastly, ONDES’ final objective is to guide and improve institutions’ public action. That is the mission of the “Discriminations” working group, which is composed of around fifty institutions, under the aegis of France Universités.

....

#### Why should we be interested in discrimination in higher education and research?

Discrimination is a form of violence, with the unique characteristic of being very difficult to objectify – to the extent that some observers deny that it even exists. We must therefore provide proof of its existence, scope and forms.

Higher education is not impervious to the risk of discrimination. But, unlike other areas like housing access or the job market, there is a lack of research on discrimination in this area. This means that there is much to do: gather and evaluate the experience of students

and staff, undertake studies on engineering and business schools, the world of research, access to PhDs, work-study programmes, and other areas... It’s a huge field.

ONDES website  
[ondes.univ-gustave-eiffel.fr](https://ondes.univ-gustave-eiffel.fr)

....

#### What results did the Observatory share in 2022?

We performed four studies, including one on discrimination in access to Master’s degrees and another on wage gaps between women and men within the university. For the first, our result showed that you are 12% less likely to obtain information about a Master’s if you have a North African first name. The wage gap study confirmed that this phenomenon also affects higher education: women experience wage gaps of 15%.



# EVALUATING, ASSESSING AND INFORMING DECISION-MAKING

The number-one objective of our public policy support mission is to contribute to the common good. Let's take a closer look at the projects undertaken in 2022 by our research and training components.

## A university anchored in the cities and territories, informing public action

Université Gustave Eiffel has chosen a positioning around themes in close connection with the ecological transition, energy, mobility, the environment and security. It informs public decision-making and helps to deploy policy at the national and regional level, particularly around the cities and territories where it is based.

Based on its expertise, skills and collaborations with public and private actors, the institution is a prominent producer of knowledge and carries out an important public policy support mission. This is represented by multiple projects and interventions steered by its research and training components, with support from the campuses.



### LOOKING BACK ON THE YEAR 2022

Since Université Gustave Eiffel was created, each year, it has shared a publication giving a concrete, overarching vision of a range of work by its components, to provide insight and expertise to public decision-makers.

This document, which is accessible to all, illustrates how the institution contributes to a better understanding of current and future challenges, shifts and questions in society. The 2022 edition includes over 60 initiatives, emphasising the diversity of themes covered, responses provided and public partners affected.

Public policy support from Université Gustave Eiffel  
[univ-gustave-eiffel.fr/luniversite/partenariats-appui-aux-politiques-publiques/appui-aux-politiques-publiques](https://univ-gustave-eiffel.fr/luniversite/partenariats-appui-aux-politiques-publiques/appui-aux-politiques-publiques)

**Our system of higher education and research truly needs to make scientific knowledge transfer in the interest of public action faster and more efficient, whether led by administrations, local governments, state operators and agencies, or major European and international associations and organisations.**

**The university is present everywhere – in urban communities, small towns and rural areas, on roads and at workplaces, underground and on the coast. It supports public decision-making, for the common good. On a case-by-case basis, scientists investigate the issue at hand, using all their knowledge and critical, distanced eye to bring a new perspective to public action or make it more efficient. Public policy support is therefore part of an ethical framework created at the intersection between research and expertise, including when a second opinion is required.**

JEAN-BERNARD KOVARIK  
*Vice-President of Public Policy Support*



## Best practices to fight concrete pathologies in New Caledonia

It is often observed in New Caledonia that certain constructions made from concrete deteriorate prematurely, due to the presence of laumontite, a type of mineral from the zeolite group. This is a changing phenomenon that is not yet under control, as little is known about it. It most often appears on the exterior of structures, in the most exposed areas: parapets, edging, ridges and so on. It causes great expense (in terms of repair, legal expertise and insurance), harms public and private investors, and damages the reputation of the construction sector, even though there are not yet any preventive or curative techniques that are unanimously recognised.

Peeling on the surface of a retaining wall  
© Loïc Divet



In this context, an agreement relating to the study of concrete pathologies was established in 2019, between the New Caledonian government, insurance bodies, members of the construction industry, and technical and industrial actors, among others. In the initial phase, researchers from the CPDM Laboratory at Université Gustave Eiffel helped to establish expertise, so as to identify the cause of such premature deterioration. Then, their physico-chemical study analysed the warning signs and factors of influence in the damage kinetics. This data was used to establish recommendations to protect structures from these pathologies and propose reliable repair techniques. They are part of a “Guide to Good Practices for Concrete”, released for construction stakeholders in New Caledonia in April 2022. This document will allow them to have “a shared level of understanding and knowledge, for better-quality and more sustainable construction”.

“Concrete Pathologies in New Caledonia” study (in French)  
[www.fcbtp.nc/suivi-de-letude-pathologies-du-beton-en-nouvelle-caledonie/](http://www.fcbtp.nc/suivi-de-letude-pathologies-du-beton-en-nouvelle-caledonie/)

## Development for the 2024 Olympics and Paralympics monitored in “real-time”

Effects on urban areas, transformations of the Paris urban community, social and environmental impacts, programme and architectural innovations... What will be the legacy of the 2024 Paris Olympics and Paralympics? This question is at the heart of the Coubertin programme, a research and action programme around the development for the 2024 Olympics and Paralympics, launched by the Department of Housing, Urban Development and Landscapes (DHUP) and the Urban Development, Construction and Architecture Plan (PUCA) in partnership with the Olympic Delivery Authority (SOLIDEO).

From 2018 through to 2026, a team of four researchers from the Lab'URBA team is following the actors in charge of the Olympic developments in real-time, through “embedded” observation at SOLIDEO, and creating a report as the project develops. They highlight the decisions, negotiations and compromises, technical, contractual and transaction solutions, and the relationships between actors, amongst other things. The goal of the process is to create a historic account of the design of the structures and development operations, help capitalise on the legacy of the Olympics and Paralympics, and evaluate SOLIDEO's ability to transform development practices in France.

[urbanisme-puca.gouv.fr/programme-coubertin-un-programme-de-recherche-a2089.html](http://urbanisme-puca.gouv.fr/programme-coubertin-un-programme-de-recherche-a2089.html)



© PUCA



## No plastics in home compost bins

More than one in three French people recycle waste in home or community compost bins. As well as their vegetable peelings, some put plastic waste in there, specifically so-called “biodegradable” and “compostable” single-use plastic bags. However, these materials are not guaranteed to fully break down in home compost bins. This means that using the compost produced may present a risk both for humans and the environment.

In 2022, Jonny Gasperi, Research Director at the Water and Environment Laboratory at Université Gustave Eiffel, contributed to a collective specialist report steered by Anses (National Agency of Food, Environmental and Occupational Health & Safety). The researcher provided his expertise on the sources and outcomes of microplastics in a range of environmental sectors: compost, soil, freshwater and saltwater. His analysis and conclusions were used for an opinion and report on the use of biosourced, biodegradable and compostable plastic published by Anses. The Agency recommends “not to place any plastic, even if labelled ‘biodegradable and / or ‘compostable’, in home and community compost bins”. It also advises

to “opt for industrial recycling of biodegradable plastic, as for other packaging, to allow compost to be used safely”.

Avoid placing plastics in home compost bins

[anses.fr/fr/proscrire-matieres-plastiques-biodegradables-compost](https://anses.fr/fr/proscrire-matieres-plastiques-biodegradables-compost)

© Anses



## Automatic analysis of agricultural land parcels for the benefit of farmers

As part of the Common Agricultural Policy (CAP), the European Union is redistributing over €54 billion per year in grants to farmers in its 27 member states, to support agricultural and environmental best practices, support agricultural markets and fund rural development. Manually checking the declarations made by farm managers regarding their land was an enormous task, but one that was necessary, to distribute the grants correctly and improve agricultural yield, while minimising water and pesticide consumption.

The LASTIG Laboratory has made it possible to automate the analysis of farmland, in response to this major practical and operational challenge. They developed a series of

algorithms that automatically classify and define the borders of agricultural parcels based on time-based series of images taken by satellites. Using these deep learning methods, the entirety of the French territory can be processed in just a few hours. The laboratory has published three scientific articles, two code submissions and a benchmark study, which are all public and open-source. They highlight the complexity of the issue and the scope of the methodological challenge faced by the laboratory.

© Félix Quinton and Loïc Landrieu





## Supporting cities towards carbon neutrality



Strengthening research and innovation and informing decisions - that is what Université Gustave Eiffel, Cerema and Efficacity offer the cities of Paris, Lyon, Marseille, Bordeaux, Nantes, Dijon, Grenoble, Angers and Dunkirk. The local governments of these nine French cities were winners of the "Smart and Carbon-Neutral Cities" call for expressions of interest as part of the Horizon Europe and have committed to becoming climate-neutral by 2030. It's an ambitious objective, to which the university plans to lend its support and expertise to inform decision-making. *"Undertaking a transition involves challenging our knowledge and moving towards a change in direction in terms of perspectives and approaches, in a supported way. With this in mind, we have created a range of services with our two partners to allow cities and urban areas to formalise and concretise their action plan in order to become climate-neutral,"* says Jean-Paul Mizzi, Vice-President of Campus Policy Organisation and Director of the Mediterranean Campus.

Université Gustave Eiffel is in discussion with Lyon, Dijon and Dunkirk and has been involved in projects based in Nantes since 2022, as part of the "Pilot Cities" call for projects. It also has taken an important role in Marseille in particular. As a member of the scientific committee and representative of the consortium, the institution helped design Marseille's Climate City Contract (CCC) in conjunction with its partners. This strategic tool is a central part of the approach for the "Smart and Climate-Neutral Cities" mission, detailing the political commitments, actions and investments for each city selected. Experts from the consortium were also involved in various themed committees (mobility, construction, energy, urban nature, etc.) launched by Marseille to determine the actions to undertake.

**"Smart and Climate-Neutral Cities" mission**  
[research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/climate-neutral-and-smart-cities\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/climate-neutral-and-smart-cities_en)

## Teaching and providing diplomas in a carceral context

In 2022, Université Gustave Eiffel continued a community initiative that dates back over ten years: providing classes to students who are detained, or in other words, incarcerated. As part of a partnership agreement with the regional Ile-de-France pedagogical unit, the institution works with the penitential centres of Fleury-Mérogis, Meaux, Nanterre, Versailles, and Melun, among others. It provides a course called the Access to University Study Diploma (DAEU), which is equivalent to the French high school diploma and allows students to return to higher education. A Licence degree in Human and Social Sciences is also offered at the Fleury-Mérogis prison only.

DAEU classes are taught by local educational centres. Université Gustave Eiffel coordinates the assessments, handles the administration and issues the diplomas. Each year, over 100 people study this course, which helps them get a taste for learning, study and knowledge again. Graduates can then pursue higher education at the institution of their choice. At Fleury-Mérogis, around fifteen teachers in sociology, geography and history provide 3-hour classes, teaching the same lessons as at university. Every year, formerly incarcerated people join the Marne-la-Vallée Campus to complete the Licence in Human and Social Sciences that they started in prison.

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## Increasing road safety awareness for elected officials



© Frimufilms/Freepik

How can road safety be better integrated into urban development projects, as part of a long-term vision? Researchers from the Laboratory of Accident Mechanism Analysis (LMA, TS2 Department) provided some answers to this question during one of the four webinars titled “Road Safety: A Challenge for Local Councils!”, organised in 2022 by the PASR (Road Safety Support Hub) at the Regional Department of the Environment, Development and Housing (DREAL) of Occitania, in partnership with the departmental administration and Cerema. This online event was aimed at elected officials and their representatives from the Occitania region. It represented an opportunity to explain the connections between road safety and urban development, so road safety

can be better included in planning tools such as local urban plans (PLU) and local intercommunal urban plans (PLUi), territorial coherence schemes (SCoT) and mobility plans.

Using the university’s huge database of detailed accident reports (EDA), the LMA experts demonstrated how urban development and infrastructure contributes to how an accident unfolds. They also highlighted the negative effects for road safety of a lack of synchronisation between urban development and network development. If a rise in everyday or irregular mobility traffic flows is not sufficiently anticipated, it can negatively impact the safety of the traffic system.

“Road Safety: A Challenge for Local Councils!”  
webinar series

[www.cerema.fr/fr/evenements/securite-routiere-enjeu-maires-region-occitanie](http://www.cerema.fr/fr/evenements/securite-routiere-enjeu-maires-region-occitanie)



# STRENGTHENING AND AMPLIFYING OUR PARTNERSHIPS

.90 Cooperating with international universities

.96 Co-constructing and reinforcing research around lives and cities

## Developing and consolidating a network of partners

Since it was created, Université Gustave Eiffel has been developing its network of partners through research projects, chairs and courses. In 2022, it further amplified its collaborations by creating the Partners' Club: a privileged space for dialogue with its most active socioeconomic partners.

SNCF, Lafarge and Eiffage groups, the company Sisley, the association Yes We Camp, the Paris - Vallée de la Marne Community, and the Seine-et-Marne Departmental Council: these are some of the first members of the Partners' Club of Université Gustave Eiffel.

This new space, devoted to the institution's key partners, was created in November 2022. It was officially launched at an evening in the Eiffel Tower's prestigious panoramic dining room. The Partners' Club is one of the results of the university's policy to develop relations with public and socioeconomic actors. *"We had already implemented a specific team and a single point of access, but we wished to go further with our most active partners and offer them a privileged space for regular dialogue,"* says Muriel Jougleux, Vice-President for Partnerships and Professionalisation.

### Co-constructing the institution's strategy with our partners

MURIEL JOUGLEUX  
Vice-President for Partnerships  
and Professionalisation

*"With this club, we wish to enrich, develop and build loyalty in our relationships",* she says. This objective is translated by a **range of custom services and support**. For its partners, the university can organise events aimed to develop their employer brand (professional conferences, recruitment days, etc.), share their job ads, offer access to its research and innovation ecosystem (visits to platforms and demonstrators, themed workshops, hackathons, etc.) and create exclusive events: annual members' evenings, networking sessions, and more. Members of the Partners' Club can also attend the annual Partners' Council. *"This highly innovative body is based around exchange. It aims not only to better understand our partners' needs and expectations with regards to the university, but also to allow them to co-construct the institution's strategy,"* says Muriel Jougleux.

Université Gustave Eiffel is rooted in the socioeconomic world and develops many partnerships, embodied through skills sponsorship in university courses and recruitment of apprentice students. This is the case for Sisley, for example. The university has been collaborating with this major French name in luxury cosmetics for nearly ten years. *"We mainly work together through close connections with the Master's in Innovation Design and Luxury at IAE. We are regularly involved in this high-level course and each year, we recruit students from this Master's as appren-*



*tices,"* says Simon Dufeigneux, Director of Public Affairs and New Projects at Sisley. The company also funds the "Sisley Young Creators" scholarship, created in 2017, which recognises M2 students working to create their own business.

For Simon Dufeigneux, the Partners' Club is a welcome initiative, which will contribute to *"breaking down barriers between the academic world and the corporate world, which still do not talk to each other enough. It's in all of our interests to work together and combine our perspectives and approaches, in order to train students as well as possible."* The Director also applauded the creation of the Partners' Council: *"Bringing together so many recrui-*

### It's in all of our interests to work together

SIMON DUFEIGNEUX  
Director of Public Affairs  
and New Projects at Sisley

ters will make it possible to communicate our needs and expectations and thereby develop the university's range of courses.



# COOPERATING WITH INTERNATIONAL UNIVERSITIES

As a European university, we have developed many strong collaborations with international partners, in both research and training. This provides greater attractiveness and visibility for our activities, as well as increased mobility and new opportunities for our students, faculty members and administration staff.

## Phoenix Contact: a new industrial automation training partner

*"A partnership to support the teaching of cutting-edge technology in the field of industrial automation." This is how Veronika Dussous, Head of Professional Training at Université Gustave Eiffel, summarises the close relations between ESIEE Paris and industrial group Phoenix Contact, to which she contributed. Phoenix Contact is a specialist in connectors and automation. Its French headquarters is located in Emerainville, a few kilometres from the Marne-la-Vallée campus. In June 2022, it signed a partnership with the engineering school. "It will support operational research and facilitate technology transfer through training, in all our sectors," says Benoît Jacquet, Head of the Industrial Engineering Department at ESIEE Paris.*

*"Our school is developing an industry 4.0 production line, co-constructed with our students. We have a fleet of machines of different technology types, ages and suppliers, which we need to make communicate together. The platform is made up of collaborative robots (cobots), mobile robots and a coordinate-measuring machine (CMM). It can be used to train students in various areas of the engineering industry: data, digital technology, maintenance, mechanics, etc. This vision, modernising practices using heterogeneous equipment, is shared by Phoenix Contact. Initially, their technicians will support and train our faculty members in various technologies, which will make it possible to harmonise communication protocols." Through this partnership, ESIEE Paris has also become a member of EduNet,*

an international network of more than 150 higher education schools coordinated by Phoenix Contact. *"One of the main aims of EduNet is to share good practices, pedagogical content and experience between educational institutions and industry bodies in the field of automation, using online platforms,"* says the department head.

**Signature of the partnership between Phoenix Contact and ESIEE Paris at the EduNet international conference organised at Université Gustave Eiffel in June 2022.**



## The PIONEER Alliance expands

The PIONEER Alliance is a European network spearheaded by Université Gustave Eiffel. In 2022, five new universities joined: Avans University of Applied Sciences in the Netherlands, Huelva University in Spain, Università Iuav di Venezia, Tomas Bata University in Zlín in the Czech Republic and Bern University of Applied Sciences. They are now part of a network of research and training dedicated to the theme of cities, which today represents nearly 130,000 students and 16,000 staff, across 10 universities and 34 campuses. *“This European project involves all university missions and provides benefits to students, faculty, researchers and administrative staff, particularly in terms of mobility,”* says Sylvie Chevrier, Deputy International Vice-President at Université Gustave Eiffel.

The PIONEER Alliance also contributes to the strategy to make courses more international, promoted by Université Gustave Eiffel. Whether through physical mobility, hybrid classes or collaborative online classes, students have more opportunities to grow in a European ecosystem and develop their linguistic, intercultural and international skills. They are also invited to focus on the PIONEER Alliance’s central theme, inclusive, sustainable and resilient cities of the future, and its many areas of study: urban planning, mobility, social inclusion, sustainable tourism, carbon neutrality, energy efficiency, and more. *“In this way, they can adopt a comparative approach to their discipline and become familiar with other countries’ standards and techniques, thanks to a global vision that accounts for the specificities of European cities and the various challenges they face,”* says Sylvie Chevrier.



PIONEER Alliance website  
[pioneer-alliance.eu](http://pioneer-alliance.eu)

## Musical composition taught across Europe

Sharing practices, testing tools and approaches, developing artistic, creative and linguistic skills and visiting incredible cultural centres – these are just some of the opportunities offered to students in Itinerant Musical Composition Classes (IMCC).

This Erasmus+ project was coordinated in 2021 and 2022 by Martin Laliberté, Head of the Master’s in Musical Creation and Sound Art offered by Université Gustave Eiffel and INA-GRM. It was run in partnership with NOVA University Lisbon, the Joaquin Rodrigo Music Conservatoire of Valencia and ENSA Bourges. Around twenty students from these institutions were able to discover new methods of teaching and learning in electro-acoustic musical composition in order to develop their skills and increase their employability.

The IMCC programme involved six days of masterclasses organised by each partner institution, helping train students in multi-track audio, programming, visual and sound art, the creative process and more. It concluded with a live octophonic concert and two other performances organised by the students with guest musicians in Marne-la-Vallée. Summaries of the masterclasses and recordings of the concerts can be found on the project website.

The IMCC partners were supported by teams from the university’s international relations department and affiliated with the I-SITE FUTURE “PARVIS – Paroles de villes” research project. They aim to create a more permanent collaboration, in the form of international Master’s degrees or blended intensive programmes (BIP), another form of mobility in the Erasmus+ programme.

IMCC project website  
[cipen.univ-eiffel.fr/imcc](http://cipen.univ-eiffel.fr/imcc)





## Stronger Franco-Indian strategic relations

In September 2022, three prestigious Indian institutions, Indian Institute of Technology (IIT) in Bombay, Cochin University of Science and Technology (CUSAT) in Kochi and Pondicherry University, received a visit from a Université Gustave Eiffel delegation. *“It was an opportunity to strengthen existing relations, present our mobility programmes, and identify possibilities for scientific and educational collaboration with these high-level partners,”* says Jean-Marc Laheurte, Director of the ESYCOM Laboratory and Deputy International Vice-President for the Asia and Middle East geographical area.

The trip to India included meetings and visits to laboratories, and concluded with the signature of two memorandums of understanding with Pondicherry University and CUSAT. Also in 2022, an Erasmus+ agreement with Indian Institute of Management Calcutta (IIM) was extended to include the three institutions visited. All these commitments aim to **support the mobility of researchers, teaching faculty, students and administrative staff**. *“We are initially focusing on subjects in computer science, electrical engineering and theoretical chemistry. IIT Madras is also very well positioned in civil engineering and driverless vehicles,”* says Jean-Marc Laheurte. *“In 2023, the LIGM, MSME and ESYCOM Laboratories will welcome four Indian researchers, who will be supported as part of I-SITE FUTURE’s international incentive programmes.”*



Sylvie Chevrier, Deputy International Vice-President at Université Gustave Eiffel, and Jean-Marc Laheurte with Gurmeet Singh, Vice-Chancellor of Pondicherry University.

Université Gustave Eiffel’s international strategy for Asian countries, which is equally developed with Vietnam, aims to build sustainable relations in both research and teaching. The goal is to create double degrees, support regular flows of students (particularly towards graduate programmes) and PhD candidates, increase exchanges between disciplines and research teams, and so on.

# CO-CONSTRUCTING AND REINFORCING RESEARCH AROUND LIVES AND CITIES

Our collaboration with scientific and socioeconomic actors takes multiple forms, including partnership agreements, creation of chairs and involvement in governance of competitiveness hubs, with the goal of innovating in service of cities and territories.

## Université Gustave Eiffel and CNRS uniting for research around cities of the future

Scientific research is a key driver of progress and innovation, and collaboration between institutions can open the way to major advances. On 20 May 2022, Université Gustave Eiffel and the French National Centre for Scientific Research (CNRS) signed a partnership aiming to strengthen their shared scientific policy and support research in the laboratories and scientific networks that they co-pilot.

Université Gustave Eiffel stands out due to its unique composition as the first institution combining a research institute, a university, an architecture school and three engineering schools.

This diverse range of expertise allows it to address the complex challenges posed by the cities of the future, which cover fields such as the humanities, social sciences, engineering sciences and architecture.

At the heart of this collaboration is the I-SITE FUTURE project, with the institution recognised as a “site of excellence” for its research around the cities of tomorrow. It is structured around three major challenges – resource-efficient cities, resilient cities and smart cities – and aims to develop innovative and sustainable solutions to shape our urban future.





## Developing innovation in service of mobility and territories

Université Gustave Eiffel and the Innovation Agency for Transport (AIT) consolidated their partnership to strengthen innovation in terms of mobility and transport in different territories. The agreement was signed on 20 September 2022 at the Marne-la-Vallée Campus of Université Gustave Eiffel.

The first stage of this collaboration is based around four main axes. Firstly, Université Gustave Eiffel commits to supporting the calls for projects launched by AIT. This initiative aims to **encourage innovative ideas in the field of transport and mobility**, by offering the university's researchers and students the possibility to actively contribute to developing new solutions.

In return, AIT provides support and guidance to the university's start-ups specialising in these sectors.

Université Gustave Eiffel also joined AIT's "Innovation Lookout" network. This allows the institution to remain at the forefront of the latest advances and emerging trends in the transport and mobility sector. By becoming part of this community of experts, the university will be able to exchange with other key actors in the industry.

In order to strengthen the connections between industry and education, AIT will also participate in educational initiatives at Université Gustave Eiffel, offering students the chance to learn from experts and become familiar with real-life challenges in the transport sector. This agreement represents an important step in strengthening the collaboration between the academic world and innovation stakeholders in the trans-



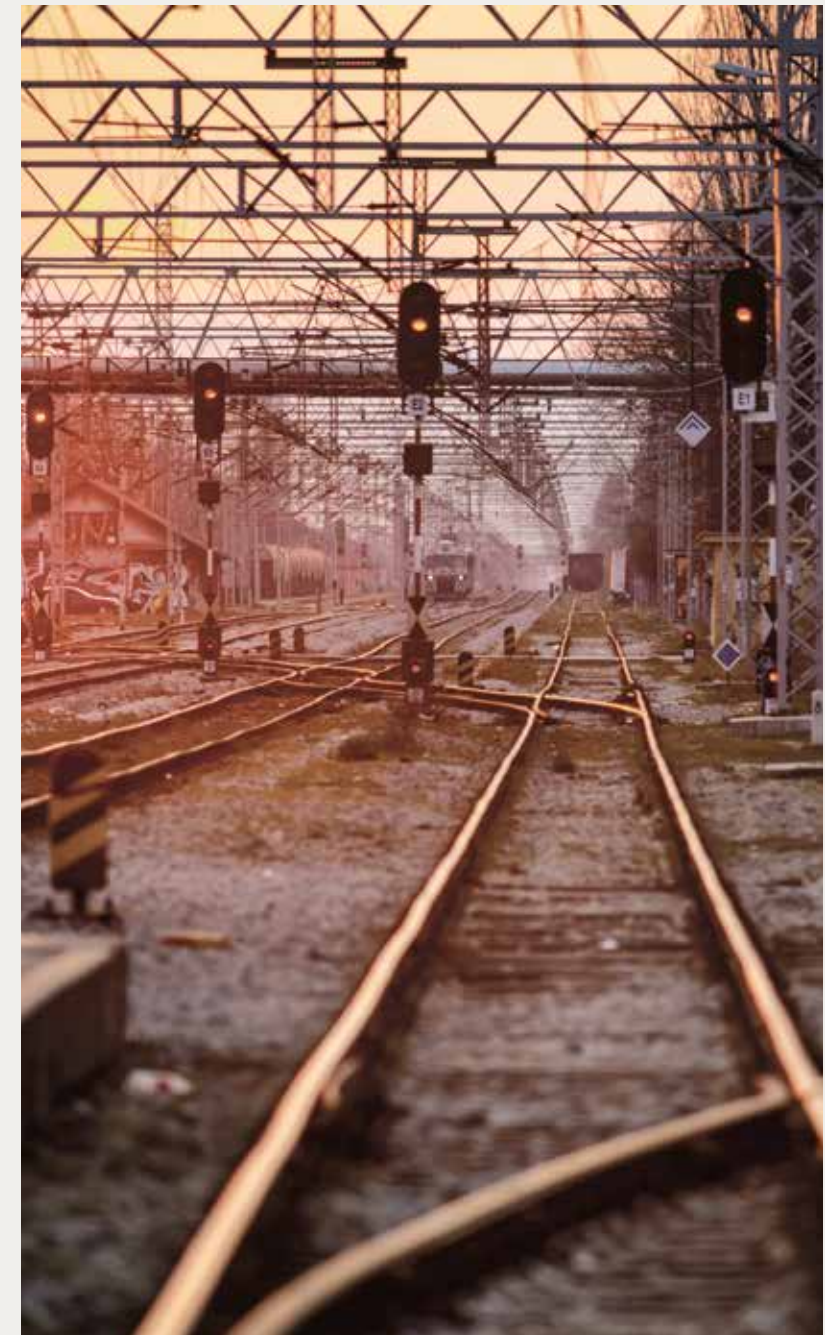
port sector. Thanks to this strategic alliance, the two entities will work together closely to support the emergence of sustainable mobility solutions, thereby responding to our society's major challenges.

## A new chair centred around rail safety

*"Evolving signalling systems, cybersecurity and the latest artificial intelligence revolutions in the rail sector... The new 'Rail Systems Safety' chair aims to share a great deal of knowledge and advances from our laboratories in these areas. There will also be a significant dimension related to training, which should support the diffusion of our work with certification bodies,"* says Paola Pellegrini, Director of Research at the ESTAS Laboratory and Chair Coordinator.

The 'Rail Systems Safety' chair was inaugurated in June 2022, consolidating the research and innovation partnership between the university and the CERTIFER and GAPAVE associations. It draws especially on research from the ESTAS (Evaluation of Automated Transport Systems and their Safety) and LEOST (Electronics, Waves and Signals for Transport) Laboratories, which are both based on the Lille campus. *"Lille has long been at the cutting-edge of technology in terms of guided transport systems. In fact, Lille was home to the world's first automatic metro in 1983."*

*"The arrival of new forms for cities, the search for greater connectivity, particularly with the '15-minute city' model, and the major challenges of climate change mean that rail is the most sustainable system to support the transition towards the city of the future,"* says Paola Pellegrini.





## Towards more effective personal airbags



*“Creating airbag systems that save lives, and not just saying it but proving it, that’s the goal of our collaboration with the company In&motion, which is the leader in the sector of inflatable autonomous airbags for motorcyclists and skiers,”* says Pierre-Jean Arnoux, Director of the Applied Biomechanics Laboratory (LBA).

Université Gustave Eiffel has been collaborating for eight years with this Annecy-based company, specifically by providing it with experimental and digital data to better understand injuries and assess the increase in protection provided by their airbags. *“We have demonstrated that they reduce the gravity of injuries by one to two units on the AIS (Abbreviated Injury Scale). This is huge - it means two hours in the emergency room rather than a week of hospitalisation.”*

On 7 November 2022, the partnership took on a new dimension with the creation of a chair between In&Motion and three of the university’s laboratories, LBA, LMA and UMRESTTE.

The partners will study accident origin scenarios, torso kinetics during a fall and epidemiological accident data, among other things. In so doing, they aim to develop **more effective, smarter airbags with more accurate algorithms**, create solutions that also protect the head and change the standards for evaluating airbags. *“One of the four Cifre PhDs planned as part of the chair will be devoted to developing solutions for new forms of urban mobility: bikes, electric scooters, etc.”*

[www.univ-gustave-eiffel.fr/en/all-news/news-in-detail/inmotion-creation-of-a-chair-around-airbag-type-personal-protection-devices](https://www.univ-gustave-eiffel.fr/en/all-news/news-in-detail/inmotion-creation-of-a-chair-around-airbag-type-personal-protection-devices)

## Looking more closely at the evolution and impact of urban logistics

Dark stores, instant delivery platforms, quick commerce, and more... These new services, which often appear in the news, are just some of the many topics of study for the Logistics City Chair. Launched in 2019 and renewed in 2023 for five years, the **chair is dedicated to urban logistics research** and spearheaded by Université Gustave Eiffel, in partnership with Sogaris, the Ile-de-France Region and the Métropole du Grand Paris. La Poste Immobilier and Geopost also provided support for the Chair in its first phase. *“We’ve benefited from strong financial support and great freedom of research,”* says Laetitia Dablang, Director of the Chair.

Where are warehouses located and how are they evolving? What is the impact of implementing an LEZ (low emission zone) on the functioning of private logistics companies? Who works as instant delivery micro-entrepreneurs and how do they see their work? How is logistics included in public policy plans and strategies? All these questions and more feed into the three scientific axes of the Logistics City Chair: “urban logistics facilities”, “public policy” and “e-commerce trends and new practices”. *“Our research takes a comparative approach,”* says Laetitia Dablang. *“Paris, Rome, New York, Seoul, Seattle, Shanghai and Tokyo: we monitor around 80 cities all over the world using indicators of urban and peri-urban logistics facilities.”*

Around ten researchers, Master’s students and postdoctoral students are involved in the chair, working mainly on **identifying new sources of urban logistics data** (automatic license plate recognition cameras, GPS tracking, smart delivery bays, applications, toll booths, etc.). The results of their research are shared and promoted in multiple forms:



articles, reports, barometers, newsletters, white papers, at round tables and conferences, and so on. An e-commerce mobility observatory was also created, to produce a report on developments in e-commerce between companies and consumers.

Another goal of all these research initiatives is to provide methodological tools for public and private actors in urban logistics and contribute to the development of public policy in the fields of goods mobility, the energy transition, new logistics facilities and employment.

Logistics City Chair website  
[www.lvmt.fr/en/chaieres/logistics-city/](https://www.lvmt.fr/en/chaieres/logistics-city/)



## Competitiveness clusters: fertile ground for partnerships

*“Vectors for collaboration with the socio-economic world” and “project factories” – that’s how Juliette Renaud, Head of the ‘Partnership Projects - Development of Partnerships, Training and Research’ Department and Jean-Paul Mizzi, Vice-President for Campus Policy, describe competitiveness clusters. Out of the 55 French clusters that received certification in late 2022, **Université Gustave Eiffel is involved in 11 of these innovation networks:** iTrans, Systematic, Cap Digital, ID4Mobility (formerly ID4CAR), NextMove (formerly Mov’eo), Pôle Mer Bretagne Atlantique, EMC2, CARA, Infra2050, Capenergies and Safe. “We have different responsibilities depending on the cluster: for some we are just a regular member, for others we are the leader of a research and innovation programme, or a member of the board or the administration,” says Jean-Paul Mizzi. The university is therefore sometimes involved in the governance of the clusters and their strategic orientation. “We are fully dedicated to our co-construction mission with public and socioeconomic actors. It is also a way to directly contribute to the skills and socioeconomic development of territories, in connection with national and European expectations,” says the Vice-President.*

Each cluster is generally anchored in a specific region and specialised in a particular area – mobility, renewable energy, risk prevention, general security, etc. – and brings together a community of interest made up of companies, research and training institutions, operators and local governments. Their mission is to **support innovation for companies and territories through collaborative research and development projects.** The university is involved in many, large-scale collaborations, including DIGUE 2020, DECARBOMILE, AWARD and EIT Urban Mobility. Some are funded by

**In co-construction with public and socioeconomic actors, we contribute directly to the development and attractiveness of territories.**

**JEAN-PAUL MIZZI**  
*Vice-President for Campus Policy at Université Gustave Eiffel*

Europe, others by the PIA or State-region plan contracts, some launched by the clusters and others by the university. *“For example, the Transpolis facility of excellence was incubated with the CARA cluster, of which the university is a founding member. This testing platform, the only of its kind in Europe, is now used for CARAPOWEE, a project that aims to create a demonstrator for powerful electrical applications in the field of mobility,”* says Juliette Renaud. *“Beyond specific projects, being part of the clusters allows us to monitor professional evolutions and better understand company expectations around skills. It represents another point of access to Europe-wide networks, thanks to European inter-clustering,”* says Jean-Paul Mizzi.

Aerial view of the Transpolis testing platform located in the former Fromentaux military base in Saint-Maurice-de-Rémens



# PROMOTING AND EMBODYING THE UNIVERSITY'S VALUES

.106 Creative and engaged  
students

.113 Staff members sharing  
knowledge



# CREATIVE AND ENGAGED STUDENTS

Our students are the number-one drivers of action at our campuses, involved in the institution's democratic life and leading many association, citizen and entrepreneurial initiatives that benefit the entire university community.

## Supporting student engagement, in all its forms

Fighting sexism and discrimination, defending minorities and the environment, preventive actions for mental and sexual health... Many causes are supported by the Université Gustave Eiffel student community throughout the entire year, as Student Vice-President Enora Lorcy explains, alongside Christopher Degorgue, her deputy.

*"The Student Parliament is a place where ideas and perspectives come together, providing connections between student life and student commitments. It is the source of many initiatives,"* says Enora Lorcy, who has acted as vice-president of this decision-making and representative body since its creation in 2021. *"The university Pride was one of the biggest initiatives undertaken in 2021, launched by the Parliament, and it sparked great student turn-out,"* says Christopher Degorgue, Deputy Student Vice-President. It culminated in a large Pride march on 9 June at the Cité Descartes campus, but also included a film screening followed by a debate and an exhibition retracing the long history of LGBTQIA+ activism.

ecology, fighting student poverty and discrimination, and more. Health issues, which were centre stage during the pandemic, are also at the heart of student concerns, *"whether it's an issue related to sexual health, such as prevention of sexually transmitted infections and contraception, or mental health, which was exacerbated by the pandemic which caused isolation, stress and depression, we have noticed that since Covid, students understand these topics more easily and are more willing to speak up,"* says Christopher Degorgue.

### RENEWED ENGAGEMENT POST-COVID

2022 was also marked by a certain level of returning to normal, after two years disrupted by Covid. *"There was a true awakening during the pandemic,"* says Enora Lorcy. *"Students acted as intermediaries for the health service, university social service and the Lugéline telephone service, a support hotline for people encountering psychological, financial or health difficulties. There are now more students than ever who wish to get involved occasionally in an initiative or project that they care about."* Students contribute in many areas: environment and

### A DYNAMIC OF SOLIDARITY SUPPORTED BY THE INSTITUTION

*"We work with the institution's various bodies, particularly the student life departments and the Equality Mission. We are lucky enough to have a university that supports us and is favourable to the implementation of our projects,"* says the Deputy Student Vice-President. This collective dynamic is based on a *"delicate balance, which is what makes it so unique and important,"* says Enora Lorcy. *"If student engagement is to continue, each generation has to take up the baton. It's up to us to make sure it gets passed down!"*

Student life at Université Gustave Eiffel website  
[vie-etudiante.univ-gustave-eiffel.fr](http://vie-etudiante.univ-gustave-eiffel.fr)



## Femicide: a website to raise awareness and act in prevention

*"Whether it's about the climate or feminism, our generation is very engaged and aims to do things our own way. The goal of our project is to raise awareness around the issue of femicide, which is a real problem but one that remains little-known,"* says student Noam Sebahoun. He is one of the three creators of a website named "Femicide", alongside Clara Many and Pagnarith Kok Srey.

It was created as part of the "DataViz" project, in their second year of the University Bachelor's degree in Technology in Multimedia and Internet at Marne-la-Vallée IUT. The site offers interactive visualisation, warning people of the realities of femicide in France.

### RAISING AWARENESS AND ENDING IGNORANCE

*"With this website, we wanted to show the concrete reality of femicide: display the data and statistics, highlight the scope of these crimes in France while paying tribute to the victims,"* says Clara Many.

The students opted for a sober, black-and-white graphic design, and visuals that give the number of deaths recorded in various regions of France. With an average of 112 femicides per year since 2016 and numbers hardly going down, the situation remains alarming – *"that is why it seemed crucial to us to include a section around prevention,"* says the student. *"What should you do if you witness violence? How can you help a woman? There are multiple systems in place, including a specific hotline: 3919. We wanted to remind people of this."* "The

*website is also indirectly aimed at victims of partner violence. It's a way for them to feel less isolated and find support,"* says Noam Sebahoun.

All throughout their project, the three students received support from their teachers, particularly Philippe Gambette. *"The university's Equality Mission also promoted our website during International Women's Day on 8 March. The university is engaged in an active approach around these issues and we have teachers who are very committed to these themes,"* says Noam Sebahoun.

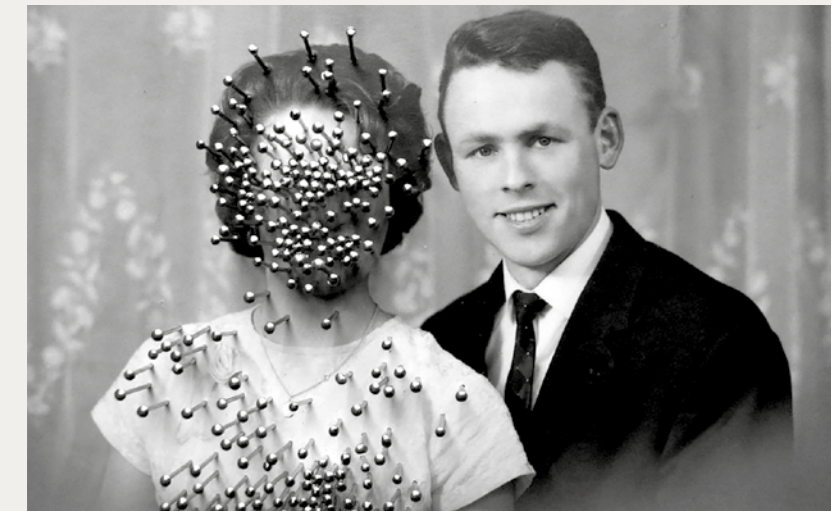
### SITE DU PROJET

[noamseb.github.io/DataViz/](https://noamseb.github.io/DataViz/)

### MORE INFORMATION ON THE WEBSITE OF THE UNIVERSITY'S EQUALITY MISSION

[mission-egalite.univ-gustave-eiffel.fr/ressources/enseigner-legalite](https://mission-egalite.univ-gustave-eiffel.fr/ressources/enseigner-legalite)

© Iris Legendre





## A Hackathon to support the resilience of territories

In March 2022, the LABILITY Smart Lab organised a Hackathon. This temporary laboratory was created in 2021 to analyse the impact of the pandemic on the organisation of work and evolutions in mobility. For two days, LABILITY researchers accompanied 14 entrepreneurs and project leaders in the aim of developing innovative solutions aimed at improving the resilience and adaptability of transport solutions within the Ile-de-France region.

*"It was an opportunity to combine my research topics with emerging projects using a multi-disciplinary approach."* Julie Perrin, postdoctoral researcher at LVMT, was involved in two of the five winning projects at the LABILITY Hackathon, including TinyWork, a coworking network focused on employment and parenthood in priority districts of the city. *"It was an opportunity for me to work with people from the entrepreneurial world, which pushed me to think about the way in which I share my academic knowledge. It was a stimulating, important and original intellectual exercise,"* says El Mehdi Aboukacem, a researcher who specialises in issues around personal and goods mobility at the SPLOTT Laboratory. He collaborated with the founder of Ho'Carré, a digital platform that facilitates short-circuit exchanges between producers and distributors, while offering a solution to pool transport services and administrative and financial management.



LABILITY Smart Lab website  
[lability.univ-gustave-eiffel.fr/toute-lactualite/actualites-details/?tx\\_news\\_pi1%5Bnews%5D=3951&tx\\_news\\_pi1%5Bnews%5D=3951&tx\\_news\\_pi1%5Bnews%5D=3951](https://lability.univ-gustave-eiffel.fr/toute-lactualite/actualites-details/?tx_news_pi1%5Bnews%5D=3951&tx_news_pi1%5Bnews%5D=3951&tx_news_pi1%5Bnews%5D=3951)

## Student share their low-carbon mobility solutions

At the 2022 FUTURE Days, the second edition of the European Hackathon was held, co-organised by the university and AFIT France (French transport infrastructure funding agency). The event awarded prizes to two student-led projects and aimed to respond to a specific issue: what infrastructure is needed for low-carbon mobility in France?

How can "greener", more resilient transport infrastructure be developed? Using which innovative materials and funding? These were just some of the questions that underpinned the work of Université Gustave Eiffel students and their Italian, German and Portuguese counterparts who came to participate in the European Hackathon in February 2022 upon invitation from the university, AFIT France, Cerema and TDIE.

Two projects stood out from the crowd at this second edition. The Green'InDer team, which included three students from ESIEE Paris, presented a concept for an 'air pollutant particles absorber', to be installed on the tops of buses. This technology, mainly made of silica gel and polyetherimide (PEI) resin, would be able to collect up to 3.5 tonnes of CO<sub>2</sub> per year if placed on a Parisian electric bus.

A prize was also awarded to the "permeable road" system presented by EcoRoad, a team of four students from ESIEE Paris and École des Ponts ParisTech. By layering pervious concrete, recycled plastic roadbed and a number of filters, this system makes it possible to absorb run-off water and combat the artificialisation of soils. What's more, the water gathered could be used to supply an electric generator.

The students leading these innovative projects were invited to present them at the European conference on Decarbonising Mobility in Paris, at the Maison de la Chimie, as part of the French Presidency of the Council of the European Union.

FUTURE Days European Hackathon  
[conference.afit-france.fr/docs/Actes\\_ColloqueEuropeen\\_gb.pdf](https://conference.afit-france.fr/docs/Actes_ColloqueEuropeen_gb.pdf)



## Mobility and engagement: two key subjects for European students

International mobility, public transport, housing access, solidarity... These are some of the major topics, at the centre of student life, that were discussed at an online meeting on 5 December 2022. Over 40 students from Alliance PIONEER European partner universities were invited by Université Gustave Eiffel and University of Žilina (Slovakia) to discuss and present proposals around two key questions: what subjects attract you the most and in what kind of initiative are you most likely to get involved?

*"Activities to support student mobility were very popular," says Ewan Richard, Master's in English student at Université Gustave Eiffel, who participated in the discussion. "Followed by suggestions for non-motorised forms of mobility, living conditions on campus, sustainable development and a project for an online platform to develop connections between students and support the implementation of programmes like an international buddy system." All these student ideas will be used to inform the Alliance PIONEER project, a European research and training network in support of more inclusive, sustainable and resilient cities. "PIONEER offers the opportunity to develop connections with other universities and make student mobility more dynamic, which suffered during the pandemic, as did student engagement," says Ewan. He is also a member of the Université Gustave Eiffel Student Parliament, where he contributes to "making the institution a friendly, pleasant place to live, not just somewhere to study."*



PIONEER Alliance website  
[pioneer-alliance.eu](https://pioneer-alliance.eu)

## STAFF SHARING KNOWLEDGE

Whether they're faculty members or administrative staff, all these staff members have one thing in common: they have evolved at our university and enjoy sharing their knowledge and experience. Read on to learn more about the reasons and motivations that drive them on a daily basis.



## “Giving students greater social awareness to create the cities of tomorrow”

“I divide my time between teaching in the Urban Engineering department and research in the Lab'Urba Laboratory. The DNA of my profession drives these two activities. I'm interested in public urban action and the way in which urban stakeholders take action, build and manage cities.

I like to have discussions with my students and try to give them a critical perspective towards cities and their shifts. I think it's important to give greater social awareness to students in technical studies, as they will be involved in shaping cities further down the line.”

**FLAVIE FERCHAUD**  
*Associate Professor, Urban Engineering  
department Lab'Urba, Marne-la-Vallée Campus*



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**WATCH HER VIDEO PORTRAIT  
(IN FRENCH)**

[youtu.be/9Wxpv7OSL2g](https://youtu.be/9Wxpv7OSL2g)

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## “A virtuous cycle between teaching and research”

“My team and I are working on a large-scale European project: LostInZoom. This project was awarded an ERC Consolidator Grant 2021-2026 and focuses on the way in which people perceive and understand interactive multi-level maps such as Google Maps, OpenStreetMap or Géoportail: zooming in and out, changing scale, etc. Our objective is to make the most functional maps possible. I handle the recruitment, management and supervision of a team of seven researchers, PhD students and postdoctoral students.

Université Gustave Eiffel offers us the opportunity to be part of an ecosystem of students and researchers that we regularly draw on as part of our experiments and with which we share our scientific reasoning. I see it as a truly virtuous cycle, in which students participate in our project and, at the same time, become familiar with research work.”

**GUILLAUME TOUYA**  
*Director of research in Geographic Information  
Science, Geovisualisation and Cartographic  
Generalisation at IGN  
(ENSG-Geomatics)*



## “Helping develop concrete, more sustainable and better-performing solutions”

“Beyond specialist and teaching work, I am responsible for the fatigue test machine, one of the biggest road traffic simulators in the world. Nearly 40 years after being commissioned, this facility still performs just as well, thanks to modernisation works and above all, the skills of our technical team. The test machine allows companies and academics to test and validate lab-developed products at level 1, before putting them into application on real roadways. This research is often part of national, European or international projects, and my work involves coordinating tests, talking with partners, organising instrumentation and experiment campaigns, etc.

I feel a certain level of pride to manage this internationally-recognised facility, which contributes to highly applied research. It's a pleasure to help develop concrete, more sustainable and better-performing solutions, like roadways aimed at reducing CO2 emissions and vehicle noise as part of the European NEMO project.”



**JULIETTE BLANC**  
*Engineer and researcher, Manager of the Road Structure Fatigue Test Machine at the Transport Infrastructure Auditing, Modelling and Experimentation Laboratory (LAMES), Nantes Campus*

## “Defending the university's fundamental values: curiosity and critical thinking”

“How can we share the results of research and support the co-construction of knowledge with society? At the Knowledge Dissemination and Openness to Society (DSOS) Department, we build bridges between science and society. We are lucky enough to speak with people who are passionate about their profession and work on a daily basis. In this context, I work to implement tools to develop and promote citizen participation in research. My job allows me to combine my personal and professional convictions while supporting equal opportunity and stimulating curiosity and critical thinking.”

**MARIE EXCOFFON-GAGNOUD**  
*Head of the Development and Promotion of Citizen Participation in Research Mission, Lyon Campus*





## "Helping students bring projects they care about to life"

"I came to Marne-la-Vallée IUT as a computer science student. During my course, student life and university events gave me just as much in terms of learning and experience as my classes did. Now, it's my turn to encourage students to create projects that they care about and bring them to life: festivals, student nights, film screenings, association events, and more. I play the role of interface between their ideas and the institution's departments that can support them, by lending them equipment or advising them on security guidelines, for example. It's extremely enriching work, that allows me to work closely with a community where initiatives are spontaneous and not motivated by professional interest."

**QUENTIN BOULIC-MAILLARD**  
*Head of Development of Student Initiatives,  
Marne-la-Vallée Campus*



**WATCH HIS VIDEO PORTRAIT  
(IN FRENCH)**

[youtu.be/oHhapIL\\_Gp8](https://youtu.be/oHhapIL_Gp8)

## "Training young people and helping them develop their project"

"The SRO Laboratory addresses multiple subjects related to ground mechanics, from risks around building on earth to the use of earth for building. These include constructions made from earth, artificialisation, new underground transport networks, evaluation of seismic risks, and more. But the challenge of the coming years is, of course, climate change: what impact will it have on structures? How will they react to alternating periods of drought and torrential rains? These are the questions to which I aim to respond."

Today, I consider that my role also involves training young people and helping them launch themselves to develop their career. I mainly teach engineering students at EIVP. I provide them with foundational knowledge, but, as a researcher, I try to open their minds to certain innovative ideas, particularly around eco-responsible structures. Knowledge must also be shared with companies and public authorities. I am involved specifically as a French representative in standardisation committees at the European (CEN) and international (ISO) level. Beyond issues around safety and defence in our expertise and practices, standards contribute to sharing a large amount of university knowledge."



**PHILIPPE REIFFSTECK**  
*Director of the Soil, Rock and Geotechnical Structures (SRO)  
Laboratory, Marne-la-Vallée Campus*

## “It's stimulating to help create the city of tomorrow”

“My role is to ensure that financial rules and procedures are followed. I allow university agents to formalise their projects and research from a financial point of view.

I collaborate in particular with the Sustainable Development and Societal Responsibility (DD&RS) Mission and the Arts and Culture Mission, but the majority of my activity is devoted to I-SITE FUTURE, an ambitious, innovative and rich project. There are a huge number of initiatives supported and undertaken as part of I-SITE.

Helping create the cities of tomorrow is very exciting. What also motivates me is my true consideration for support services: I participate in team meetings and I am involved in project lifecycles. Though I am not a researcher, I am capable of speaking about the research that the university does. This gives meaning to my work and makes me proud to be part of this institution.”

**JEREMY DEPRES**  
*Financial Manager, Management Hub,  
Lille Campus*



## “Playing the role of a social elevator”

“Our school is public and the only of its kind, training future assistants in architecture in three years. One of our strengths is that we accompany small cohorts – around 80 students in total – and draw on the experience of our faculty, who also work in the industry, meaning that they can transmit their expertise and share their knowledge of the professional world.

EPS-AA also plays a true role of a social and educational elevator. We welcome young people who only have a high school diploma, who ‘don’t have the right profile’ to be admitted to architecture school but who show great potential. We help them translate this into professional skills and grow throughout their entire course. Our graduates then have two options: either go straight into work in an architecture agency or in a technical municipal department, or enrol in a higher education degree in the field of architecture, for example, or by applying to have units validated to apply to an ENSA (National Superior Architecture School).

As a teacher, my role mainly consists of training them in the notion of space, in producing models, and in digital tools, as well as in materials recycling and waste management, two subjects that hold particular importance at our school nowadays.”



**ISABELLE TAVERNIER**  
*Course Director at EPS-AA  
(Professional Superior Architecture Assistant School)*



## ACKNOWLEDGEMENTS

We would like to thank the entire university community for its contribution to the publication of this activity report and for its ability to constantly develop new, innovative and transforming projects.

We would also like to thank our academic, institutional and socioeconomic partners, with whom we work hand in hand, for their unfailing support.

Document published by Université Gustave Eiffel

Legal submission - ISSN 2803-2551

**Publication director:** Gilles Roussel

**Communication director:** Sandrine Witeska

**Editorial:** Kogito and Université Gustave Eiffel

**Graphic design:** Epok Design

**Photo credits:** Université Gustave Eiffel, Adobe Stock, Unsplash  
or otherwise noted next to the images

**Translation:** Hancock Hutton

September 2023

