Research Fellow

Who are we?

We are the University of Cambridge presence in Singapore called Cambridge CARES, sponsored by the NRF CREATE program CAM.CREATE. CARES also hosts industry-funded and other agencies funded projects. Our team is comprised of world-class scientists and engineers working in a vibrant, fast-paced environment with great opportunities for knowledge and skills development.

CARES is a partner in the Pharma Innovation Programme Singapore (PIPS). The core partners of PIPS are: The Agency for Science, Technology and Research (A*Star), The National University of Singapore (NUS), the Nanyang Technological University (NTU), the Singapore Institute of Technology (SIT), and pharma companies GlaxoSmithKline (GSK), MSD International GmbH (Singapore branch), Pfizer Asia Pacific and Syngenta.

Within PIPS, CARES is involved in several projects in which software products are being developed. We are now seeking to turn some of the custom-built codes into demo applications accessible via browsers.

Who are we looking for?

Primarily, we are looking for an individual or a contract research organization with direct experience in machine learning based design of experiments and optimization of chemical processes. The sub-contractor will need to have access to a valid ASPEN license as well and would be experienced in setting up externally-run ASPEN models. The specific task involves running an ASPEN model as 'ground through', managing the issues around model convergence and completion, potentially through developing a classification algorithm, and benchmarking a series of multi-objective optimization algorithms in the DoE mode, focusing on minimization of the number of evaluations. Final report, well-annotated codes and demonstration of the optimization run would be required as project outputs.

The successful candidate (person or a company) will be expected to:

- Understand existing code in ASPEN
- Have practical knowledge of ML-based optimization and DoE, include access to working codes
- Communicate research results with team members

What skills do you have?

- A degree in a relevant discipline such as computer science, mathematics or engineering.
- Experience with ASPEN and ML-codes in Python
- Excellent oral and written communication skills in English.
- Track record of delivery of contracts to specification and timeline.

When is position available, for how long and who is eligible?

The contract is available immediately. Enquire with Alexei Lapkin (aal35@cam.ac.uk) for the specifics of the available code to agree on contract duration and to prepare a quotation. Project timeline and specification of deliverables will be agreed in the contract text.

Please note for eligibility reasons the contractor must be based in Singapore and renumeration will be made to a Singapore-based account.

How to apply?

We are seeking quotations for the specified job. Upon receiving your enquiry (to aal35@cam.ac.uk), we will share with you further job specification and the proposed timeline. We would require you to propose modifications to the timeline, your proposed start/end dates and your breakdown of costs (per task in the proposed workflow). The selection of the winning bid will be done on the basis of a combination of criteria:

- Delivery time
- Expertise / experience
- Total project price

To apply, please send your CV and cover letter (summarising the most relevant skills and experience that you have for the position) to https://talent.sage.hr/jobs/4538e457-ec20-4990-80a5-c2c7c5dce74a.