

# Kevin A. Mitchell

---

1616 McLean Dr  
Vancouver, BC V5L 3P3  
Canada

(604) 910-4022  
kevmitch@gmail.com  
kevmitch.ca

**PROFILE** Applied math Ph.D. with background in physics and industry experience. Strong programming, computational problem solving and technical communication skills.

**SKILLS**

- Mathematical problem solving
- Scientific computing, machine learning and numerical analysis
- Technical communication, education and presentations
- Data acquisition and analysis
- Fluent in: c / c++, Python, Fortran, Objective-C, Unix shell scripting, Lua
- Web development with Django, MySQL, Bootstrap
- Revision control with git

**EDUCATION** **Simon Fraser University** *Doctor of Philosophy Mathematics*  
Burnaby, BC 2008–2013

- Doctoral Thesis: Rossby wave propagation in the tropics and midlatitudes

**University of British Columbia** *Master of Science Physics*  
Vancouver, BC 2005–2008

- Master's Thesis: Observations of pattern formation in sun-melted snow

**University of British Columbia** *Bachelor of Science Physics*  
Vancouver, BC 2000–2005

- Honours Thesis: Modelling and simulation of pattern formation in sun-melted snow
- Minor in Anthropology

**EXPERIENCE** **kevmitch.ca** *Applied Mathematical Consulting*  
Vancouver, BC 2013–Present

- Mathematical modelling and simulation for e-ink and ground water reclamation
- Social clustering algorithm development
- Django-based web development and deployment

**Pacific Institute for the** *Scientific Computing*  
**Mathematical Sciences** *Instruction and Administration*  
Burnaby, BC 2010–2013

- Instructional seminars, documentation and technical support for users
- Advocacy and procurement of improved graduate student computing resources
- Installation and maintenance for Linux-based desktops and computational server

**Simon Fraser University** *Mathematics Teaching Assistant*  
Burnaby, BC 2008–2013

- Tutorials supplementing material covered in lecture
- Marking assignments and exams
- Holding office hours

**UBC Molecular Beam Epitaxy Lab/  
Photonics and Nanostructures Lab**  
Vancouver, BC

*Scientific Computing  
Instruction and Administration*  
2007–2008

- Documentation and technical support for users
- Installation and maintenance for Linux-based desktops and computational server

**University of British Columbia**  
Vancouver, BC

*Physics Teaching Assistant*  
2006–2008

- Running and assisting instructional physics labs
- Marking assignments, exams and lab notebooks
- Holding office hours

**Pure Technologies Ltd.**  
Calgary, AB

*Nondestructive Testing R&D*  
2001–2004

- Development of electromagnetic testing system for concrete cylinder pipe
- User documentation and technical reports of research results
- Field operation and data analysis for commercial contracts

#### VOLUNTEERING

**mpv Media Player**

*Open Source Contributor*

<https://github.com/mpv-player/mpv>

2013–Present

- Primary maintainer for WASAPI Windows audio backend
- Performance improvements to the hardware video decoding system

#### REFEREED PUBLICATIONS

- **Kevin A. Mitchell**, T. Tiedje (2010). Growth and fluctuations of suncups on alpine snowpacks. *J. Geophys. Res. Earth Surface*. 115: F04039.
- Tom Tiedje, **K. A. Mitchell**, B. Lau, A. Ballestad, E. Nodwell (2006). Radiation transport model for ablation hollows on snowfields. *J. Geophys. Res. Earth Surface*. 111: F02015.

#### PATENTS

- P. Paulson, J. McIntyre, **K. Mitchell**. *Electromagnetic analysis of concrete tensioning wires*. US Patent # 6,781,369. August 24, 2004.
- P. Paulson, J. McIntyre, **K. Mitchell**. *Electromagnetic analysis of concrete tensioning wires*. US Patent # 6,791,318. September 14, 2004.

#### SCHOLARSHIPS, PRIZES

- SFU Graduate Fellowship (2012)
- SFU Graduate Fellowship (2011)
- SFU Computational Math Day: Best poster (2010)
- SFU President's PhD Research Stipend (2010)
- SFU Department of Mathematics Graduate Scholarship (2010)
- UBC Graduate Entrance Scholarship (2006)
- UBC Arthur Crooker Prize for experimental physics (2005)