



Open Master Position in Robotics Design and Control of a higher pressure sampler for enhanced oil recovery research

Master Position

Are you an engineering or computer science student with a keen interest in expanding your knowledge into the area of Robotics System Design?

The Hibernia Enhanced Oil Recovery Laboratory at Memorial University currently has ONE position for one Master student starting as soon as possible since funding is completely secured. The student will assist with the development of an automated higher pressure sampler for fluids collection (robotics) in the Enhanced Oil Recovery Lab.

The project offers a very competitive yearly bursary of 16 000 Canadian dollars. The student will be allowed to undertake teaching assistantships with a complementary salary.

The Master degree student will be working under the supervision of Dr. Lesley Anne James (process engineering for the application) and Dr. Luc Rolland (mechanical engineering for robotics design).

Description of Work

There is currently an opening for a Master position in Robotics to work on the design, development, construction and control of a robotic system to provide for process solution dispensing in a palletized network vessels. Two robotics dispensers for fluids collection will be constructed and integrated to a larger oil and gas preparation process.

The candidate will work directly with an interdisciplinary team including process researchers.

Prerequisites

The candidate must have the equivalent of a Bachelor's or License degree in Engineering, Computer Science, Computer Engineering or Applied Mathematics, and an excellent study curriculum.



MECHANICAL AND PROCESS ENGINEERING DISCIPLINES FACULTY OF ENGINEERING

We encourage candidates with a solid programming and mathematical background and a strong motivation in designing/building physical mechanical systems as well as in simulation and data analysis. Previous experience with robot designs and/or robotic programming is a plus. Experience with applied geometry, algebra and the corresponding simulators are advantageous though not obligatory. Proficiency in writing/spoken English is mandatory. Knowledge on oil and gas processes is also considered an advantage.

The project is strongly interdisciplinary, using skills from the following fields: electrical engineering, mechanical engineering, control and computer engineering. The candidate is expected to undertake research towards his master thesis with an emphasis on field work in support of their research.

Specific requirements of the candidate include:

- Bachelor's degree in engineering, computer engineering, or related disciplines
- Programming skills (e.g., C/C++, Matlab, Labview, Maple)
- Knowledge of drawing and design software (e.g., Solidworks, ProEngineer, Catia, Ideas)
- Good written and oral communication skills in English
- Ability to work in an interdisciplinary team
- An excitement for a career in conducting scientific research

Desirable attributes for perspective candidates are:

- Mathematically inclined and scientifically curious
- Resourceful and with past exposure to field work under incremental conditions
- Able or interested to design, build and test robots

Interested candidates should send an updated CV, together with a motivation letter and at least two academic references by e-mail to Dr. Luc Rolland (lrolland@mun.ca).

Telephone: 1-709-864-89 43

The starting date is fixed to September first 2013 and possibly earlier.

This call will be closed as soon as the position is fixed.