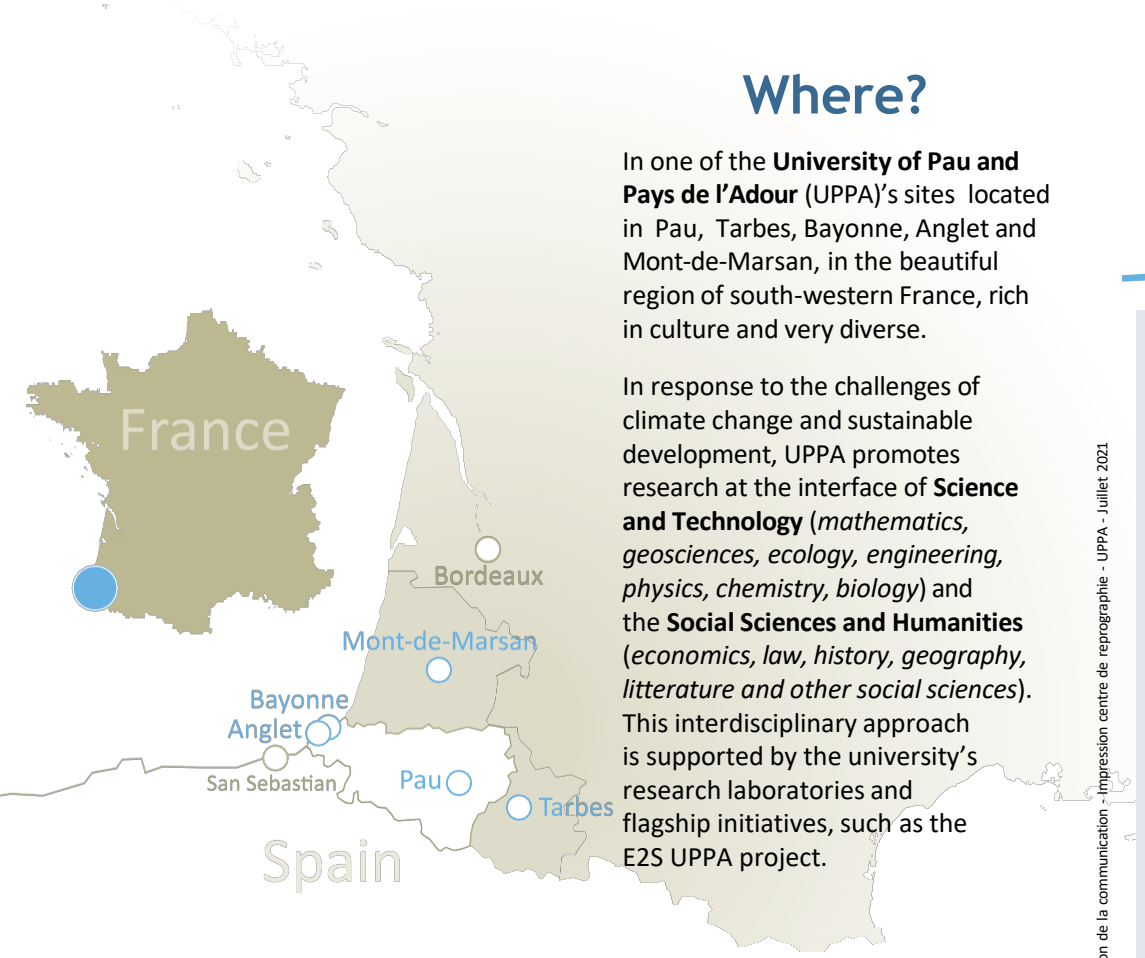

Where?

In one of the **University of Pau and Pays de l'Adour** (UPPA)'s sites located in Pau, Tarbes, Bayonne, Anglet and Mont-de-Marsan, in the beautiful region of south-western France, rich in culture and very diverse.

In response to the challenges of climate change and sustainable development, UPPA promotes research at the interface of **Science and Technology** (*mathematics, geosciences, ecology, engineering, physics, chemistry, biology*) and the **Social Sciences and Humanities** (*economics, law, history, geography, litterature and other social sciences*). This interdisciplinary approach is supported by the university's research laboratories and flagship initiatives, such as the E2S UPPA project.

Contact & info

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UNIVERSITÉ DE PAU ET DES PAYS DE L'ADOUR | Horizon MSCA Cofund REACH-UPPA Postdoctoral Program

Co-funded by the European Union

REACH-UPPA

HORIZON MSCA COFUND

Postdoctoral Program

REACH-UPPA, A Career and Research Excellence Hub for International Postdoctoral Researchers at UPPA, France

Why undertake a REACH-UPPA Postdoctoral position?

Join a dynamic, internationally recognized research environment where **excellence**, **innovation**, and **interdisciplinarity** drive every project. REACH-UPPA empowers you to develop your own research while collaborating with leading experts across **physical sciences and engineering, life sciences, and social sciences & humanities**

- ✓ **Boost your career** – Gain research independence, strengthen your research profile and benefit from dedicated mentoring and career development support
- ✓ **Work without boundaries** – Engage in interdisciplinary research and collaborate with top academic, industrial, and socio-economic partners worldwide
- ✓ **Access excellence** – Take advantage of cutting-edge facilities and a high-level scientific environment
- ✓ **Drive innovation** – Develop ambitious projects aligned with major global and societal challenges
- ✓ **Experience more** – Live and work in a vibrant, culturally rich region in the South-West of France, close to the border with Spain

REACH-UPPA by the numbers

10 fellows
selected in two cohorts of 5

48 months
Full funding per researcher

2026 - 2031
5-year programme

€3,500 gross/month ≈ €2,880 net (before income tax)

Research, conferences & secondment costs covered

Eligibility criteria

- ✓ **PhD by the call deadline** (or successfully defended with proof)
- ✓ **Max. 3 years of research experience** after PhD
- ✓ **At least 1 first-author publication** (accepted or published)
- ✓ Compliance with MSCA mobility rule (**max. 12 months in France in the past 36 months**)
- ✓ **One application per candidate** (in English, one project aligned with one research area)
- ✓ Open to **all nationalities**

How to apply?

Highly-skilled international postdoctoral researchers will be recruited in 2026 & 2027 through a rigorous and fair recruitment process via involved committees and expert evaluations

1. **CONSULT** the **research areas open for each call** and the **Guide for applicants** on the website
2. **PREPARE** a **research project aligned with the selected research area**
3. **SUBMIT** your **application online** at https://aap.univ-pau.fr

Application information is available on the REACH-UPPA website: https://www.univ-pau.fr/reach-uppa

When to apply?

1	March	**Submission of the Research project** on the application platform
2	End of May	**Deadline for application (May 17, 2026 for CALL#1)**
3	June -July	**Evaluation and selection process** by successive committees
4	September	**Official announcement of the results**
5	October	**Starting date of the 4-year postdoctoral contract**

Durability and optimization of engineered structures (for details, see the call at: https://www.univ-pau.fr/reach-uppa)

Scope

The mechanics of materials and structures is a vast field that is approached at UPPA through 2 categories of applications: (i) the mechanics of geomaterials, geostructures and civil infrastructures, considered in the context of bio-inspired materials and eco-materials, and with a perspective towards the sustainability of civil infrastructures, and (ii) the optimization of engineered structures with a current emblematic application in aeronautics. These challenges call on skills in applied mathematics and solid mechanics, with training in physics and chemistry. Building on such a conducive environment, two research areas are open. Here a focus is made on the first one:

(i) Data and physics-driven modelling geomechanics and multiphysics problems by the implementation of machine learning and data driven analyses. Historically, modelling the mechanical response of materials has been the cornerstone on which focused many research efforts on the solid mechanics community. With few experimental data, rational, physics-based, modelling provided robust extrapolations. At the same time computational methods were developed for a better prediction of structural responses under more and more extreme conditions coupling environmental effects to mechanical effects. This picture changed drastically over the past two decades with the advent of field measurement techniques and the systematic use of tomography. Today, experiments generate enormous amount of data. Still, theoretical models are calibrated on "as small as possible" sets of data, and in most cases only parts of the data are used for validation purposes also.

IA-based tools opened the path for a broader use of large experimental data bases and combining modelling principles with data stands today at the center of most research efforts (see e.g., Thermodynamics consistent neural networks or data driven computational schemes). The implementation of machine learning and data driven analyses in mechanics and multiphysics is no longer an emerging subject. It is a must and the upfront challenge is to apply this methodology to severely non-linear and coupled multiphysics problems.

Research groups at UPPA have acquired a solid international reputation in physics-based modelling of geomaterials subjected to coupled multiphysics problems. Combined with the experimental (e.g. X-ray and Neutron Tomography, optical and acoustic techniques) and theoretical expertises (e.g., on lattice modelling and data driven nonlinear computational mechanics) available within at UPPA, decisive advances in geomechanics are expected.

In this context, the proposed research project should focus on the mechanics of geomaterials, geostructures and civil infrastructures, considered possibly in the context of next construction materials (e.g., bio-inspired or eco-materials) and with a perspective towards the sustainability of civil infrastructures.

Research groups and contact persons

Laboratory of Complex Fluids and their Reservoirs (LFCR) – Industrial Joint Research Unit CNRS / UPPA (UMR 5150) https://lfc.univ-pau.fr/en/organisation/presentation.html

Created in 2003, LFCR brings together approximately 120 people across four research teams and two transversal research axes, supported by several industrial and academic chairs. Its scientific scope spans multiple spatial and temporal scales - from the nanometer to hundreds of kilometers and from the nanosecond to the million-year scale - covering the physics and chemistry of interfaces, thermodynamics of fluids under flow, reservoir geology, geomechanics, and geophysics. Positioned at the crossroads of energy, environment, and georesources, LFCR develops innovative research on subsurface systems, including reservoir characterization, CO_2 storage, fluid–rock interactions, the behavior of complex fluids in confined or porous media, and multi-physics analyses of subsurface and infrastructure materials. This broad, multidisciplinary expertise makes the LFCR a key national and international actor in subsurface sciences and geomechanics at large.

Research Units Referents:

- ***Dr. Jean-Paul Callot*** is LFCR's director – jean-paul.callot@univ-pau.fr
- ***Dr. Daniel Brito*** is LFCR's geosciences team leader – daniel.brito@univ-pau.fr