Postdoctoral Position - E 13 TVöD Bund, 39 hours/week

Reference number: SCIoI-43/19 (starting not later than from October 1, 2020 / for 3 years / closing date for applications November 29, 2019)

We invite applications for a Postdoc position on the project “Rational strategy selection in decisions under risk”

How do people select strategies that allow them to solve a given cognitive or behavioral task in a manner that matches their available resources (in terms of time or computational abilities)? To address this question, the project will investigate how organisms infer the anticipated accuracy and costs associated with candidate strategies and how, when choosing from among the repertoire of available strategies, the consideration of the implementation costs is attuned to the resources that are available to the organism. The project focuses on the mechanisms underlying strategy selection in risky choice. One question is which features of a decision problem are predictive of the accuracy of each strategy and the costs associated with implementing the strategy, and how, based on the accuracy and cost assessments of the decision maker, an appropriate strategy is selected. The project will involve both machine learning analyses to identify such features of task environment as well as behavioral experiments and computational modeling of the observed behavior.

This position is embedded in the DFG-funded Cluster of Excellence "Science of Intelligence".

What are the principles of intelligence, shared by all forms of intelligence, no matter whether artificial or biological, whether robot, computer program, human, or animal? And how can we apply these principles to create intelligent technology? Answering these questions - in an ethically responsible way - is the central scientific objective of the new Cluster of Excellence Science of Intelligence (https://www.scioi.de), where researchers from a large number of analytic and synthetic disciplines - artificial intelligence, machine learning, control, robotics, computer vision, behavioral biology, psychology, educational science, neuroscience, and philosophy - join forces to create a multi-disciplinary research program across
universities and research institutes in Berlin. Interdisciplinary research projects have been defined (https://www.scienceofintelligence.de/research/projects), which combine analytic and synthetic research and which address key aspects of individual, social, and collective intelligence.

Requirements:

Applicants must hold PhD and a Diploma/Master's degree in psychology or cognitive science and should have proven skills/background in following topics:

- Interest in interdisciplinary research in the context of the Center of Excellence "Science of Intelligence"
- Designing, programming, and running behavioral experiments and online experiments
- Interest in the cognitive underpinnings of decision making
- Proficiency in computational statistics and data analysis using either frequentist or Bayesian approaches (e.g., in R or Python)
- Experience in developing computational models of decision-making and reinforcement learning
- Strong programming skills (e.g., in Matlab or Python) and experience with machine learning -especially Bayesian inference and reinforcement learning
- Excellent English writing and communication skills

This position requires participation in research colloquia, lecture series and workshops, as well as an active engagement in the Cluster’s research activities.

Application procedure:

Candidates should upload their application preferably via the portal http://jobs.scienceofintelligence.de in order to receive full consideration.

Applications should include: motivation letter, curriculum vitae, transcripts of records (for both BSc and MSc), copies of degree certificates (BSc, MSc, PhD if applicable),
abstracts of Bachelor-, Master and (if applicable) PhD-thesis, list of publications and one selected manuscript (if applicable), two names of qualified persons who are willing to provide references, and any documents candidates feel may help us assess their competence.

A part-time employment may be possible.

The Max Planck Society strives for gender and diversity equality. We welcome applications from all backgrounds.

The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals.

A written application with the reference number and the above-mentioned documents could be sent to Technische Universität Berlin - Der Präsident - Fakultät IV, Cluster SciOl, Sekr. SciOl, Marchstr. 23, 10587 Berlin. We are kindly asking you to submit your application without a photo.

For more information about the position, please contact Dr. Thorsten Pachur (pachur@mpib-berlin.mpg.de).

Signed Dr. Brigitte Merz