

## IMMEDIATE OPENING

### **Council on Library and Information Resources (CLIR) Postdoctoral Fellowship in Design for Multiple Visual Scales at McMaster University**

The Computing and Software Department and the University Library at McMaster University in Hamilton, Ontario, Canada invite applications for a two-year CLIR Postdoctoral Fellowship in software design, with an emphasis on games, for multiple visual scales, from the iPod Touch to 60inch high-resolution screen panels. The Fellowship is part of the Gaming Scalability Environment (G-ScalE) project involving Dr. Jacques Carette (Computing and Software, Faculty of Engineering), Dr. Andrew Mactavish (Multimedia, Faculty of Humanities), and Jeff Trzeciak (University Librarian). The fellow will start immediately and report to Dr. Carette but also work closely with the library on certain projects.

#### **Duties**

- Work with Dr. Carette and his students to identify all of the issues relating to usability at different scales, then help design (and implement) a set of domain-specific languages which capture the constraints of user-interface features with respect to scale.
  - From the psychology and user-interface literature, identify cognitive issues relating to scale perception, and capture these in a formal model. Examples: Fitts' Law, Hick's Law and the Steering Law;
  - Identify examples of such concerns, and pre-existing solutions, from existing software which works at multiple scales; put an emphasis on solutions concerning gaming software;
  - Relate these models and solutions to design constraints for features in software;
  - Embody these design constraint into a set of domain specific languages; and
  - Provide interpreters for these languages.
- The above work will be done in conjunction with a number of other researchers and students, and is expected to lead to several peer-reviewed publications, as well as working software.
- The candidate will be expected to teach one course (in the CAS department).
- The candidate will be expected to work with the library to:
  - Identify the current and future library needs of Engineering faculty and students;
  - Assess current state of library resources, services and facilities in support of Engineering;
  - Make recommendations to the library administration for improvement;

- Promote greater awareness of library resources, services and facilities within Engineering;
- Promote greater awareness within the library of the faculty's teaching and research priorities ; and
- Provide support as needed to students and faculty within Engineering.

### **Required Skills:**

- Ph.D. in Computer Science or Software Engineering is preferred, but a Ph.D. in psychology, human factors, or mathematics accompanied by a demonstrable expertise in software development and mathematical modelling.
- Interest in multi-disciplinary work.
- Capable of understanding the requirements of faculty and students in Engineering with regards to library resources, services and facilities.

### **How to Apply**

If you have received your Ph.D. within the last five years and are interested in this fellowship, please email your curriculum vitae to [abishop@clir.org](mailto:abishop@clir.org).

The Council on Library and Information Resources (CLIR) is an independent, nonprofit organization that forges strategies to enhance research, teaching, and learning environments in collaboration with libraries, cultural institutions, and communities of higher learning. CLIR promotes forward-looking collaborative solutions that transcend disciplinary, institutional, professional, and geographic boundaries in support of the public good.