



efrei

PARIS PANTHÉON-ASSAS UNIVERSITÉ

RESEARCH LAB



Efrei Research Lab



Higher Education establishment recognised by the French State



Founded in 1936, Efrei is a grande école—a top-level French institute of Higher Education—specialized in engineering in the field of digital technology and recognized by the CTI, France’s commission for engineering program accreditation. The school gives students the scientific and technical skills they need for a successful engineering career. As an EESPIG—that is, a non-profit private establishment of higher learning recognized by the French government—it actively pursues its educational objectives, through an innovative pedagogical approach as well as research, science outreach, and international collaboration, among other activities.

In January 2022, Efrei joined Paris-Panthéon-Assas University as a member institute. This has permitted the design of multidisciplinary research programs that combine digital technology with fields such as law, management, the media, or the environment, paving the way for studies in legal tech and other new areas.

The applied research conducted at the Efrei Research Lab directly shapes the school’s curricula and ensures their excellence.

In addition to its grande école engineering track, Efrei offers two other programs :

- **Efrei Executive Education, E³** providing continuous education for businesses and individuals
- **Digital Expert tracks** conferring French BTS (vocational training) certificates, bachelor’s degrees, and master’s degrees for studies in digital technology paired with marketing, digital communication, or e-business

L'EFREI RESEARCH LAB

Research at the laboratory is applied to two major fields: **life sciences** (with applications in sports, health, and agriculture) and **smart territories** (businesses, homes, and connecting networks).

30 International collaborations
Research professors
PhD students

4 high-potential research areas :

- Data and Artificial Intelligence
- Digital security, resilience, and trust
- Communication networks
- Smart embedded systems

By attracting the best researchers, the laboratory fulfills several missions woven into Efrei’s curricular activities :

- To offer companies access to innovative knowledge that meets their needs
- To train Efrei students—the experts and managers of tomorrow—through and for research
- To produce knowledge useful to society by addressing its needs and those of the environment
- To engage in science outreach activities

In particular, the laboratory develops innovative interdisciplinary projects to provide solutions to businesses and society :

- Multichannel social media analysis integrating messages, texts, images, and video (voice, motion, and face)
- Smart contracts for everyone
- Sports and health monitoring and tracking, using video and connected sensors (Internet of Things)
- Smart and secure 5G+ network architecture for health and smart city applications
- AI processing of genomic data
- Embedded AI algorithm implementation

The Efrei Research Lab, as the laboratory for digital technology of Paris-Panthéon-Assas University, awards doctorate degrees in IT and electronics.

Through its integration within the university, it hosts multidisciplinary research combining digital tech with :

- **Law** (e.g., AI-powered comparative law, forensic platforms for the analysis of cybercrimes or AI accountability)
- **Management** (e.g., supply chain and blockchain)
- **Media analysis** (e.g., spread of given content on X)
- **The environment** (e.g., AI-assisted decision-making in climate disasters event management)

COLLABORATIVE PROJECTS

Outstanding examples of Efrei Research Lab partnerships :



Sciences²⁰²⁴

The Sciences2024 research program helps high-level athletes enhance their performance through science and innovation, on the eve of the Paris Olympic and Paralympic Games.

Efrei puts its expertise at the disposal of the sporting world through its laboratory, which has already conducted studies on video tracking of players and objects, movement monitoring to detect fatigue in human and equine athletes, and the locating of individual athletes on the playing field or in the swimming pool (spatial coverage).

Possessing expertise in robotics, Efrei has robots that respectively serve and retrieve shuttlecocks, and makes them available to assist in badminton training.

Paris Saclay Cancer Cluster



Efrei is a member of the Paris Saclay Cancer Cluster (PSCC). The PSCC unites leading cancer research entities from academia and the business world to advance cancer research and the battle against the disease.

The Efrei Research Lab has thus pledged to actively contribute to cancer research alongside leading partners in academia.

WHY AND HOW TO PURSUE RESEARCH COLLABORATIONS WITH EFREI

With its shared philosophy and culture, the Efrei Research Lab directs its theoretical and applied research efforts towards finding solutions for the business world.

Several collaborative arrangements are possible and eligible for French collaborative R&D tax credits :

Research internship : After considering the needs of a particular company, Efrei defines a research topic that is submitted to first-year (5-month internship) or second-year (final 6-month internship) master's program students, who are then guided by laboratory researchers.

CIFRE PhD : Through the CIFRE (convention industrielle de formation par la recherche, or "company research training agreement") mechanism, a company recruits a PhD student to conduct a 3-year research project—in collaboration with the Efrei Research Lab—that ends with a PhD degree.

Research contract : Via a collaborative agreement between the Efrei Research Lab and a company, the latter's resources and the technical expertise of Efrei laboratory researchers are mobilized to meet a particular challenge. A collaborative agreement between the Efrei Research Lab and an organization with the objective of solving a particular problem using the expertise of Efrei researchers and the organization's resources.

Company research chair : This designates a program of education or research backed by one or more businesses over a multiyear period and aimed at deeper investigation of a specific topic defined by the partners.



Your contacts :



Étienne PERNOT
Director of Research
etienne.pernot@efrei.fr



Ksenia RIBOT
Head of Corporate
Partnerships
ksenia.ribo@efrei.fr

Paris : +33 1 88 28 90 01
Bordeaux : +33 5 82 06 01 62
efrei-research-lab@efrei.fr

Follow us on social media :



For more information,
visit our website :

