

# egorlarionov

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🌐 egorlarionov.com

## summary of qualifications

- Proficiency with C/C++, and technical work experience with Python, MATLAB and Julia
- Technical experience in tetrahedral and triangle mesh processing
- Research experience in fluid simulation through graduate work
- Significant experience with OpenGL, Eigen, OpenVDB, CGAL, Qt Libraries
- Knowledge of iPhone and Google Android mobile platforms
- Experience with Javascript, Haskell and Rust through personal projects

## employment

### 3D Software Developer, SideFX Software - Toronto, Ontario

- Developed mesh tetrahedralization techniques for finite element analysis
- Created a robust mesh solidification tool using binary space partitioning
- Developed methods for automatic polyhedral mesh repair
- Optimized and upgraded the rigid body dynamics solver

May 2014 - Present

May 2013 - Aug 2013

May 2011 - Aug 2011

### Research Assistant, University of Waterloo - Waterloo, Ontario

- Research on the continuity of quantum capacities with two-way classical assistance
- Analyzed quantum channel spaces and their enclosing supersets

May 2012 - Aug 2012

### Mathematics Tutor, Seneca College - Toronto, Ontario

- Taught students from Engineering, Accounting, Optometry, Finance, etc.
- Planned and hosted mathematics workshops as well as one-on-one tutoring

Sep 2010 - Dec 2010

### Software Developer, Xtreme Labs - Toronto, Ontario

- Developed applications for iPhone, BlackBerry and Google Android
- Coordinated multiple projects across various platforms
- Worked overtime to develop and deliver extra projects
- Conducted technical research and gave numerous talks

May 2009 - Apr 2010

## education

### Master of Mathematics, Computer Science, University of Waterloo - Waterloo, Ontario

- Thesis: The Mimetic Approach to Incompressible Surface Tension Flows
- Supervisor: Christopher Batty, Average: 95.3%
- Summary: A novel method to handle liquids with high surface tension. This method integrates a semi-implicit surface tension model with the mimetic finite difference method that can simulate hydrophobic and hydrophilic surfaces.

Sep 2013 - Apr 2016

### Bachelor of Mathematics, University of Waterloo - Waterloo, Ontario

- Pure Math and Computer Science (Co-Op), Physics Minor

Sep 2007 - Apr 2013

## awards

- David R. Cheriton Graduate Scholarship, 2013 - 2015
- Work Term Report Award from Research In Motion, 2009 - 2010
- University of Waterloo Merit Scholarship, 2007 - 2008

## interests



climbing



biking



tennis



guitar