



4 PhD Positions Available

Description:

There have been many high profile achievements of Artificial Intelligence (AI) algorithms in recent years, demonstrating their effectiveness. This project will develop new AI algorithms and apply these methods to the agriculture sector in Ireland, focusing on dairy farming. Dairy farming is a very energy intensive form of farming. In order to decarbonise the dairy farming sector, it is necessary to better integrate renewable energy generation into dairy farming. This project will develop and apply AI methods to effectively integrate renewable generation into dairy farming, by combining it with recent technological developments in the energy sector. This project will investigate a range of topics relating to AI (deep learning, reinforcement learning, multi-agent systems, and agent based modelling) and energy systems (energy modelling, renewable energy, energy management, and energy in agriculture).

PhD Start Date:

1st October 2022.

Stipend & tuition:

€18,500 per annum plus tuition fees at EU rate for 4 years.

Requirements:

The successful applicants will ideally hold a Masters degree, or *at least* a 2.1 Honours Bachelors degree, in computer science, engineering, or another relevant technical discipline (physics, mathematics, etc.). The successful candidates will have experience in at least one of:

- Computer programming (preferably Python).
- Computational modelling/simulation.
- Artificial intelligence.
- Energy systems.
- Agriculture.

Extremely strong written and spoken English communication skills are essential. Prior research experience, e.g. publications, are advantageous.

How to apply:

Send a one-page cover letter, and your CV with names and contact details of two referees to the Principal Investigator, Dr. Karl Mason, at karl.mason@nuigalway.ie, with “**AI Energy Agriculture PhD Application**” in the subject line. Applications will be reviewed and interviews will be held on a rolling basis until all positions are filled.

Additional information:

Informal questions: karl.mason@nuigalway.ie

Research website: <https://karlmasonsite.wordpress.com/>

Dr. Karl Mason: <https://www.nuigalway.ie/our-research/people/engineering-and-informatics/karljohnmason/>

NUIG: <https://www.youtube.com/watch?v=xsamBVZc5Lo>