



Doctoral Vacancy Announcement form

Learning Without Sharing: How Organisations Build Collective Intelligence through Cross-Silo Federated Learning

No. of Openings: 1

Description

We invite a candidate with a strong interest in organisations, digital technologies and inter-organisational collaboration to study how organisations learn together from data they are not allowed to share. Banks fighting money laundering, hospitals building clinical models, manufacturers optimising equipment and ship managers analysing fleet performance each hold data that would be more valuable in combination, but that competition, confidentiality and law keep in separate silos. Cross-silo federated learning promises a way out: a shared machine learning model is trained across the silos while each organisation's data stays where it is. Only model updates travel. In Cyprus, the draft National AI Strategy 2032, put to public consultation in 2026, points in a similar direction, proposing a federated national data architecture and sectoral data spaces.

The literature on federated learning is large but predominantly technical, concerned with algorithms, performance and privacy mechanisms. Its organisational dimension has received far less attention, even though recent research with practitioners and platform developers found that many of the main obstacles to real deployments are organisational: building trust, aligning incentives, distributing benefits fairly, agreeing contracts, and governing how models are approved and updated. One of the largest industrial efforts to date, in which ten pharmaceutical companies jointly trained machine learning models on more than two billion data points, concluded that federated learning comes at real cost and risk, and that partners need a transparent and mutually beneficial case for taking part. How organisations make such collaborations work in practice is still an open question.

This is a PhD project about organisations, not algorithms. The candidate could investigate how legally autonomous organisations develop the capability to learn together from data they cannot see, and what this changes in the way they decide, innovate, compete and adapt. Possible lines of inquiry include:

- How parties that cannot see each other's data negotiate trust, incentives and the distribution of benefits.
- Through which practices and governance mechanisms a model that no single party fully controls, becomes usable and accountable knowledge within each organisation.
- How participation reshapes decision-making, innovation and agility, and under what conditions it strengthens or constrains them.
- How federated-learning collaborations evolve over time, and why some endure while others stall.
- How such collaborations relate to emerging data-governance and AI regulation in Europe



and Cyprus.

These are indicative ideas; the final focus will be shaped together with the candidate. The aim is to understand a new form of collaboration, in which organisations, including competitors, build intelligence collectively. The thesis will offer a theoretically robust and empirically grounded account of how they set up, govern and benefit from training machine learning models jointly, and of how this reshapes the way they learn and work together.

The successful candidate will work in a field where policy, industry and theory are moving at once, receive systematic training in qualitative and quantitative research methods and connect with the national and European data and AI ecosystem. The doctoral thesis will be written in English. The position is available on a full-time or part-time basis. Interested candidates are encouraged to contact the research advisor for a preliminary discussion of their ideas.

Methodological Orientation

The topic lends itself to in-depth qualitative study, such as longitudinal case studies of federated-learning collaborations, interviews with the organisations involved and analysis of governance documents, but mixed-methods designs are also welcome. Candidates should set out their preferred approach in the research proposal; the final design will be agreed with the advisor and will depend on research access.

Required Qualifications

Required Qualifications:

- A bachelor's and a master's degree in Information Systems, Business and Management, Computing/Computer Science or another relevant field from an accredited university.
- Proven proficiency in oral and written communication skills in English.
- Not to hold a doctoral degree at the date of enrolment.

Relevant required skills:

- Ability to take research initiatives and work collaboratively and individually.
- Ability to work independently.
- Strong problem-solving skills, attention to detail, and high-quality output.
- Basic knowledge of qualitative and quantitative research methods, and an interest in the study of organisations and technology.

Optional skills and competencies

- Previous experience in research projects, academic writing or scientific publications.
- Familiarity with data governance, privacy or AI regulation.

Applications should be submitted online and include

- Curriculum vitae (CV)
- Research proposal (max 1500-2000 words), outlining your research approach and focus for the advertised topic, including possible research questions, a brief literature review and



the methodology for carrying out the proposed research.

- Letter of motivation/research statement (500 words) explaining why you would like to be part of this project and what you feel you can contribute to this PhD position.
- Copies of bachelor's and master's degrees.
- Copy of English language certificate (graduates of English-language programmes are exempt).
- 2 reference letters
- **(Optional)** Publications and other scientific work, if any.

Funding: Self-funded. **Note:** Tuition fees may be covered by the University for the first doctoral student selected by each new faculty member, in accordance with the Rector's Council decision at its 239th session, 29/10/2024. Candidates may also be funded as teaching assistants, compete for internal excellence scholarships, or participate in funded research projects as per university regulations.

Research Advisor:

Name/Surname: Avgousta Kyriakidou-Zacharoudiou

Position: Lecturer

Email: avgousta.kyriakidou@cut.ac.cy



Doctoral Vacancy Announcement form

Research Topic Title: Corporate Strategy and Environmental Challenges

No. of Openings: 1

Description: As climate change increasingly reshapes the external business environment, firms face growing pressure to account for environmental considerations in their strategic decisions. Yet, the relationship between corporate strategy and environmental performance is far from straightforward. Do environmental pressures lead firms to rethink how they compete, or merely to adapt existing strategies? Do environmental initiatives complement a firm's competitive strategy, or can they create strategic trade-offs? Under what conditions can environmental performance become a source of competitive advantage rather than simply a cost of doing business? How do firms' responses to climate change differ across industries, competitive environments, and strategic contexts? In this doctoral thesis, the candidate will investigate how and why changing environmental conditions are incorporated into corporate strategy. The research may examine these questions across different industries, markets, strategic contexts, and forms of environmental action.

Required Qualifications: Prospective students must hold a recognized Bachelor's and a Master's degree from accredited universities in the following disciplines: Management, Economics, Mathematics, or other related fields. They should have a strong background in quantitative research methodologies and proven proficiency in oral and written communication skills in English. Applicants should demonstrate their ability to take research initiatives and to work both collaboratively and individually. Previous research experience will be considered an advantage.

Candidates should submit a short report (500 words) describing why they chose the program, their research goals, and their interests. Also, in a brief report (1,000 -



1,500 words), candidates should demonstrate their understanding of the proposed research topic. Both reports must be written in English.

Applicants should be able to write their doctoral dissertation in English. The Ph.D. position is based on full-time or part-time study.

Prospective students are strongly encouraged to contact the research advisor to submit a preliminary expression of interest.

Funding: Candidate students can receive funding as teaching assistants, by applying to competitive internal scholarships, or by participating in funded research projects.

Research Advisor

Name/Surname: Pavlos C. Symeou

Position: Professor of Strategy

Email: pavlos.symeou@cut.ac.cy



Doctoral Vacancy Announcement form

Research Topic Title: Geopolitics, Energy Transition, and Corporate Strategy

No. of Openings: 1

Description: The global transition from fossil fuels to renewable energy is transforming the geopolitical environment in which firms operate. Consequently, as countries compete over strategic resources, technologies, and access to critical markets, established patterns of economic power and international competition are being reshaped. How do firms respond when geopolitical forces alter the opportunities and risks associated with their markets and operations? How does the energy transition affect firms' internationalization, competitive strategies, and relationships with governments and other stakeholders? And when do geopolitical shifts constrain corporate strategy or create new opportunities for strategic action? In this doctoral thesis, the candidate will investigate how geopolitical forces associated with the energy transition influence corporate strategy and how firms respond to a changing geopolitical environment. The research may examine different industries, countries, and strategic contexts, including industries particularly exposed to shifts in energy systems and access to strategic resources, such as extractive industries.

Required Qualifications: Prospective students must hold a recognized Bachelor's and a Master's degree from accredited universities in the following disciplines: Management, Economics, Mathematics, or other related fields. They should have a strong background in quantitative research methodologies and proven proficiency in oral and written communication skills in English. Applicants should demonstrate their ability to take research initiatives and to work both collaboratively and individually. Previous research experience will be considered an advantage.

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Research Advisor

Name/Surname: Pavlos C. Symeou

Position: Professor of Strategy

Email: pavlos.symeou@cut.ac.cy