Postdoctoral fellowship in Optimal Operation of an Industrial-scale unit in the Oil & Gas sector

The Department of Chemical Engineering (ChE) at the University of Waterloo invites applications from qualified candidates for a 12-month postdoctoral fellowship appointment in Real-time optimization of an industrial-scale system in the Oil & Gas sector under the supervision of Professor Luis Ricardez-Sandoval.

This project is part of an industrial collaboration that aims to develop a mathematical optimization algorithm that determines the optimal operating conditions for a major operation unit in an Oil & Gas company. The real-time optimization problem is expected to predict from simulations economically attractive solutions using this method. The candidate for this position is also expected to collaborate in other research projects related to topics such as optimal process integration using advanced optimization algorithms and/or machine learning techniques. Also, candidates are expected to collaborate with other members of Dr. Ricardez-Sandoval's research group in topics of common interest. Upon common agreement, opportunities to disseminate the candidates' research at national and international conferences will be provided. The candidates for this position must have solid expertise in computer programming, chemical process optimization, process control, and first-principles modelling of chemical systems. Expertise in machine learning techniques is desired. In particular, the candidate must have expertise in solving nonlinear dynamic optimization problems using state-of-the-art optimization software. A Ph.D. degree and evidence of excellence in research are required. Applications should include a cover letter describing their interest in the position and the candidate's background in the areas. Applicants should also include a curriculum vitae and provide the names and contact information of three referees.

Candidates will be evaluated until the position is filled. The selected candidate is expected to start working on the project at their earliest convenience (accommodations will be provided if necessary). Interested individuals should send their application to Luis Ricardez-Sandoval (laricard@uwaterloo.ca). The salary for this position will be similar to that offered by the NSERC postdoctoral fellowship program and commensurable with the background and activities to be developed by the applicant. Only applicants that fit the profile outlined above for this position will be contacted.

The University of Waterloo regards diversity as an integral part of academic excellence and is committed to employment equity and accessibility for all employees. As such, we encourage applications from women, Indigenous (First Nations, Métis and Inuit) peoples, persons with disabilities, members of diverse gender identities, and others who may contribute to the further diversification of ideas. At Waterloo, you will have the opportunity to work across disciplines and collaborate with an international community of scholars and a diverse student body, situated in a rapidly growing community that has been termed a "hub of innovation".