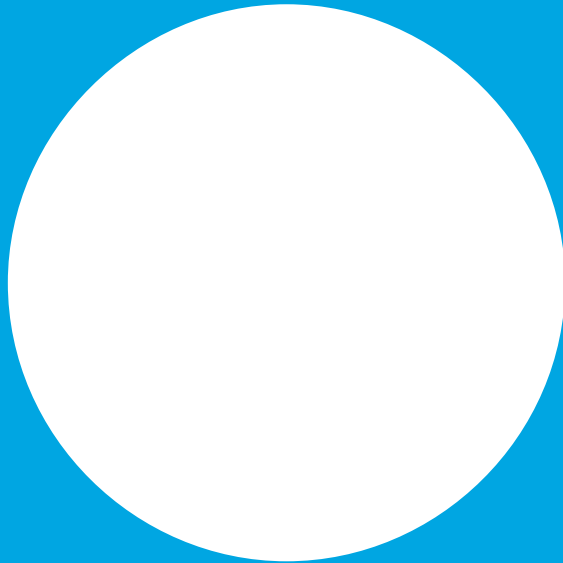
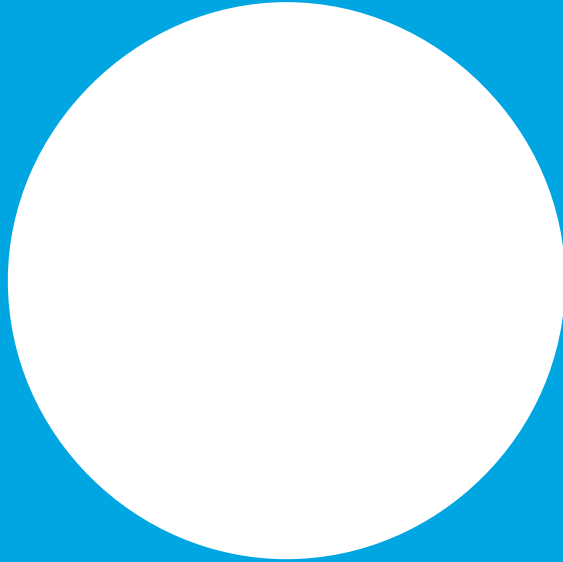




**RÉPUBLIQUE  
FRANÇAISE**

*Liberté  
Égalité  
Fraternité*





#### Being together is everything

In Brittany, the need to meet up again, the art of being and living together, along with a keen sense of celebration are reflected in the quality of the welcome and the unique ability to organise large gatherings and events. Solidarity, tolerance and a sense of equality form this **fraternity**.



#### "Glaz" business

The assets of the Breton economy and the strategic vision of its key players can be summed up in a colour that is unique in the world. The term "Glaz" in Breton denotes a mixture of greens, blues and greys symbolizing **three areas of excellence** (agri-food, marine resources, knowledge based economy and digital technology) which create innovation and jobs.

# BRETON

#### Against all odds

Bold initiatives, purposeful actions serve the territory and its development. Here, everyone's sense of commitment can be seen in the common subjects supporting ambitions and **sustainable projects**.



**IN THE IMAGE OF  
A STRONG, UNITED  
AND ADVENTUROUS  
REGION OF  
CHARACTER, THE  
UNIVERSITY OF  
SOUTHERN BRITTANY  
TEACHES AND  
CULTIVATES THE  
SPIRIT OF CHALLENGE.**

#### The call of the sea

The home ports face an ocean that triggers the imagination. Brittany produces and nurtures travellers, full of daring, openness and a **spirit of adventure**.

#### Finding your balance

Studying in Southern Brittany, is above all about enjoying it, savouring a **quality of life** in the great outdoors, discovering your passions, on land or at sea, marvelling, experiencing a way of life and having the chance to fully flourish.



**10,000**  
**STUDENTS**

**3**  
**CAMPUSES**  
LORIENT, PONTIVY  
VANNES

**14**  
**LABORATORIES**

**8**  
**DOCTORAL**  
**SCHOOLS**

**900**  
**EMPLOYEES**  
500 OF WHICH ARE  
LECTURERS, LECTURERS-  
RESEARCHERS

**6**  
**COMPONENTS**  
**OF THE UNIVERSITY**  
**OF SOUTHERN BRITTANY**

- Faculty of law, economics & management
- Faculty of arts, languages, humanities and social sciences
- Faculty of sciences and engineering sciences
- Lorient - Pontivy Institute of Technology
- Vannes Institute of Technology
- ENSIBS school of engineering

# INFOGRAPHY

**THE UNIVERSITY**  
**OF SOUTHERN**  
**BRITTANY:**  
**A UNIVERSITY ON**  
**A HUMAN-SCALE**

Since 1995, we have believed in small groups, in teachers who know their students by their first names, in commitment and a taste for entrepreneurship.

**+ 500**  
**PLACES**

Available to UBS students wishing to study overseas within the framework of the Erasmus programme and agreements with foreign universities.

**100%**  
**OF**  
**COURSES**

ARE ACCESSIBLE WITHIN THE FRAMEWORK OF VOCATIONAL TRAINING.

**50**  
**COURSES**

AVAILABLE VIA SANDWICH TRAINING AND MORE THAN 900 SANDWICH COURSE STUDENTS EVERY YEAR.

**1**  
**UBS**  
**FOUNDATION**

# A VISION, VALUES THAT COMMIT US

ON A HUMAN-SCALE, OPEN TO THE WORLD, THE UNIVERSITY OF SOUTHERN BRITTANY CULTIVATES A TASTE FOR OTHERS, A COLLECTIVE ADVENTURE AND PARTICIPATIVE PROGRESS.



## TATIANA RAKOTOZANDRY, CIVIL ENGINEERING STUDENT

With a Bachelor degree in civil construction and infrastructure and with the highest results in her year in Madagascar, Tatiana joined the University of Southern Brittany in 2018. At the age of 23, she is now studying for a Masters 2 sandwich course in Civil Engineering and is hoping to join the École Nationale des Ponts et Chaussées.

## : AUDACITY

### BRIDGES TO THE FUTURE

**NP:** Women are under-represented in civil engineering. What led you to choose this option?

**TR:** My father is a civil engineer in Madagascar and my mother is a construction engineer. Since a very young age I have been fascinated by buildings. After my baccalaureate, I was uncertain about choosing this career because I wasn't sure I'd be able to manage teams of workers. However, my father persuaded me to go for it.

**NP:** After your degree in Madagascar, why did you decide to join the University of Southern Brittany?

**TR:** Since I had the best results in my class, the Head of the University suggested that I follow a course overseas to discover other aspects of civil engineering and other ways of studying. I really liked the possibility of doing part of my Master's degree in a work-study program. And, having grown up on an island, the proximity of the sea was also decisive in my decision to come to Lorient.

I knew that I was going to have to work hard and really focus to bring myself up to the same

level as the other students and that living in another country and being far from my loved ones was going to be difficult at the beginning. Being near the ocean helps to recharge your batteries. And I am also very lucky in that Bretons are very welcoming people.

**NP:** After your Master's degree, you're hoping to enter the legendary École nationale des Ponts et Chaussées. What are your ambitions for the future?

**TR:** With all the skills I have acquired, I'd like to be able to return to Madagascar to contribute to the development of my country. All the decisions I make direct me towards this goal.

**MAIWENN  
DEFFONTAINES,  
ENGINEERING  
SCIENCE STUDENT**

Awarded the Prize for the most outstanding student of 2019 for her results and in particular for her investment in the university's sporting life. The Prize was awarded in partnership with the Association des Membres de l'Ordre des Palmes Académiques (AMOPA), under the auspices of the President of the Republic and the Ministry of National Education.

**THIS  
COMMUNITY  
EXPERIENCE  
IS VERY  
ENRICHING.**

# : COMMUNITY

**Rendez-vous every day at 4 pm at the water sports centre in Lorient. Four hours of intensive training for the 11 members of the two crews of the UBS Sailing Team created in 2017.**

*"There are no secrets when you want to perform: whether on land or at sea, you have to work, work and work!"* Maiwenn Deffontaine leads the adventure, along with Pierre, a fellow student. *"I discovered offshore sailing at UBS. Many of us here are sailing enthusiasts: when we suggested creating a university crew, we received*

*many applications from all the University of Southern Brittany's campuses! It helped to create friendships and favours a sense of belonging to the same family".*

For this student who combines scientific studies with water-board sports at a high level, *"this community experience is very enriching. The complementarity of the different participants is a strength. On-board, each person has a key role to play. You have to learn to communicate and define a strategy in order to arrive at a common goal. It is*

*essential to develop a good relationship. It's extremely enriching."*

After the first experience at the French championships this year, the UBS Sailing Team wants to gain every chance of progressing. *"We have made our training more professional and we are looking for sponsors so that we can take part in more competitions."*

The crew wants to obtain greater visibility among students and beyond Brittany, to hoist the colours of UBS high. The course has been set and the winds promise to be good.



**HOEL RIVAL,  
LAW STUDENT**

He was awarded the Prize for being the most outstanding student of 2019 for his results and in particular for his commitment to university life. The Prize was awarded in partnership with the Association des Membres de l'Ordre des Palmes Académiques (AMOPA), under the auspices of the President of the Republic and the Ministry of National Education.

# : COMMITMENT

**UBS IS  
A PLACE  
WHERE  
EVERYONE  
CAN GET  
INVOLVED**

Every Tuesday evening, on the Vannes campus, about fifty students collect their basket of fruit and vegetables for the price of €5. In partnership with a local farmer, the Ferme de Kerambio, the initiative was launched by the students' association, La Coop, and was extended to other campuses at the start of the 2019 academic year. Its aim is twofold: to enable all, regardless of budget, to enjoy good quality local produce and also to promote Breton farming. A group of friends is behind this initiative, including Hoel Rival. "I've always enjoyed creating new amenities that

meet needs. Apart from the quality of teaching, I chose the University of Southern Brittany because it offers me the chance to express my ideas and act on my beliefs. I've always wanted to be committed to others and help them. For me, university is a place where everyone can be an active participant and not a simple consumer."

In addition to the message, Hoel Rival, the elected president of the UBS students' federation, wants to undertake real actions to encourage and support the commitment of students to the region. "The students' associations, of which there are about thirty, play an

essential role in giving access to culture for all."

In 2018, Hoel Rival also created the Jules Verne club, so that students could find out more about law and facilitate their future professional projects in the legal profession. He also sits on the Faculty Council and the Commission for training and student university life. And because for Hoel one project always leads to another, training will soon be offered to volunteers and to those who wish to become one.

## UNIVERSITY SHOULD BOOST THE CONSCIENCE

**NP: What does a citizen university mean to you?**

**TV:** It's a university that encourages participative projects and includes professional members in its work. Within the framework of my thesis on the technical properties of the mixture of clay and hemp in construction, I had the chance to work with researchers as well as manufacturers and tradesmen who provided me with their expertise in building projects.

With these participative projects, the University is able to contribute to the development of responsible sectors and really boost the public conscience. It is a real opportunity as a student to be able to lead a project that involves this dimension.

**NP: The subject of your thesis promotes more ecological housing.**

**TV:** The aim of this thesis and the Eco Terra project was to scientifically study the variability and performance of a clay-hemp mixture as an insulating material. I toured Brittany and Normandy to build up a representative sample of clay and hemp among manufacturers. I prepared various mixtures and

observed their behaviour in mechanical, thermal and hydric terms. It is now scientifically proven that among construction materials, clay-hemp offers an effective local and ecological alternative.

**NP: What is your ambition for this material?**

**TV:** To be ecological, clay-hemp must be used through a local distribution network and not on an industrial scale. Therefore, the aim is to train tradesmen to use this eco-material: more than 25 of them in France have been trained in sprayed clay-hemp this year.



**THÉO  
VINCELAS,  
PHD IN CIVIL  
ENGINEERING**

He was awarded the First regional prize in the "My Thesis in 180 seconds" contest for his research work on the technical properties of a natural clay-hemp mixture in construction.

# : CITIZEN



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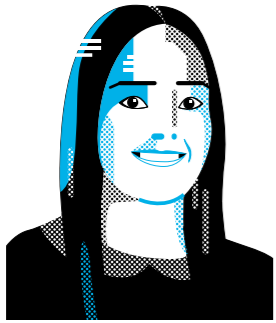
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# 4

## AREAS OF EXCELLENCE DRIVEN BY PROFESSIONAL INTEGRATION

Multidisciplinary, the University of Southern Brittany bases its teaching and research strategy on 4 promising themes in terms of innovation, economic development, and professional integration. The Sea and the coastline, the Industry of the future, Cyber and data intelligence, the Environment, health and disability constitute its transversal centres of excellence that amalgamate 500 lecturers-researchers, 10,000 students and a vast network of businesses and public partners.

## CYBERSECURITY



### COMBATTING THE CRISIS

In a world where everything is connected and interconnected, it has become a priority for all key-players, both public and private, to anticipate the security of systems and of people.

**JAMAL EL HACHEM**

● The University of Southern Brittany very quickly decided to invest in this field by launching the first French cyber defence course for budding cyber defence engineers in 2013; followed by a trusted computer engineering degree, and a masters in "cybersecurity for embedded systems" in 2017.

● In addition to training, with the support of large groups of new operational experts in the field, UBS has expanded its research teams and intensified its international partnerships.

Among its new recruits, Jamal El Hachem, a lecturer-researcher from Lebanon, works in particular on the methodology of crisis management exercises at the Cyber Security Centre on the Vannes campus. A unique team in France, complemented by an educational platform devoted to embedded systems in Lorient. "At UBS, combining research, teaching and collaboration with businesses allows us to progress much more quickly, explains Jamal El Hachem. This ensures that we have a good head start."

## ENVIRONMENT HEALTH AND DISABILITY

### GUIDING SOCIETY TO REINVENT ITSELF



How can the rules be changed to ensure that all, regardless of their differences, are able to enjoy the same rights in society? Research in legal science has a real role to play in social progress.

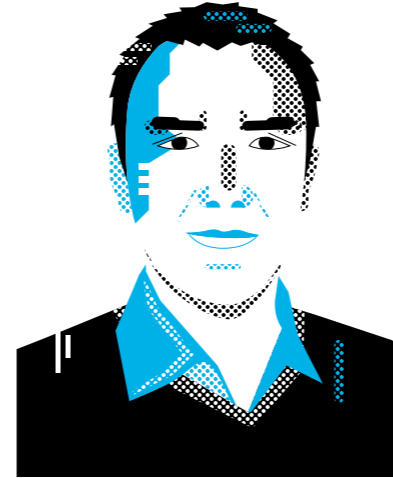
**ANJELA GALLAIS-LAVANANT**

● In a country that lays claim to liberty, equality and fraternity, strong disparities persist according to the age, gender, education and physical or mental condition of each person. For years, the teams of the University of Southern Brittany have carried out recognized work on issues of vulnerability, inclusion and accessibility, in particular with the aim of changing legal standards.

● For the past two years, with Lab-LEX, a UBS research unit in law, Anjela Gallais-Lavanant has focused her research on disability in prison environments. Her thesis on "Vulnerabilities and places of deprivation of freedom", is a result of concrete observations. "I remember an article that triggered something in me. In a penitentiary centre, convicts could not access any kind of work adapted to their disability, which would have allowed them to benefit from a reduced sentence and facilitate reintegration upon their release." To overcome this "double sentence" only a new interpretation of the rules of law would allow equality to be restored. Throughout her thesis, supervised by professors Eric Péchillon and Stéphanie Renard, Anjela Gallais-Lavanant's aim, using an analysis of human rights reports and case law, is to draw up suggestions to change prison institutions.

Beyond prisons, the young teacher wants to convey a message: "Taking into account disabilities can be a true richness for helping society reinvent itself and accept differences with kindness."

## INDUSTRY OF THE FUTURE CYBER AND DATA INTELLIGENCE



● Digital technologies are revolutionising all areas of activity, including industry.

● In construction, 3D printing, for example, offers a whole host of new opportunities.

**ARNAUD PERROT**

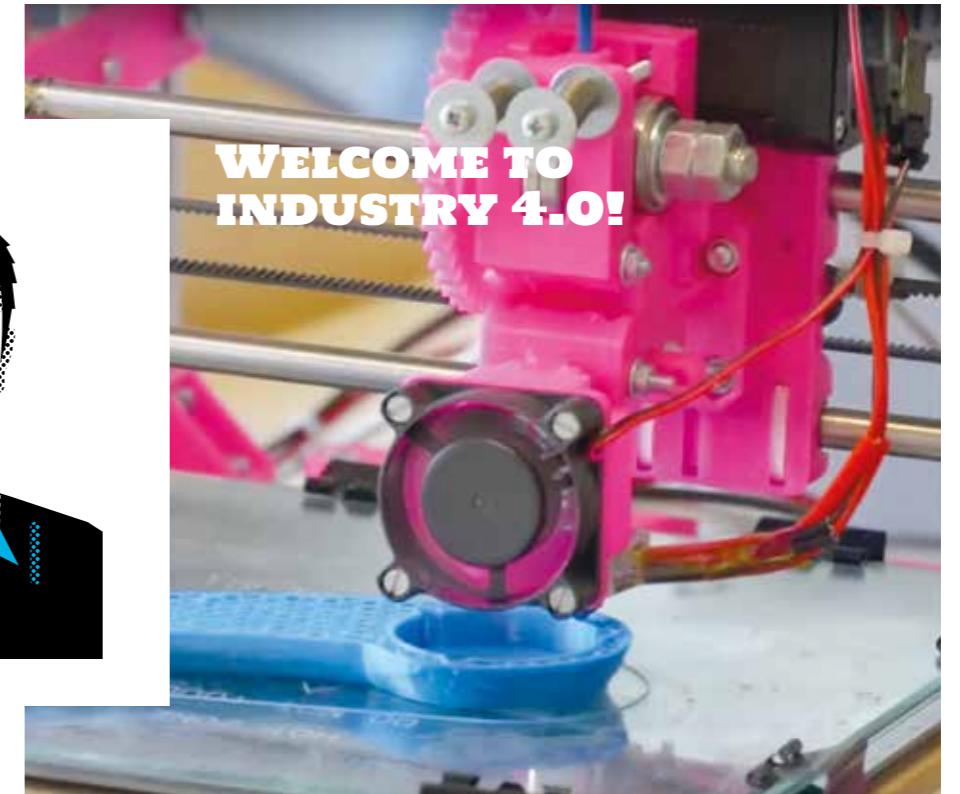
What if, instead of building the city of the future, we printed it? "Today, we have a very low tech image of buildings, but digital tools are starting to change the game in construction", explains Arnaud Perrot, a lecturer in civil engineering at the University of Southern Brittany. Not only does digital technology make data exchanges much more fluid between all of a building project's key-players, it also helps to develop innovative construction methods. From digital models to connected devices, the building sector is undergoing a complete transformation, supported by the State.

"At UBS, we show students the potential uses of printable concrete, for example. The advantages of this technology of the future are numerous. Beyond savings in terms of productivity and the greater freedom it offers architects, 3D printing means that it is possible to only use the strict quantity of materials required. Studies show that this would allow the use of concrete in construction to be halved". The challenge is twofold: economic and environmental.

On the strength of its cross-disciplinary expertise in civil engineering, data science and materials, the University of Southern Brittany is well equipped to support the

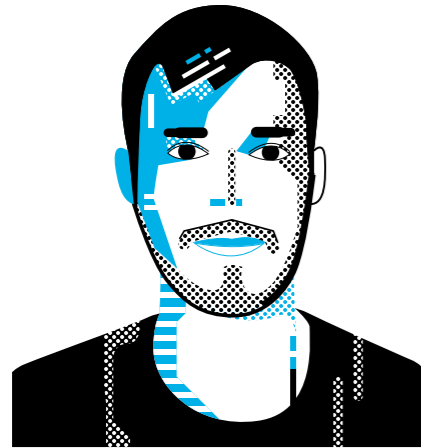
transformation of the sector and businesses. "We have worked with the Breton group Pigeon on the recycling of its waste aggregates to produce decorative elements using 3D printing", explains Arnaud Perrot. In partnership with Lafarge, a CIFRE thesis is also underway on the digital manufacturing of concrete.

UBS is also involved in large-scale international projects with its many partners abroad, such as the Technical University of Munich in Germany and Columbia University in New York. Welcome to the new world of construction 4.0!





## SEA AND COASTLINE



**“EDUCATE,  
DEVELOP,  
SHARE”**

Water quality, rising sea levels... Changes in sea levels affect people's lives and many areas of economic and cultural activity (fishing, tourism, culture). At its institute Archipel, UBS is developing high-level training and research to educate, develop and share scientific advances.

**ERWAN GENSAC**

● Culturally and economically oriented towards the sea, the University of Southern Brittany has made the sea and the coastline a privileged area of training and research. Two-thirds of its 14 laboratories study the maritime environment: from “antifouling” paints designed to protect boat hulls, to maritime history, sea/coastal relations, on-board systems (marine drones) or even materials.

*“The sea is a transversal theme that leads us to develop collective multidisciplinary projects (data science,*

*geoscience, biology, law, etc.), emphasises Erwan Gensac, lecturer-researcher at the Océan Géosciences laboratory. A coastline is an entity that must be considered as a whole in order to be fully understood.”*

Since 2019, Archipel, a public institute for maritime and coastal research thus facilitates the links between students, researchers and society.

A group of students, in partnership with the Golfe du Morbihan Vannes agglomeration, is preparing a 3D device to educate the general public about

marine environments, coastal paths and local microfossils. Sediment dynamics is also one of the UBS teams' research topics studied at a local, national and international level. Alongside his work on the Bay of Saint-Brieuc, Erwan Gensac continues his research in French Guiana and the Amazon. *“The tools and methods I have put in place there can also be used to study the Gulf of Morbihan and this gives us some points of comparison. It is always more relevant to explain the local with a global vision.”*

## THE NUMBER

# 8 GRADUATES OUT OF 10

## FIND THEIR FIRST JOB WITHIN THREE MONTHS AFTER OBTAINING THEIR DIPLOMA

### THE UNIVERSITY OF SOUTHERN BRITTANY IS A CHAMPION WHEN IT COMES TO INTEGRATING ITS GRADUATES INTO WORKING LIFE.

**Ranked among the Top 10 universities for professional integration.**

Source: Palmarès L'Étudiant de l'insertion en Master – June 2018

**Ranked among the Top 10 for success in Bachelor's degrees.**

Source: Le Monde "Réussite en Licence" – November 2018

**Consistently at the top of the charts, it has excellent results, for example, with a 96% integration rate within 30 months of graduation.**

Results that have not come about by chance. Close to its students and attentive to its region, UBS has developed a winning combination for

ensuring the swift entry of its students into the job market.

#### A ticket for success

From the first year, each student is allocated a professor-tutor who can advise them. Students in difficulty benefit from reinforced support from more advanced students to acquire working methods and consolidate their knowledge.

#### The 1st job club

After graduating, students continue to receive support from UBS in their search for a job. Supervised and managed by professionals, the “first job club” helps to target opportunities and promote applications (CV, covering letter). It also offers students

the chance to train for job interviews.

#### Another approach of the programme

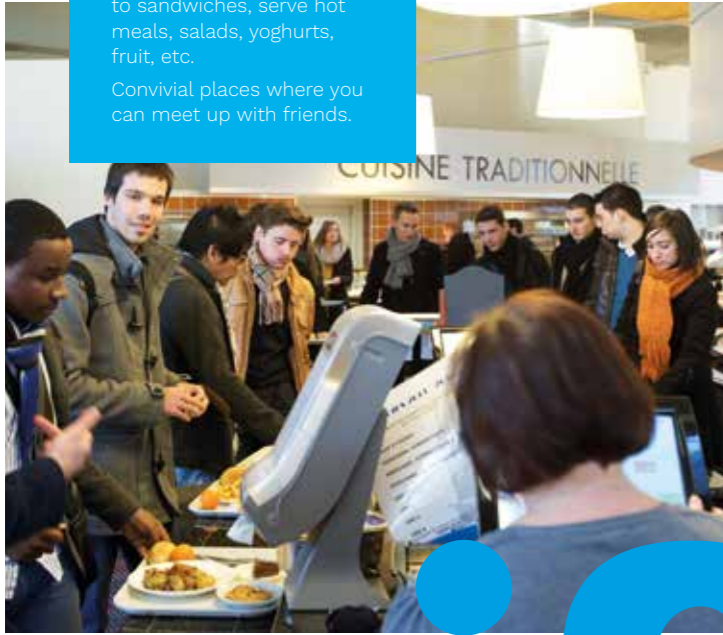
If UBS students are able to integrate more easily, it is also due to an innovative educational approach. Since 2017, its teachers have been testing a different approach to teaching courses. What is expected of a young graduate in law, civil engineering or data science?

Ultimately, each training course will present a repository of all the skills to be acquired in order to meet the expectations of employers. A serious additional asset in the job market.

### Balance and friendliness on the programme

The University Restaurant serves balanced meals. You can also have lunch in the cafeterias which, in addition to sandwiches, serve hot meals, salads, yoghurts, fruit, etc.

Convivial places where you can meet up with friends.



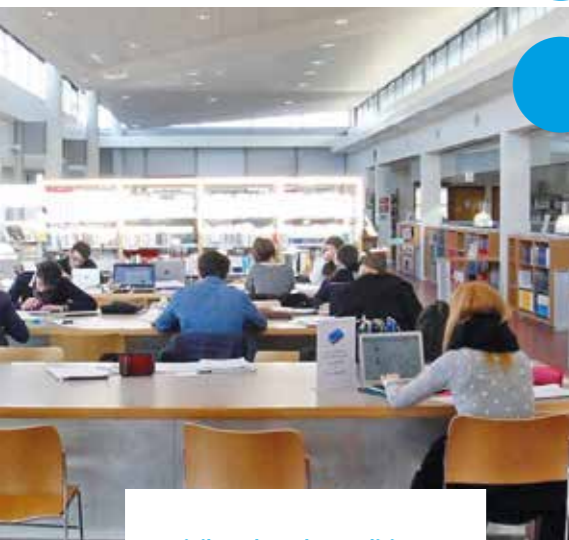
### The Welcome Deiz

A real welcome highlight, the Welcome Deiz offers new students the chance to discover the university's services, associations and partners. Addressing the entire university community, students and staff, this moment is dedicated to discussion and relaxation.



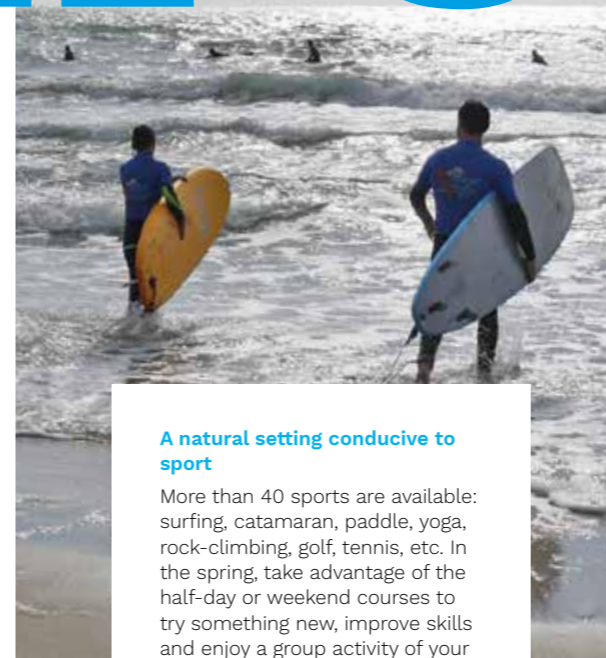
# CAMPUS

## UBS, A CENTRE OF LIFE, EXCHANGES AND CONVIVIALITY.



### Privileged study conditions

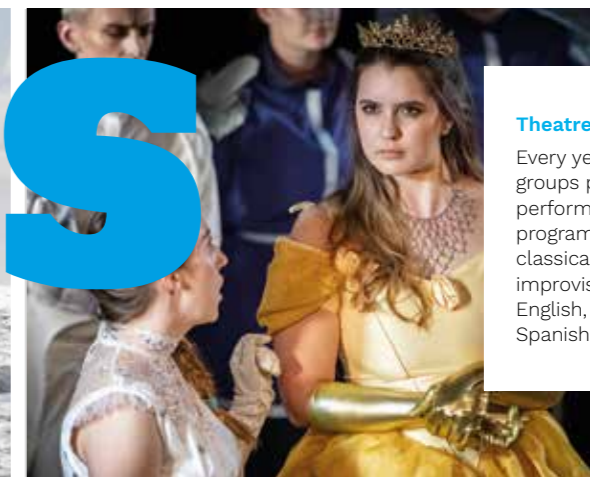
Bright, peaceful, modern, our libraries and classrooms offer individual and collective workspaces that allow you to study in a comfortable environment.



### A natural setting conducive to sport

More than 40 sports are available: surfing, catamaran, paddle, yoga, rock-climbing, golf, tennis, etc. In the spring, take advantage of the half-day or weekend courses to try something new, improve skills and enjoy a group activity of your choice.

**Also +:** Boat licence course, training courses to become a sailing instructor, a Life Guard.

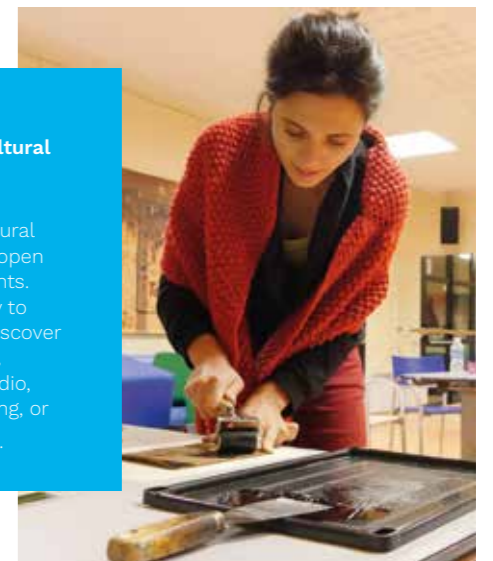


### Theatre festival

Every year, the student groups put on a performance. On the programme: musicals, classical plays, and improvisations in French, English, German and Spanish.

### Artistic and cultural workshops

Free practical artistic and cultural workshops are open to all the students. The opportunity to join others to discover and try cooking, photography, radio, theatre, engraving, or even street art...



# AN INTERNATIONAL AMBITION

UBS has chosen an international strategy based on strong partnerships that combine training and research. The University has 252 active agreements around the world.

**192**  
PARTNERSHIPS



UNIVERSITY OF  
SOUTHERN BRITTANY



## STRONG TIES WITH CANADA

UBS is developing partnerships with several higher education organisations in all regions of Canada. In recent years, exchanges have continued to intensify, whether it be within the framework of research or training activities.

In research, collaborations have been developed in marine sciences, mechanical engineering, nano-materials, civil engineering, management and marketing, and even personal assistance.

Furthermore, Canada is the first destination outside Europe of our students for academic or professional mobility.



## FOOD SECURITY, A PRIORITY FOR MADAGASCAR

To better meet the needs of Madagascan agri-food industries, UBS is leading the ARCADIA programme. Financed by the Ministry of Europe and Foreign Affairs, it is part of the call for projects "Support for the Development of French Higher Education in Africa" (ADESFA).

With food security being a priority for the country, the ARCADIA project aims to reinforce the level of skills in the field of industrial engineering, in line with the needs of the agri-food industry.



## CYBERSECURITY: ALONGSIDE QATAR

With Cyber Range, its cybersecurity training and education platform, UBS offers students at the University of Qatar a valuable new training tool and is also helping companies prepare efficiently for possible cyber-attacks.

10 students from UBS have also been selected to take part in the entrepreneurship and technological innovation programme of the Arab Innovation Academy (AIA).



## AT THE HEART OF THE FRENCH-SENEGALESE CAMPUS

**Direction Dakar!** Several weeks a year, teachers from UBS participate in 3 of the 18 training courses on the French-Senegalese campus, recognised by the Ministry of Higher Education, Research and Innovation\*. Since 2019, this innovative university programme has been preparing for a double French-Senegalese degree to promote the integration of young people into the job market.

\* Professional Degree in Chemical and Biological Analysis Techniques, Degree in Ecological Engineering and Environmental Management, Master's Degree in Ecological Engineering and Environmental Management.

### LIST OF PARTNER COUNTRIES

**NORTH AFRICA:** Algeria, Morocco, Tunisia, Egypt **SUB-SAHARAN AFRICA:** Senegal, Kenya **INDIAN OCEAN:** Madagascar **NEAR AND MIDDLE EAST:** Lebanon, Iran, Qatar **ASIA:** India, Vietnam, Indonesia, Malaysia, Japan, China, Pakistan **OCEANIA:** Australia, New Zealand **NORTH AMERICA:** Canada, United States **SOUTH AMERICA:** Argentina, Colombia, Mexico, Peru, Brazil **EUROPE:** Germany, Austria, Belgium, Cyprus, Denmark, Spain, Estonia, Finland, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Norway, Netherlands, Poland, Portugal, Czech Republic, Romania, United Kingdom, Slovenia, Slovakia, Sweden, Switzerland, Turkey, Russia.



**ANNE  
LE HENANFF,  
CHAIR OF  
"CYBERSECURITY  
OF MAJOR PUBLIC  
EVENTS"**

Vice-president of the national association Villes Internet.

Founding member of Women4Cyber (ECSO) - Brussels

# FOUNDATION

## AN OPEN LABORATORY

The Foundation of the University of Southern Brittany brings together lecturers-researchers, students and entrepreneurs around projects with high added value for the region. An area for exchanges and sharing, it works to make concrete progress in science and innovation on subjects at the heart of society: health, safety, environment, etc. Thanks to corporate sponsorship and the support of public players, it currently holds six chairs.

Anne Le Hénanff, chair of "Cybersecurity for major public events" testifies to the will of the foundation to support research for the benefit of the region's economic development.

**NP:** What is the objective of your chair?

**ALH:** Large events are perfect targets for cyber-attacks. 20 million hacking attempts were foiled during the last football World Cup in Russia. At all levels (ticketing, media relations, broadcasting of information on screens, transport, hotels, etc.) a flaw in this set of hyper-connected systems can quickly lead to disaster. In the run-up to the Rugby World Cup in France in 2023 and the 2024 Olympic Games in Paris, from 2020 the "Cybersecurity for major public events" chair will spend three years developing new tools to secure events in their globality and anticipate the new risks associated with human factors. This applied research approach will be based on the skills of the university's laboratories and the contribution of large companies and local start-ups.

**NP:** In what way does the Foundation of the University of Southern Brittany make this ambitious project possible?

**ALH:** The ambition of the chair corresponds to the culture and purpose of the foundation, which is to support research and enable the sharing of knowledge with the economic world via common deliverables. The Foundation creates this formidable bridge. Thanks to corporate patronage, it also offers us essential support to recruit the number of doctoral students needed by 2022. Agile, responsive and flexible, the Foundation is an open laboratory where a multitude of skills create beautiful dynamics.

**"A UNIVERSITY OPEN TO THE WORLD, COMMITTED AND OPTIMISTIC, FOR MORE THAN 25 YEARS, OUR ENDEAVOURS HAVE NEVER CEASED"**

VIRGINIE DUPONT,  
PRESIDENT OF UBS

**UNIVERSITÉ BRETAGNE SUD**

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