2 PhD Positions in Computational Social Choice and Digital Democracy

We are looking for two PhD students to join the research team of the ERC Synergy project "Advancing Digital Democratic Innovation" (ADDI) at the Université Toulouse Capitole.

Salary: up to 2500 EUR gross monthly salary (approx. 2000 EUR net)
Duration: CDD of 36 months
Starting date: September 2026

DESCRIPTION OF THE ADDI PROJECT

ADDI is an ERC Synergy Project funded by the European Union. Its goal is to study digitally augmented forms of civic participation through three core objectives: designing technologies and procedures for citizen deliberation and participation; experimentally testing the impact of technology in deliberative and participatory forums; and understanding the preferences expressed in digitally augmented forms of civic participation. At the end of the project, we hope to have a better understanding of how digital technologies can improve democratic practices while providing a robust suite of scientifically validated open-source tools. The project starts in May 2025 and will finance an interdisciplinary and international research group between two universities in Toulouse in France, the University of Amsterdam in the Netherlands, and the University of Turku in Finland. More information on our webpage https://advancingdemocracy.eu/

JOB DESCRIPTION

The research group at the University of Toulouse led by Umberto Grandi will focus on research in computational social choice both on theoretical algorithmic research and on the development and implementation of digital and AI techniques in democratic applications. The team will also collaborate to the testing of digital technology in participatory processes and deliberative assemblies. The PhD student hired conduct research on these topics at international standards, leading to publications in top conferences and journals in artificial intelligence, economics, and in multidisciplinary journals.

During the three years of the appointment the PhD candidate will be part of the doctoral school EDMITT (https://adum.fr/as/ed/edmitt/page.pl?page=contact). The candidate will have to complete and defend a PhD thesis, publish your research in conferences and journals in artificial intelligence, economics, and in multidisciplinary journals. Regular activities will include presenting research in internal and university meetings but also at international workshops and conferences, participate to the ERC ADDI consortium meetings (online or in one of the three project locations), and participate in outreach activities. It is possible to teach tutorials in one of the bachelors or masters of the university (up to 64 hours per year, including a salary top-up).

CANDIDATE PROFILE

We look for candidates with a Master in Computer Science, AI, or Mathematics. Candidates should be strongly motivated towards research, and have the curiosity and motivation to collaborate with researchers outside computer science (in political science and economics). Candidates should have good writing and presentation skills, and full proficiency in English (French not required).

DESCRIPTION OF THE UNIVERSITY

Rooted in a long academic tradition, the University of Toulouse Capitole became an Experimental Public Institution on January 1, 2023.This new institution currently is composed by five faculties: the Faculty of Law and Political Science, Toulouse School of Management, Faculty of Administration and Communication, Faculty of Computer Science, the Rodez University Institute of Technology (IUT), and two affiliated institutions: Toulouse School of Economics and Sciences Po Toulouse. More than 700 faculty staff and 600 administrative staff members offer training to 20 000 students. The university's mission is to establish a **multidisciplinary and international research hub**, foster local and global partnerships, promote innovative teaching methods, and enhance the attractiveness of the Toulouse university site.

DESCRIPTION OF THE RESEARCH LAB

IRIT, the Toulouse Institute of Computer Science Research, is a Joint Research Unit (UMR 5505) affiliated with the French National Center for Scientific Research (CNRS). At Toulouse Capitole University, IRIT serves as the supporting laboratory for the programs offered by the Faculty of Information Technology (UFR), comprising 24 faculty.

The PhD student will integrate the LILaC research team. This team works on **modelling and designing intelligent systems and algorithms** based on theories and techniques from knowledge representation, logics, game theory, social choice, argumentation, and formal verification. See our webpage for more information: https://www.irit.fr/en/departement/dep-artificial-intelligence/lilac-team/

HOW TO APPLY

Apply to this PhD position by sending:

- Your detailed CV
- The official transcript of your courses and grades during your Master degree. This document should be in French or English, or accompanied by an English translation.
- If possible, the official grade transcript of your Bachelor degree.
- If possible, a written production of yours (an article, a preprint, a bachelor/master thesis…)
- A motivation letter of at most 2 pages
- The name and contact of two referees that we can contact to obtain recommendation letters for you (please do not attach recommendation letters directly)

Please state clearly in your CV and motivation letter which of your competences you think will be useful for your PhD, state any research idea you may already have in relation with the ADDI project,

and discuss which kind of techniques you would like to apply to tackle it. AI-generated letters will typically result in us discarding your application as not serious. Please also specify your preference for starting date of the contract.

Online interviews for shortlisted candidates will be scheduled in late March and April. A national security check will be part of the selection process (probably at the same time of the interviews).

Apply by email **before March 8th** to Umberto Grandi and Anna Gordillo-Torras (email below).
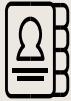
Contact

GRANDI Umberto (Professor)

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GORDILLO TORRAS Anna (Project Manager)

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