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DOCTORAL RESEARCH PROJECT 'ECO-CARE'
Deep-Tech Entrepreneurial Ecosystems and Early Career Researchers (ECRs)' Pathways

1. Presentation of the ECO-CARE project

The objective of the project ECO-CARE is to provide policymakers and the scientific community with an original, interdisciplinary, and multilevel framework that analyses the influence of deep-tech policy tools on early-career researchers (ECRs). The central question is how deep-tech policy tools influence ECRs' career trajectories emerging from university-based entrepreneurial ecosystems (U-BEEs).

Most studies on deep-tech startups primarily focus on how universities can leverage deep-tech policy tools to foster entrepreneurship and innovation, often overlooking their impact on the career trajectories of ECRs. While deep-tech startups are increasingly recognized as key drivers of economic transformation and industrial renewal, government initiatives (such as the Pôle Universitaire d'Innovation (PUI) program launched in France in 2022) are mainly designed to support technology transfer and university-led entrepreneurship. These initiatives aim to strengthen institutional capabilities, commercialize research, and improve university-industry collaborations. However, despite the effect of these initiatives on ECRs, they fail to fully capture the impact of deep-tech policy tools on their career trajectories. Consequently, despite the growing emphasis on deep-tech as a pathway for large-scale technological deployment, there remains a significant gap in understanding how these policies shape (or fail to shape) the career prospects of ECRs beyond academia. The ECO-CARE project aims to fill these gaps by integrating insights from national level U-BEEs, deep-tech policy tools and ECR's career studies.

The project's central analytical premise is that the influence of deep-tech policy tools on ECRs' trajectories must be examined within the broader framework of U-BEE, regardless of whether these researchers choose an entrepreneurial path. This premise is operationalized through three hypotheses: 1) The ECRs are embedded in the U-BEE and, through this, gain access to specific deep-tech policy tools. This hypothesis aims to investigate the integration of the ECR into their ecosystem and the tools they have access to. 2) Deep-tech policy tools shape the professional trajectories of ECRs by providing via U-BEE targeted support, funding, and infrastructure that facilitate their integration into innovation-driven environments. Whether pursuing entrepreneurship or corporate careers, ECRs benefit from these deep-tech policy tools through access to incubators, mentorship programs, intellectual property support, and industry collaborations. 3) The efficiency of deep-tech policy tools within U-BEEs depends on recognizing the specific nature of ECR's careers.

ECO-CARE aims to further develop this analytical premise by integrating the concept of hybrid researcher identities, initially articulated through the figure of the researcher-entrepreneur but now extended to encompass ECRs navigating both entrepreneurial and corporate career pathways. This broadened perspective acknowledges that ECRs increasingly operate at the intersection of multiple institutional logics: academic inquiry, innovation valorization, and organizational performance, and that their trajectories cannot be reduced to a simple dichotomy between academia and entrepreneurship. Within U-BEEs, such hybrid career dynamics emerge as structural outcomes shaped by deep-tech policy tools that encourage fluid transitions between research activities, technology transfer processes, venture creation, and industry-oriented roles. Embedding this understanding within the ECO-CARE project enables a more comprehensive analysis of how deep-tech policies support or constrain hybridization processes, how ECRs negotiate overlapping expectations across academic, entrepreneurial, and corporate spheres, and how composite, boundary-spanning professional profiles take shape. This enriched perspective strengthens the project's capacity to explain the differentiated ways in which deep-tech policy tools influence ECRs' career development, regardless of the specific career path they ultimately pursue.

The entrepreneurial ecosystem approach provides a relevant analytical framework to quantify and characterize these interactions and to assess how deep-tech policy tools impact ECRs' professional trajectories more broadly. The project's objectives are anchored on two primary perspectives:
Theoretical and Methodological Perspective – The scientific challenges to be overcome in this study are linked to the complexity of the topic, which requires the development of an original theoretical and methodological framework. The ECO-CARE project must integrate perspectives from U-BEEs, public policies, and ECR's career studies, which poses a challenge due to its interdisciplinary approach. It builds upon Theodoraki's protocol (2024) to implement an original multi-level and interdisciplinary methodology. This approach enables a deeper understanding of how deep-tech policy tools influence ECR's career trajectories within entrepreneurial ecosystems. This novel framework offers an unprecedented integration of these perspectives, providing fresh insights into the intersection of deep-tech policies, career development, and entrepreneurial ecosystems.
The ECO-CARE project will provide a detailed mapping of deep-tech policy tools supporting ECRs, a typology of ECRs based on their use of these tools, and a multi-level framework analyzing their interactions within U-BEEs. By offering empirical insights and actionable recommendations, it enhances the effectiveness of deep-tech policies in shaping ECRs' career trajectories, contributing to both academic research and innovation policy.

2. Research PhD project description

The PhD project "Deep-Tech Entrepreneurial Ecosystems and Early Career Researchers (ECRs)' Pathways" is in line with the ECO-CARE funded project. The objective of this research is to explore how early career researchers (ECRs) can transition from academic research to entrepreneurship within deep-tech, and to identify how entrepreneurial ecosystems can be designed or adapted to better support these transitions.
Several dimensions are suggested for this research project:

1. Examine how entrepreneurial universities employ different tools, practices, and support mechanisms (such as university business incubators-UBIs) to develop entrepreneurial skills among early career researchers (ECRs), and assess their effectiveness in preparing a skilled talent pool for as an essential source of the Deep-Tech Entrepreneurial Ecosystem. (University Deep-Tech Sourcing Activity of ERCs)
2. Investigate the role of ECRs as drivers in the development of Deep-Tech Entrepreneurial Ecosystem, with particular attention to how UBIs act as bridges between academic research and the wider deep-tech entrepreneurial ecosystem. (Link of ERCs and Deep-Tech Entrepreneurial Ecosystem)
3. Analyze the impact of engagement with Deep-Tech Entrepreneurial Ecosystem on ECRs' career trajectories, and explore how these individual pathways influence the evolution and sustainability of university-based entrepreneurial ecosystems and their connections with industry. (Link of Industry-University and Deep-Tech Entrepreneurial Ecosystem)
4. Investigate how deep-tech policy tools within U-BEEs contribute to the emergence of hybrid professional identities among ECRs, and assess how these tools shape researchers' transitions toward entrepreneurial, corporate, or mixed career pathways. (*Hybridization of ECR careers through deep-tech policy tools*)
5. Analyze how ECRs navigate and reconcile the competing institutional logics of academia, entrepreneurship, and industry innovation, and examine the extent to which this negotiation influences their role within deep-tech entrepreneurial ecosystems. (*Identity negotiation and agency of ECRs in multi-logical environments*)
6. Examine how the degree of ECR integration within U-BEEs affects their access to deep-tech policy tools and shapes long-term boundary-spanning career trajectories, and how these trajectories, in turn, feedback into the development of U-BEEs.

The above dimensions could evolve during the research project.

The PhD will contribute to major research debates on:

- Deep-tech and innovation policy effectiveness
- Transformation of academic careers and professional identities
- Strategic management of talent and resources in entrepreneurial ecosystems
- Institutional hybridization in the university–industry interface

Beyond academic contribution, the project will offer policy recommendations for more effective design of deep-tech support instruments and better integration of ECRs in innovation ecosystems.

3. Research field and partners

This project is funded by the ANR Collaborative Research Project - Enterprise (PRCE) no ANR-25-CE26-3852 'ECO-CARE ECRs towards Entrepreneurial Careers: An Ecosystem Approach on Deep Tech Tools for Entrepreneurship' in partnership with Adoc Talent Management.

The PhD candidate will be fully integrated into the CERGAM (Centre d'Études et de Recherche en Gestion d'Aix-Marseille)**,** one of the leading management research laboratories in France, hosted by Aix-Marseille University**.** Within the CERGAM, the doctoral researcher will join the E2I (Entrepreneuriat, Innovation et Internationalisation) research team, which focuses on understanding entrepreneurial dynamics, innovation processes, and the internationalization of firms and ecosystems. As a member of E2I, the PhD candidate will take part in the laboratory's scientific life through participation in seminars, doctoral workshops, research meetings, and collaborative publications. He/she will also contribute to data collection and valorization activities linked to the team's research axes, particularly those related to entrepreneurship and innovation policies.

In addition, the doctoral researcher will work:

- in close connection with the team of the "Chaire Légitimité Entrepreneuriale" (CLE)**,** which brings together researchers and practitioners studying legitimacy processes within entrepreneurial ecosystems. This collaboration will offer access to a rich empirical field, regular research seminars, and opportunities to engage with both academic and institutional partners involved in the ECO-CARE project.
- in collaboration with Université Côte d'Azur's Entrepreneurship Centre (UniCA Entreprendre), which will provide additional access to empirical data, opportunities to engage with the Deep-Tech Entrepreneurship diploma program (either for the researcher's own training or to better understand the learning pathways followed by ECRs), and the expertise of CNRS–GREDEG in innovation management, entrepreneurship, and ecosystem dynamics.

4. Required skills

- Master's degree in innovation, management, business administration, strategy, business economics business engineering, or a related field (candidates in their final year can also apply but the degree requirements need to be fulfilled at the start of the PhD project)
- Good written and spoken English and French (B2 minimum).
- Interest in entrepreneurship, entrepreneurial ecosystems and the Deep-Tech sectors.
- Good knowledge of qualitative and/or quantitative techniques or ability to be trained (having followed a Master Research is a plus).
- Strong motivation for academic research in the field of entrepreneurship (potential to publish in top-ranked journals)
- Working style should be team-oriented and have strong communication skills

5. Tasks

- Perform in-depth literature review and investigating frameworks and models related to the three suggested dimensions of the research project
- Conduct interviews and focus group meetings with ecosystem stakeholders
- Collect data (qualitative and quantitative)

- Implement advanced methodological analysis
- Provide help in the scientific administration of the ECO-CARE project (e.g. conference organization, scientific monitoring and assistance)
- Actively contribute to CERGAM's collective research life (seminars, doctoral activities, research events)
- Collaborate closely with researchers from the E2I team and the Chaire Légitimité Entrepreneuriale to enrich cross-project insights and disseminate research findings
- Ensure ethical research behavior and discipline.

6. Funding and duration

The salary will correspond to the French standards for a PhD. This is a full-time employment fixed term from September 2026, for 3 years.

7. Supervision

- *PhD supervisor (HDR):* Christina Theodoraki is Full Professor in Entrepreneurship and Strategy at IAE Aix-Marseille University.
- *PhD co-supervisor (HDR):* Rani J. Dang is Associate Professor in Entrepreneurship at Côte d'Azur University.

8. Contact

For more information, you can contact us by email:

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- Rani J. Dang rani.dang@univ-cotedazur.fr

9. The workplace of the doctoral student

La MEGA (Maison de l'Economie et de la Gestion d'Aix)
424 Chem. du Viaduc, 13080 Aix-en-Provence

10. To apply

Upload your file **in English** in one single pdf file **before January 31, 2026 via the Application Form: https://bit.ly/ECOCARE-Scholarship** including:

- A detailed curriculum vitae including:
  - education
  - specific technical skills,
  - previous work related to the topic (master's thesis, reports and others)
- A document detailing the courses taken on methodology such as research methods, statistics, econometry, epistemology, etc. courses taken as relevant for the position (i.e. methodology, entrepreneurship, innovation, strategy),
- A letter of motivation explaining (max 1 page):
  - the motivation for conducting a PhD, and for dedicating to the topic for the next years
  - the applicant's background and expertise, with a focus on the skills, knowledge and aptitude they would bring to the position
- Copies of diplomas and transcripts from the first year of higher education
  - Bachelor Degree (incl. grades)
  - Master Degree (incl. grades)
- Thesis proposal (3-6 pages):
  - How does the candidate plan to develop the research topic?
  - What methods to be used to process it?
  - What are the expected contributions?

Applicants who are about to complete their degree are explicitly encouraged to apply.