William Page

Postdoctoral Scholar

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PROJECTS/PUBLICATIONS

UC Berkeley — Postdoctoral Scholar

Feb 2019 - PRESENT

Co-led an analysis of rare processes in cryogenic Silicon to characterize a dominant background in dark matter detectors.

Designed and implemented digital filtering algorithms to extract energy estimators, discrimination variables, and other metadata from digitized time stream data. Developed models to isolate and measure rare detector effects among hundreds of millions of data points.

Led commissioning of expensive and mission critical cryogenic equipment. Coordinated between a group of international engineers, UC Berkeley scientists, and building managers. Mentored physics undergraduate students.

Cryogenic Dark Matter Search — Analysis Team Leader

Mar 2017 - Feb 2018

Co-led a team to improve signal-extraction methods in large datasets from SuperCDMS dark matter detectors. Improved dark matter sensitivity by factor of two over previous analyses. Managed efforts of postdoctoral and student researchers and organized weekly teleconferences.

EDUCATION

University of British Columbia, Vancouver—*Ph.D. and M.Sc.*

Sep 2013 - Feb 2019

Member of the SuperCDMS collaboration searching for particle dark matter. Specialized in statistics, data analysis, and low-noise experimental methods to improve detector sensitivity. **Awards:** Canadian Association of Physicists Research Presentation Award.

Bowdoin College, Brunswick, Maine — B.A.

Sep 2009 - May 2013

Physics major. Mathematics minor. **Awards:** Highest honors in Physics; Sarah and James Bowdoin Scholar (Dean's List).

SKILLS

- Maximum likelihood analysis
- Multivariate analysis
- Monte carlo simulation
- Bayesian inference
- Digital signal processing
- Data processing
- Data visualization
- Git
- Unit tests (Travis CI)
- Cluster computing
- Mechanical design

LANGUAGES

- Python (numpy, scipy, pandas, sklearn)
- SQL
- C++
- Matlab