Steefan Contractor

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Education

Jan 2015 onwards **PhD, Climate Science**

- Analysed changes in precipitation globally
- Created a new global dataset of precipitation (**50 GB**)
- Interpolated **135,000 station** timeseries using Kriging
- **Quality controlled** data using spatial and temporal homogeneity tests
- Proposed new statistical method to analyse changes in entire distributions
- Tested significance of changes using **bootstrapping** approach

2009 - 2013 **Bachelors of Science (Advanced) with Honours**,
Major: Mathematical Physics; Honours: Quantum Computing

Publications

Published **four** journal articles in reputable journals such as *Geophysical Research Letters*, including a dataset documentation paper.

Conferences/Talks

- Presented at **four** international conferences including American Geophysical Union Fall Meeting 2017, **four** domestic conferences and **two** research workshops (one in Germany).
- Given **two** invited seminars at federal government organisations (American and German)

Scholarships/Awards

Received **Computing Award** from UNSW in high school, **two** undergraduate summer research scholarships and the **Australian Postgraduate Award** supporting my PhD.

Work Experience

Over **six** years' experience teaching university Physics including a 3rd year climate science course

Leadership Roles

Held **three** elected positions across undergraduate and postgraduate student associations including one cross-institutional position

Public Outreach

Co-created a website: isithotrightnow.com | Easy to understand graphics and real-time temperature statistics | **Real-time scraping and cleaning** of data from Bureau of Meteorology website | Increasing public awareness and understanding of climate change.

Skills

Expert	R, Fortran, C programming
Intermediate	Python, HTML, CSS, SAS, Matlab, Mathematica, IDL, NCL
Data processing	CDO, Bash, SQL
Data visualisation	Tableau, XMGrace, R Shiny, D3
Documentation	Latex, Git, Markdown, RMarkdown

Numerical Modelling

- Weather Research and Forecasting Model (WRF) Version 3.0, NCAR, NOAA
- Coupled Model Intercomparison Project Phase 5 (CMIP5) model output (**3.3 PetaByte**)

- Density Functional Theory Modelling (Quantum Chemistry)