



ABOUT

The [Software Quality Research \(SQR\) Lab](#) at Ontario Tech University is under the direction of Dr. Jeremy Bradbury and focuses on *improving the software quality of complex systems through enhanced tools, development practices and education*. In particular members of the lab conduct research on:

- Industry relevant problems and challenges
- Automation of software development activities using artificial intelligence (AI)
- Development of new software testing and analysis techniques
- Experimentation and user studies to understand how developers analyze, debug and test software
- Development of new methods to train software developers

RECENT RESEARCH PROJECTS

[Automatic Analysis of Concurrent Software](#) — “Applying genetic algorithms and machine learning to automatically localize and fix concurrency bugs”

[Predicting Bug Severity Using Historical Data](#) — “Combining natural language processing and ML to predict bug report severity using data from past projects”

[XIVT: eXcellence In Variant Testing](#) [www.xivt.org] — “Testing highly configurable, variant-rich embedded automotive systems”

[Managing Developer Interruption](#) — “Developing visualizations to support interruption recovery during programming, testing and debugging”

[Adaptive Games for Computer Science](#) — “Using AI to develop adaptive games for educating software development professionals”

LAB LEADER

Jeremy S. Bradbury
Associate Professor, Computer Science, Ontario Tech University
PhD, Queen’s University, 2007

RESEARCH KEYWORDS

testing & analysis

bug repair debugging

quality assurance

concurrency open source

automotive software testing

human-centered soft. dev.

automation AI

genetic algorithms

machine learning

educational games

CONNECT

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