Dr Alexander Taylor

Address: First Floor Flat, 14 Brighton Road, Bristol, BS6 6NT **Mobile:** 07895 065 870

Email: alexander@inclem.net **Website:** http://inclem.net/ **Github:** https://github.com/inclement

I am a scientific researcher currently based in South West England. I am particularly interested in scientific problem solving, numerical computation and software engineering, enjoying the challenges involved in understanding and implementing numerical techniques for data analysis.

Work History

March 2015 - present: Postdoctoral Research Associate, University of Bristol, UK
In this role I am responsible for:

- Pursuing scientific research independently and in collaboration with other academics.
- Collaborating on scientific publications targeting a range of publication formats.
- Creating and publishing scientific software. I maintain the pyknotid Python/Cython library for geometrical and topological analysis of space curves, targeted at physicists and other groups for whom a unified set of tools suitable for data analysis were not previously available.
- Presentating results at conferences and seminars.
- Managing and informally supervising graduate students in all stages of their studies.
- Supervising undergraduate students on Masters level research projects.

A full list of my publications and presentations can be found on my website.

Education

2011-2015: PhD Physics, University of Bristol, UK
Analysis of Quantised Vortex Tangle, supervised by Professor Mark Dennis (Theoretical Physics group).
My thesis was awarded a Faculty of Science Commendation for outstanding research, and further published as a book in the Springer Theses series recognising scientific excellence in PhD research.

2007-2011: MPhys Physics, Durham University, UK
First Class Honours, with final year project on Rogue Waves in Bose-Einstein Condensates.

Technical experience

Scientific computing and other programming
Advanced use of Python (including NumPy, SciPy, Pandas, Cython) and experience with JavaScript, bash, OpenCL, C, Java and Mathematica. I have some experience in cluster computing environments, and have created and distributed standalone tools for use by other researchers.

Open source development
I am a core developer of the Kivy graphical framework, and in particular am a primary maintainer of the python-for-android packaging tool. My roles include contributing code and documentation, code review, user technical support, helping to maintain the project web presence, and project management in collaboration with other core developers. These projects involve interacting with Python, Cython, C, Java and OpenGL.
I have also contributed to other open source projects, and created a series of popular video tutorials for Kivy.

Web development
I have created and maintained several websites, including a Flask-based scientific analysis tool (http://inclem.net/knotidentifier). I am familiar with HTML, CSS and JavaScript. As part of my work on python-for-android, I added support for Python apps with a webview interface on Android.

Operating systems
I am an experienced user of GNU/Linux, macOS and Microsoft Windows, and have some experience with Android development. I have contributed articles to Linux User magazine.

Computer applications
I am experienced with version control via Git, make advanced use of LaTeX, and am fully competent with Microsoft Office.

Conference presentation
I am an experienced conference and seminar presenter.

Other Activities

I enjoy playing the board game Go, and have reached the rank of 3 Dan. I am currently (2015-present) the captain of the UK team in the Pandanet Go European Team Championship.