

Postdoctoral Fellowships

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CALL FOR APPLICATIONS 2025 – FELLOWS

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Supervisor page https://www.isir.upmc.fr/personnel/khamassi/?lang=en

Host Institution Sorbonne Université

https://www.sorbonne-universite.fr/en

Research Lab Institute of Intelligent Systems and Robotics

https://www.isir.upmc.fr/?lang=en

Research Team Action, Cognition, Interaction and Embedded Decisions

https://www.isir.upmc.fr/teams/acide/?lang=en

Project Title

Is it worth it? Grounding value, motivation and preferences in robot energy use

Project Description

This project investigates valence in artificial systems, examining how robots assess energy costs in decision-making. Using experimental protocols from psychology, we study how robots evaluate energy costs in planning and movement, and examine robot willpower through physical and cognitive tasks, e.g. slope-climbing and attentional control. Crucially, by grounding judgment and reward in embodiment, this work will pave the way towards AI systems solving complex problems with minimal energy waste.

Keywords

AI, robotics, energy

Description of the Host Research Lab

The advent of artificial intelligences and robots is inducing profound transformations in our societies. Isir researchers help to anticipate them by working on the autonomy of machines and their ability to interact with human beings. Gathered in multidisciplinary teams, they create drones, micro-tweezers, bionic prostheses, social robots, surgical arms and all kinds of intelligent and interactive systems, physical, virtual or mixed reality. Their applications address major societal challenges: health, industry of the future, transport, personal services.