

# PhD Call for Applications on *“Competition and Algorithms: adoption, impact and transparency”*

**EconomiX Research Laboratory**  
(joint research unit of **CNRS** and **Université Paris Nanterre**)

## Project Overview

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The **EconomiX** Research Laboratory at Université Paris Nanterre invites applications for a **fully funded 3-year PhD** position in Economics. The PhD project is embedded in a multi-institution research agenda addressing competition in digital markets, with a focus on **algorithmic pricing, consumer decision-support systems, and transparency** issues arising from advanced digital infrastructures such as future-generation networks (6G and beyond).

## Context and Scientific Objectives

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Digital technologies fundamentally transform competitive interactions by enabling firms to rely on automated decision systems for pricing and market strategies. In particular, algorithmic repricing tools allow real-time price adjustments based on predefined rules or machine-learning techniques. While recent theoretical work has examined market outcomes under algorithmic pricing, the determinants of firms' adoption and switching of such technologies remain poorly understood. Similarly, consumer behavior as they perceive use of algorithmic pricing deserves more investigation.

This project pursues **three interrelated objectives**: (i) to analyze firms' incentives to adopt pricing algorithms and how algorithmic features influence competition; (ii) to provide novel empirical evidence on the prevalence and impact of algorithmic pricing using data from French marketplaces; and (iii) to study consumer perceptions, transparency concerns, and regulatory implications associated with observable algorithmic pricing practices.

## Methodology

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The PhD research may combine **three complementary methodologies**:

- Theoretical modeling (game theory and/or agent-based models) to formalize strategic interactions involving algorithmic pricing technologies.
- Empirical analysis of real-world pricing data (e.g. e-commerce platforms) to detect algorithmic pricing behavior and assess its competitive effects.
- Experimental methods (laboratory or online experiments) to study consumer behavior, acceptability, and responses to different transparency regimes.

## Funding and Conditions

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The position is funded through a 36-month doctoral contract (contrat doctoral) in accordance with French regulations. The gross monthly salary is approximately €3,800 (gross amount). The PhD candidate will benefit from full social security coverage, access to the EconomiX research lab resources, and funding for conferences, workshops, and doctoral training.

## Eligibility Criteria

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Applicants must meet the following requirements:

- A **Master's degree** in Economics or a closely related field (completed by sept. 2026).
- Strong analytical background in **microeconomics, industrial organization, and/or econometrics and data science techniques** (scraping).
- Demonstrated research potential in economics. **Research interest in digital and competition issues.**
- Working languages can be either **English or French**. Knowledge of French can be an asset but is not mandatory.

## Application Procedure

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Applications must be submitted as a single PDF file including:

- Curriculum Vitae
- Motivation letter including a short research statement related to the project (<3 pages)
- Academic transcripts
- Master's thesis or representative research paper. If not yet completed, preliminary version of master thesis or research outputs will be considered
- Optional: contact information for one or two academic referees, recommendation letters

## Timetable

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- Opening of applications: April 1<sup>st</sup>
- Interviews: applications will be reviewed on a rolling basis until the position is filled.
- Start date: sept. 2026 expected

## Contact

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For further information, please feel free to contact:

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