



# UNIVERSIDAD DE GRANADA

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Centro de Investigación  
Mente, Cerebro y  
Comportamiento

## **Postdoctoral position on decision neuroscience at Aarhus University and University College London**

25/06/2018

### Empleo

The Department of Management at Aarhus University and University College London, invites applications for a 2-year postdoctoral position offering applicants an exciting opportunity to join a new research project on the role of the locus coeruleus-norepinephrine system in learning and decision making. Application deadline: 15th of July 2018. Starting date: 1st of October 2018 or subject to mutual agreement.

Postdoctoral position on decision neuroscience at Aarhus University and University College London

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This project is funded by Lundbeckfonden ([www.lundbeckfonden.com](http://www.lundbeckfonden.com)) and aims to advance our understanding of the locus coeruleus-norepinephrine (LC-NE) system and neural gain by (i) developing new and inexpensive methods for indexing LC-NE activity in learning and decision making tasks using pupil size (pupillometry) and eye movements, (ii) cross-validate the new method with magnetoencephalography (MEG) signatures of neural gain, and (iii) using these methods to investigate the role of the



<http://cimcyc.ugr.es/>

LC-NE system in balancing the exploration and exploitation in reinforcement learning. Overall, the project aims to advance our understanding of how decision makers balance exploration and exploitation and how they attend to and learn from the environment in doing so. The exploration-exploitation trade-off is relevant in a wide range of situations, for instance, in managerial decision making concerning new investments or in consumer decision making between known and unfamiliar products. Our aim is to build a better understanding of the cognitive processes behind these real world decision problems. The project is a joint collaboration between Jacob L. Orquin at Aarhus University and Ray Dolan at the Max Planck UCL Centre, University College London (UCL) (<https://www.mps-ucl-centre.mpg.de/en>).

The successful candidate is expected to contribute to the overall objectives of the project by being involved in all phases of the project, including formulating research questions, experimental designs, analyses, and writing articles. The position is research-oriented, but may involve teaching assignments depending on the interests of the candidate. The candidate will be based at Aarhus University, but will receive an Honorary contract at University College London as parts of the project will be carried out at the Max Planck UCL Centre and Wellcome Centre for Human Neuroimaging at UCL. The candidate will be affiliated at Aarhus University and the Max Planck UCL Centre, London. It is therefore a requirement that the candidate is willing to be in London for a certain period of the project. Candidates must hold a PhD relevant to the academic areas of the project and have experience with data analysis and programming of experiments in at least one programming language such as R, Python, or Matlab. Experience with one or more of the following research areas is desirable: i) eye tracking and pupillometry ii) neuroimaging techniques such as fMRI or MEG iii) computational modeling such as reinforcement learning iv) basic or applied decision making theory.

For further information about the position and the department, please contact Jacob L. Orquin, Tel.: +45 22178621, Email: [jalo@mgmt.au.dk](mailto:jalo@mgmt.au.dk).

See the job posting here:

<http://www.au.dk/om/stillinger/videnskabelige-stillinger/stillinger/Vacancy/show/983154/5285/>

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