

# Seán Blake, PhD

Astrophysics Researcher

## Mail

blakese@tcd.ie

## Web & Git

seanblake.ie

github.com/TerminusEst

## Computing

- Python
- Numpy
- Scipy
- Scikit-Learn
- Linux
- L<sup>A</sup>T<sub>E</sub>X

## Publications

orcid.org/0000-0001-9042-3557

## Interests

Computers 

Board Games 

Poker 

Running 

Piano 

## About

I am a motivated astrophysics researcher with 8 years of experience in **data analysis** and **scientific computing**, currently based at the NASA Goddard Space Flight Center. I am experienced with **machine learning**, data visualisation, manipulating large datasets and technical writing. I am seeking to apply my skill set to a data science/analyst role.

## Skills

### Data Analysis

- Extensive experience with **Python** both in developing code for scientific applications and teaching others. Also developed data-processing software for magnetic observatories (e.g. **Magie.ie**).
- Experienced with analysing large datasets, **machine learning**, time-series analysis, numerical physics simulations and web-scraping.

### Communication

- Published multiple articles in academic journals, technical reports for engineers and presented at international conferences.
- Experience teaching physics and scientific computing to students.

## Work Experience

- 2018-now **Postdoctoral Researcher at NASA GSFC**  
*Research extreme geomagnetic storms and their effect on power grids. Perform numerical physical simulations and analyse terabytes of output data using Python. Also scrape and process data from websites.*
- 2017-2018 **Postdoctoral Researcher at Trinity College Dublin**  
*Gathered and processed geophysical data around Ireland as part of SWEMDI: the Space Weather Electromagnetic Database for Ireland.*
- 2016-2018 **Director of CodifyDublin.com**  
*Founded Codify Ltd. which provided data science and computer programming workshops in Dublin. Designed curriculum, organised classes and taught approximately 150 students and professionals.*
- 2014-2016 **Workshop Leader with Student2Scientist.org**  
*Ran educational computer science and physics workshops for secondary level students and teachers. Produced Junior Cert Short Course.*

## Education

- |           |   |                                 |
|-----------|---|---------------------------------|
| 2013-2017 | <b>Ph.D. in Astrophysics.</b>                 | Trinity College Dublin, Ireland |
| 2014-2015 | <b>Postgraduate Certificate in Statistics</b> | Trinity College Dublin, Ireland |
| 2009-2013 | <b>B.A. Mod. in Astrophysics, II.I</b>        | Trinity College Dublin, Ireland |