

# Jacob Buete

## Curriculum Vitae

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## Education

**Bachelor of Science (Advanced) (Honours),** **2013–2016**  
*The Australian National University, Canberra, ACT, HD-average.*

- Major: Theoretical Physics
- Specialisation: Advanced Physics
- Minor: Mathematics
- Honours: Astronomy and Astrophysics (graduating in December 2016)

## Honours Thesis

**Title:** *A Realistic Sub-grid Supernovae Implementation for Exploring Supernova Driven Turbulence*

**Supervisor:** Dr Christoph Federrath

**Description:** Implemented an analytical supernova model in a FORTRAN-based hydrodynamics codebase that employs adaptive mesh refinement, FLASH. ([jbuete.com/honours](http://jbuete.com/honours))

## Experience

**IT Assistant, Bruce Hall, Canberra.** **2016**

Worked as part of the student IT team at Bruce Hall.

Job Details:

- Worked as a liason for Bruce Hall and ANU IT services;
- Fixed technology-related issues encountered by students and Bruce Hall admin;
- Ran Bruce Hall's internal website, including:
  - Writing Python scripts to update MySQL database of student information;
  - Created video series to teach student leadership team how to create and format articles on the site.

## Open Source Projects

### FlashPy.

FlashPy is a Python module designed to interface with the HDF5 output files produced by FLASH simulations. The module provides automated analysis and visualisation tools for use in research. ([github.com/JBuete/FlashPy](https://github.com/JBuete/FlashPy))

## Languages

**Highly Experienced:** Python, FORTRAN

**Moderately Experienced:** C, Java

**Some Experience:** Javascript, Haskell