

# Leland J. Jefferis

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## Education

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### University of Wisconsin - Madison

*Ph.D. Mathematics, Adviser: Shi Jin*

*Sep. 2009 – May 2014*

### Seattle University

*B.S. Mathematics, Summa Cum Laude*

*Sep. 2004 – May 2008*

### Seattle University

*B.S. Physics, Summa Cum Laude*

*Sep. 2004 – May 2008*

## Experience

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### Epic Systems

*Software Developer Team Lead*

*Mar. 2016 – present*

I lead a team that develops advanced web apps, conducts dependency analysis, and performs long-term planning.

- Mentored team members and guided weekly meetings to discuss projects and progress.
- Created and organized a seminar focused on disseminating self-taught web-related knowledge through informal presentations.
- Organized a code dependency analysis effort to chart a course for future code releases.

### Epic Systems

*Software Developer*

*Feb. 2015 – Feb. 2016*

I worked collaboratively to develop advanced web apps within an advanced MVVM data binding web framework for use by radiologists in the clinical setting.

- Optimized (via in-depth “Big-O” analysis) a report look-up algorithm which resulted in a 20 fold performance increase and dramatic improvements to user experience.
- Developed scripting tools for calculating and visualizing code dependencies of a legacy code base for the purpose of devising long-term code migration strategies.
- Completed and managed 10 projects in parallel on aggressive timelines. Projects included writing detailed design documents and comprehensive unit tests.

### Seventh Harmonic LLC

*Cofounder and Programmer*

*Aug. 2013 – present*

I cofounded Seventh Harmonic, a mobile gaming company.

- Produced “Bee-Line”, an original puzzle game that currently has over 2000 users.
- Fabricated a custom game engine from scratch within the Android platform using Java and OpenGL.
- Worked with a legal team and UW – Madison business school to form an LLC and to conceive a marketing strategy.

### UW - Madison

*Research Assistant & Teaching Assistant*

*Sep. 2009 – May 2014*

- As a research assistant I researched and developed new numerical methods to simulate high frequency wave motion in hyperbolic PDE.
- Wrote and produced three research papers (published two) with adviser Shi Jin and presented them at numerous conferences.
- As a teaching assistant I taught undergraduate and graduate level mathematics courses as well as qualifying exam summer preparation classes.

## Computer Skills

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**Primary Languages:** C/C++, C#, Java

**Scripting:** Bash, Emacs Lisp, AWK

**Web Client:** Javascript, JQuery, CSS/SCSS, AngularJS

**Web Server:** Node.js, ASP.NET, Liquid

**Database:** SQL, MUMPS

**Editors:** Emacs, Visual Studio, Android Studio

**Other:** Android, Matlab, OpenGL, Python, FORTRAN

## Open Source Projects

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**Katyedid's Kitchen:** Built an HTTP server in C/C++ from scratch to be used as a back-end for a one page app style recipe management website (also built from scratch). The back-end is capable of data mining content from other recipe aggregators.

**Yasnippet Backsolve Emacs Extension:** This project added "backsolve" functionality to Yasnippet, a popular snippet entry tool for the Emacs editor.

**Tetromino 19:** An optimized algorithm for tiling arbitrary regions with polyominoes which is at the core of both a game and a collaborative art project with Awdience LLC.

**Photon counting:** Researched and developed an asynchronous time-correlated single photon counting based auto-correlation algorithm in collaboration with Dr. Randall Goldsmith. The Matlab script implementation is competitive with commercial offerings and is freely available for researcher use.

**More:** Please visit my home page.

## Selected Awards

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**Goldwater Scholarship:** The most prestigious undergraduate award given in the sciences and is awarded annually to about 300 students nationwide.

**John Ju Award:** Awarded to an exceptional student in the school of Science & Engineering at Seattle University. There have only been 9 recipients since its establishment in 1990.

**John Nohel Prize:** Awarded for outstanding dissertation in applied mathematics at UW - Madison.

**Mathematical Sciences Postdoctoral Research Fellowship:** An extremely competitive fellowship awarded by the National Science Foundation to applicants from a national pool. (declined)

## Languages

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**English:** Native

**Mandarin Chinese:** Conversational

## Hobbies

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**Music & Art:** Piano, guitar, music composition, and sketching.

**Rock-star:** Member of The Hum (a rock band).

**Exercise:** Rock climbing, surfing, backpacking, and dancing.

**Travel:** Traveled extensively in China, North America and Europe.