Postdoctoral Research Fellowship Position
“Reinforcement learning and imitation learning for robot navigation in simulated environments”

About the position
We are seeking a motivated candidate to fill a postdoctoral research fellow position in “Reinforcement learning and imitation learning for robot navigation in simulated environments”. This project is part of the Future of Artificial Intelligence Project (FAIR) within Spoke 10: Sustainable Bio-Socio-Cognitive AI”. This position will be hosted and located in the Autonomous Agents Research Group (https://agents.inf.ed.ac.uk) in the School of Informatics, University of Edinburgh, United Kingdom. The researcher will be supervised jointly by Prof. Stefano V. Albrecht (University of Edinburgh) and Prof. Concetto Spampinato (University of Catania).

What will you be doing
Contribute to the project through research activities, including:
- Conduct a comprehensive literature review to understand the current state-of-the-art in reinforcement learning, imitation learning, and robot navigation.
- Develop novel reinforcement learning and imitation learning algorithms tailored to the specific challenges of robot navigation in our simulated environment MIDGARD (https://midgardsim.org/).
- Design, together with engineers, more realistic and diverse simulated environments that capture the complexities of real-world scenarios in MIDGARD.
- Develop evaluation metrics and protocols to assess the performance of reinforcement learning and imitation learning algorithms in these environments.
- Define and validate methods for sim-to-real challenges that may arise in the transition from simulation to physical robots. This activity will be carried out jointly with robotics researchers.

Candidate requirements
PhD in AI, machine learning, computer science, or related area.
Excellent publication track record in leading conferences for AI/ML/robotics research.
Background and expertise in one or more of the following areas:
- RL and imitation learning algorithms
- Knowledge of robotic systems and challenges in navigation
- Solid foundation in machine and deep learning concepts and techniques
- Proficient in Python and Pytorch algorithm development

Employment package
12 months initially, with option to extend to 36 months subject to performance review.
Standard salary for research postdoc in Italy (1.500 Euros/month), and additionally accommodation costs (i.e. rent) covered.
Paid trips to conferences to present work.
Desktop/laptop computer.

How to apply
Interested candidates are encouraged to contact the PeRCeVe Lab research admin at alessia.spitaleri@unict.it for further details on how to apply and support with the application process.

For questions about the position and research, please contact Prof. Stefano Albrecht (s.albrecht@ed.ac.uk) and Prof. Concetto Spampinato (concetto.spampinato@unict.it).

Applications close: December 27th 2023 at noon (Italian time)