HOLE SCHOOL OF CONSTRUCTION ENGINEERING
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING
FACULTY OF ENGINEERING
POSTING DATE: AUGUST 3, 2016

POSTDOCTORAL POSITION IN
SIMULATION-BASED ANALYTICS FOR CONSTRUCTION

Dr. Simaan AbouRizk, Canada Research Chair in Operations Simulation, invites applications for a Postdoctoral Fellow seeking to become part of a research team in the area of construction engineering and management in the University of Alberta's Hole School of Construction Engineering. Position is for one year with potential for extension, depending on performance and funding availability.

Dr. AbouRizk's research program facilitates high-quality, targeted industry research through which Hole School of Construction Engineering faculty and students work directly with partner representatives to define problems and apply solutions. Results advance construction engineering and management research in the academic context while at the same time providing applicable deliverables and learning opportunities for industry.

The research program aims to develop a simulation-based analytics for construction (SAC) framework to support a new generation of decision support systems (DSS), develop the simulation environment to deploy the framework, and demonstrate the validity of this framework by implementing it in numerous industrial settings in the areas of productivity, safety and quality management, and in the analysis of the industrial construction supply chain.

We are looking for a researcher to assist with the delivery of this research program by:

1. Developing data adaptors to support data-driven simulation-based analytics:
    a. Warehousing data from a wide variety of sources such as Enterprise Resource Planning (ERP) systems, scheduling/estimating/contract management software, real-time data acquisition systems, and CAD/BIM models.
    b. Cleansing data by utilizing data mining to identify anomalies, missing information, etc. and simulation methods to populate and fill gaps in the data or to validate the data.
2. Deploying of optimization techniques such as genetic algorithms and Monte Carlo search trees.
3. Collaborating closely with graduate students and senior programmer analyst involved in research program

Applicants must meet the following minimum qualifications:

- PhD degree with a background in computing science.
- Experience with software development and programming languages (e.g. Visual Studio, .NET, C#, Visual Basic and SQL).
- Track record of producing high-quality, peer-reviewed scientific publications.
- Willingness to work and conduct fieldwork at industry partner facilities.
- Possession of a valid Canadian driver's license and ability to pass the required University of Alberta driving tests.

To Apply:

Applicants should send a cover letter, curriculum vitae, and contact information for three referees and a sample of relevant publications to Brenda Penner, Department of Civil and Environmental Engineering, 5-050 NREF, Edmonton, Alberta, Canada T6G 2W2, or electronically to brenda.penner@ualberta.ca . Applications will be reviewed upon receipt and will be accepted until a qualified candidate has been found and the position is filled. To learn more about Dr. AbouRizk's research, visit http://irc.construction.ualberta.ca/

Closing date:

Position open until filled.

The review of applications will begin on August 12th and will continue until the position is filled.

All qualified candidates are encouraged to apply. We thank all applicants for their time and effort but only those selected for an interview will be contacted. Applicants may be considered for future vacancies.

The University of Alberta offers appointments on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities and Aboriginal persons.