





PHILIP SCHLUP PhD

CONTACT

philip.schlup@gmail.com
16 Berkeley Road
O'Halloran Hill SA 5158
0403 634 031

BIO LINKS

pschlupnzl.github.io 
linkedin.com/in/philip-schlup 
github.com/pschlupnzl 
imdb.com/name/nm9195332 

EDUCATION

Diploma in Digital Film

Southern Institute of Technology
February 2015 – December 2017
Distance Learning, New Zealand

PhD Physics

University of Otago
January 1998 – December 2003
Dunedin, New Zealand

BSc (Hons) Physics

University of Otago
January 1994 – December 1997
Dunedin, New Zealand

LANGUAGES

English (Native)
German (Native)
Spanish (Intermediate A2)
French (Beginner)

SOFTWARE DEVELOPER EXPERIENCE

Senior Integrations Developer Software Development Manager Senior Software Developer

The Tarn Group, Dunedin, New Zealand

February 2021 – present
April 2016 – September 2017
January 2011 – April 2016

- Design and implement e-learning platform, in part funded by NZ Government for all primary, secondary, and tertiary learners.
- Develop web-based video analysis tool as plugin into electronic medical record systems for sports and prosthetics.
- Implement and maintain APIs and integrations with external parties.
- Lead and mentor team of up to five developers.
- Play active role in whole product life cycle, from ideation to release.
- Write documentation, project plans, and summary reports.

Software technologies: **C# .NET (Framework and Core), Microsoft SQL, JavaScript and Typescript, React, GraphQL.**

Senior Integrations Developer

Tabula, Mosgiel, New Zealand

June 2019 – February 2021

- Maintained and improved GPS mapping data platform.
- Led design and implementation of API to integrate with farm contractors and fertiliser suppliers.
- Collaborated with external fertiliser and farm management teams to improve effectiveness of workflows and communication.
- Analysed and processed geospatial and business data.

Software technologies: **Python, PostgreSQL, PostGIS.**

Senior Developer

EducationPerfect, Dunedin, New Zealand

October 2017 – June 2019

- Led ongoing development of mathematics teaching engine for online learning platform used by 1.4M students and 50,000 teachers around the world.
- Created translator to read LaTeX maths formulas as speech.
- Fostered collaborations with product, design, and content teams to improve product by aligning to client needs.
- Designed and implemented new interactive e-learning elements.

Software technologies: **Typescript, Vue, AngularJS, MathQuill.**

VISUAL MEDIA EXPERIENCE

Software developer, animator, video editor
Freelance contractor

June 2008 – present

Maths teaching plugins

Education Technology, Dunedin, New Zealand

- Developed requirements in collaboration with client to build tools for maths education, used by thousands of students at levels 1–5 of the New Zealand Curriculum.
- Implemented interactive mini-games and simulations as plugins to online learning platform.
- Delivered final product on or ahead of schedule.

Blender animations

Colorado State University, Fort Collins, CO, USA

- Collaborated with Marketing and Communications office to design science animations.
- Build and rendered animations used as insert shots for university marketing reel.

Dear Boobs on Stage

Suitcase Theatre, Dunedin, New Zealand

- Filmed live stage show over two nights.
- Edited multiple camera recordings and sound mix to produce final video.

ACADEMIC EXPERIENCE

Research Scientist

January 2006 – November 2010

Colorado State University, Fort Collins, CO, USA

- Designed, built, and used lasers for world-first experiments in spectroscopy and imaging.
- Wrote software to connect to laboratory equipment to speed up data acquisition times.
- Participated in experiments spanning Physics, Chemistry, and Zoology departments.
- Created application that allows interactive modelling of laser resonators (personal project).

Software technologies: **C++, Windows API, Matlab, LabView, OpenGL.**

Publications: 35 articles, 6 conferences, 1 chapter, 1 patent.

Post-Doctoral Researcher

January 2003 – December 2005

Swiss Federal Institute of Technology – ETH, Zürich, Switzerland

- Designed and constructed optical systems to manipulate laser sources used for highly sensitive single-atom experiments.
- Collaborated with mechanical design workshop to build ultrahigh vacuum system.
- Performed detailed numerical modelling of laser and atomic interactions.
- Created 3D computer graphics animations to visualise experimental apparatus.

Software technologies: **C++, Windows API, Matlab, Cocoa, POV-Ray.**

Publications: 9 articles, 11 conferences, 1 chapter.