



PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE  
ESCUELA DE INGENIERIA  
DIRECCIÓN DE INVESTIGACIÓN E INNOVACIÓN

## CALL FOR POSTDOCTORAL RESEARCH FELLOWSHIPS UC 2024

The School of Engineering at Pontificia Universidad Católica de Chile opens an international call for three postdoctoral research positions in the following research topics:

1) ***Gender gaps in engineering: exploring underlying mechanisms.*** Sponsoring professor: Fernanda Ramírez ([fernanda.ramirez@uc.cl](mailto:fernanda.ramirez@uc.cl)).

This research proposal contributes to studying gender biases in STEM, focusing on how gaps are maintained and reproduced in Civil Engineering education. We will analyze the trajectories of students through the quantitative study of administrative data, exploring the dynamics of gender gaps within different areas of engineering. Furthermore, we will use survey data to evaluate whether relative performance bias (i.e. bias in the appreciation of one's own performance in relation to the performance of others) influences the gender gap observed in engineering education.

2) ***Autonomous aerospace systems and AI integration to care for the Earth.*** Sponsoring professor: Miguel Torres ([mtorreto@uc.cl](mailto:mtorreto@uc.cl)).

Aerospace research and engineering is a dynamic field that faces numerous challenges due to technological advances, environmental concerns, and economic pressures. This research will combine the use of satellite information with information obtained through unmanned aerial vehicles (UAV) to improve autonomous navigation strategies and data collection focused on increasing spatiotemporal information through AI techniques based on deep neural networks in the context of surveillance and response applications. disaster and forest monitoring.

3) ***Intersectional study of care mobility: socioeconomic stratum and immigration status.*** Sponsoring professor: Sebastián Raveau ([sraveau@uc.cl](mailto:sraveau@uc.cl)) and Patricia Galilea ([pgalilar@uc.cl](mailto:pgalilar@uc.cl)).

Care mobility refers to trips generated by care activities for the home and family. In Chile, these activities are carried out mostly by women and therefore require looking at mobility from a gender perspective, especially considering that transportation options could be linked to social and economic disadvantages. Furthermore, it is important to include in the analysis two intersectional variables that influence care mobility: socioeconomic stratum and the immigration status of the people who carry out care activities.



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### Application requirements

Researchers who have obtained their Ph.D. degree no earlier than January 1st, 2022, can apply to this call. For female applicants who have had children in the last 3 years, this period is extended by an additional year for each son or daughter.

The application must be submitted through our [online platform](#) and must include the following documents in pdf format:

- Copy of the diploma or certificate of Doctor's degree (Ph.D.)
- Letter of interest
- Updated CV

Applicants can directly contact the sponsoring professors with inquiries regarding the line of research and the associated project that they will develop together.

Awarded researchers **must apply to the FONDECYT Postdoctoral Call of the National Research and Development Agency (ANID)**, which will take place during the year 2025. In addition, foreign researchers without a residence permit in Chile must apply for a temporary residence visa at the National Migration Services, with the support of the Pontificia Universidad Católica de Chile.

### Evaluation

The evaluation of the applicants will be based on the academic and research career in the selected topic, focusing on acquired knowledge, skills, autonomy as a researcher, productivity and other competencies that ensure the successful completion of the proposal. Verifiable academic written English proficiency is required. The project must be carried out in Santiago, Chile.

### Benefits

Selected applicants will receive:

- Annual stipend of \$26 million (CLP) before taxes for a period of 2 years.
- Up to \$2.5 million (CLP) for installation expenses in the case of researchers who need to settle in Santiago from abroad or other Chilean regions.
- Up to \$4.5 million (CLP) for equipment and investments at the beginning of the project.
- Academic appointment as a UC Postdoctoral Researcher, with access to resources and facilities available at the university that ensure a proper execution of the project.



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### **Deadlines**

This call will be open until **Thursday, August 15** and the results will be communicated directly to applicants on Monday, September 23. Financing for the awarded projects will be available from October 2024.

### **Inquiries**

You can direct your questions to Pablo Mardones ([pmardohi@uc.cl](mailto:pmardohi@uc.cl)), Research Coordinator, or to Javiera Ziehe ([javiera.ziehe@uc.cl](mailto:javiera.ziehe@uc.cl)), Deputy Director of Research at the UC School of Engineering.