



« AGP-TEC / DEGE » 2027 GRANT CAMPAIGN

PHD, POSTDOCTORAL AND RESEARCH ENGINEER POSITIONS

« TELECOMMUNICATIONS AND NETWORKS » AND « DETECTION AND ELECTRONIC WARFARE »

Under the « Telecommunications and Networks » (TEC) and « Electromagnetic Detection and Electronic Warfare » (DEGE) strands of the General Partnership Agreement [1], a joint call for applications is launched with the DGA and the AID to fund PhD projects, 18- or 24-month postdoctoral projects, and 18- or 24-month research engineer projects.

Eligible to apply as thesis supervisor, or as scientific supervisor of a postdoctoral or research engineer project, are researchers accredited to supervise research (HDR) within the scientific institutions that are signatories to the General Partnership Agreement (the supervisory bodies of the IETR, IRISA, IRMAR, Lab-STICC and IODE research units), together with the Saint-Cyr Coëtquidan military academy and the École navale, as well as ENSAI and the FOTON research unit (UMR 6082).

Applying entities choose the framework they propose: PhD, postdoctoral position or research engineer position.

Topics of the « AGP-TEC / DEGE » 2027 call

Through the AGP-TEC/DEGE 2027 call, the DGA (DGA MI) invites academic institutions to investigate scientific approaches, techniques and innovative methods on the five topics listed below and detailed in Annex 1:

- Radio propagation
- Radio-frequency measurement techniques
- Radiating systems and antenna processing
- Waveform protection / protection against telecom electronic warfare [2]
- Counter-drone operations (DEGE) [3]
- Networks

The full terms of the call are available on the CREACH LABS website [4].

For any question regarding this call, you may contact CREACH LABS [5].

KEY DATES

4 December 2026	Deadline for submitting scientific projects
12 February 2027	Deadline for submitting PhD projects on the Brittany Region extranet (ARED scheme)
19 February 2027	Publication of the list of pre-selected projects (main and reserve lists)
9 April 2027	Progress review on the search for students
28 May 2027	Deadline for submitting the students' CVs — closing of the call Clôture de l'appel
4 June 2027	Publication of the funded projects

CALL PROCEDURE

PHASE 1: PRE-SELECTION OF SCIENTIFIC PROJECTS

1) By Friday 4 December 2026 at the latest, the thesis supervisor or the scientific supervisor of the postdoctoral or research engineer project completes the online pre-application form on the CREACH LABS intranet:

[https://intranet.creachlabs.fr/depot?](https://intranet.creachlabs.fr/depot?appel=jkIMNMYJpaggm12C36pkEXx7C5JzIVdJ2xskJeUxZn_Q)

[appel=jkIMNMYJpaggm12C36pkEXx7C5JzIVdJ2xskJeUxZn_Q](https://intranet.creachlabs.fr/depot?appel=jkIMNMYJpaggm12C36pkEXx7C5JzIVdJ2xskJeUxZn_Q)

The form includes online help that guides you at each step. You will specify whether the request concerns a postdoctoral or a research engineer position, the duration envisaged (18 or 24 months) and the proposed research project. The submission must include a project description of 6 to 10 pages (excluding publications) together with the keywords locating the topic within the reference framework (Annex 2).

At the end of the process you must upload the CV of the thesis supervisor, or of the scientific supervisor of the postdoctoral or research engineer project (two pages maximum, in PDF format), containing the following information:

- First name, surname, position held, employer and career path;
- List of the main publications related to the submitted topic;
- List of the students, researchers or engineers supervised, indicating for each one the year the thesis or project began, whether it was funded by the AGP/TEC, and whether the thesis, postdoctoral project or research engineer project is still ongoing.

The jury will pay particular attention to proposals presenting at least one of the following characteristics:

- A strong synergy with the cybersecurity cluster of DGA Maîtrise de l'information;
- Synergies between different teams, or the exploration of what new approaches can bring to the field of security (law, sociology, geopolitics, etc.).

- 2) From 5 January to 12 February 2027: all PhD project leaders must also submit their application on the Brittany Region extranet [6].
- 3) Friday 19 February 2027: publication of the ranking of the pre-selected proposals, as a main list and a reserve list.

PHASE 2: SEARCH FOR CANDIDATES AND FINAL SELECTION

For postdoctoral positions, priority will be given to applications whose candidates have spent at least 18 months abroad over the past three years. Project leaders whose projects are eligible will also be invited to apply to the Brittany Region's Bienvenue Bretagne scheme (submission period between April and May 2027).

- 1) A formal progress review is scheduled for Friday 9 April 2027. If, by that date, the project leader has not yet found a candidate, they must contact CREACH LABS to review the steps taken and assess the chances of success, so that the reserve list can be activated if necessary.
- 2) By Friday 28 May 2027 at the latest, the project leader uploads the candidate's CV to the CREACH LABS intranet;
- 3) The list of funded projects will be published on Friday 4 June 2027.

References

- [1] General partnership agreement signed in 2021, bringing together the DGA, the AID, the Brittany Region, ANSSI, CentraleSupélec, the CNRS, ENS Rennes, ENSTA, IMT Atlantique, INP Bretagne ENIB, Inria, INSA, UBO, UBS, UR and UR2
- [2] EW: electronic warfare
- [3] DEGE: electromagnetic detection and electronic warfare
- [4] Call regulations and TEC-DEGE reference framework: www.creachlabs.fr/en/call-agp-tec-dege-projects-2027
- [5] Karine Chatel: [karine\[dot\]chatel\[at\]creachlabs\[dot\]fr](mailto:karine[dot]chatel[at]creachlabs[dot]fr)
- [6] Submission of application files on the Brittany Region extranet: <https://region.bretagne.bzh/rech>

Annex 1

TOPICS OF THE « AGP-TEC/DEGE » 2027 CALL

Radio propagation

- Modelling radio propagation through AI approaches (deep learning, etc.) or classical algorithms. The aim is to obtain classical or AI algorithms able to predict propagation, either through theoretical modelling or by learning from propagation measurement

data and/or from deterministic propagation computations such as those produced with the DGA MI/TEC tool CARDIF (radio attenuation computation with diffraction in the terrestrial environment, the reference propagation model).

- Characterising and modelling propagation channels for which no model exists, whether because of the band (15–22–27 GHz) or the environment (air-to-air, ground-to-air).
- Modelling the spatial dimension for MIMO, and antenna directivity aspects.
- This topic is also open to other subjects.

Radio-frequency measurement techniques

- Open topic.

Radiating systems and antenna processing

- Open topic.

Waveform protection and telecom electronic warfare

- Protecting waveforms (PHYsec) against jamming, detection, interception and/or localisation. Solutions may include the following optional and non-exhaustive elements: discreet or even stealthy communications, radio tagging, artificial noise generation (OPALS, spatial encryption), spatial modulation, antenna processing (beamforming, beamsteering, beamnulling, spatial encryption, direction finding of legitimate or illegitimate signals alongside the communication), frequency hopping (FHSS), spread spectrum (DSSS), faster-than-Nyquist signalling (FTN), and so on.
- Attacking waveforms: in-band full-duplex jamming, energy-discreet signal detectors and interceptors, and so on. The aim is to bring to light attacks and threats against emerging telecommunication assets, in order to better protect telecom systems.
- Protecting the physical layers for the benefit of semantic networks.
- This topic is also open to other subjects.

Counter-drone operations (DEGE)

This topic falls within counter-drone operations. The aim is to characterise remote-control waveforms in order to define effective jamming waveforms — for instance to take control — without resorting to high-power jamming. Characterising the remote-control waveform requires:

- Spectrum analysis (AI, FFT, time–frequency);
- Characterisation of the modulations (OFDM/FSK, etc.);
- Bitstream analysis (error-correcting codes, scramblers, etc.);
- Protocol analysis.

The application and development of drone localisation techniques (TDOA, FDOA) are to be studied, with a view to focusing the jamming in a single direction. The effectiveness of the jamming waveforms developed will have to be demonstrated.

Localisation techniques from LEO satellites, protocol characterisation, localisation of network disruptors, vulnerability analysis.

Networks

The « Networks » topic will address one or more of the following themes (non-exhaustive list):

- Routing for ad hoc networks (MANET: mobile ad hoc network; FANET: flying ad hoc network) with a discretion objective, with or without associated AI techniques;
- Quality of service (QoS) management for heterogeneous and sporadic flows across different types of network (traffic engineering: adaptive routing according to network capacity and application needs, granularity of quality-of-service policies, taking quality of experience — QoE — into account);
- Distributed architectures and processing based on virtualised network functions (VNF) or cloud-native network functions (CNF), with optimised placement and dynamic reconfiguration of network hardware (YANG modelling of services, automatic event-driven reconfiguration);
- Network traffic generation combining telemetry techniques with AI techniques;
- Innovative network management and monitoring, with or without associated AI techniques (filtering of network alarms, root-cause analysis and identification of possible solutions through a feedback loop);
- Optimising secure network performance (taking cyber elements into account, such as the integration of encryption devices into the new virtualised architectures based on SDN/SDWAN/NFV technologies);
- Network impacts of the new « semantic network » approaches. Semantic communications aim to transmit the meaning of a piece of information rather than its binary encoding. For example, rather than transmitting an image bit by bit in compressed form, its description is transmitted: an AI agent extracts the information from an image (« an armoured vehicle in front of the forest ») and, at reception, another agent reconstructs an image that carries the information without being identical. The use of AI will accelerate these new network approaches;
- NDN networks: named data networking technologies make it possible to address information — the data itself — without regard to its location (IP address or DNS name). NDN is a way of accessing information, whereas semantic communications are a way of transporting it. The two approaches could complement each other: transforming information semantically also allows it to be named explicitly, which would let NDN make it available more easily;
- This topic is also open to other subjects.