

# Christopher N. Beaumont

## Curriculum Vitae

### Contact

**Senior Software Engineer**  
Harvard-Smithsonian Center for Astrophysics  
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Cambridge, MA 02138  
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<http://www.chrisbeaumont.org>

### Education

**Institute for Astronomy, University of Hawai'i at Manoa** Honolulu, HI  
Ph.D Astronomy  
January 2014  
Dissertation Topic:  
Morphological Diagnostics of Star Formation in Molecular Clouds (*Advisors: Jonathan P. Williams and Alyssa A. Goodman*)

**Institute for Astronomy, University of Hawai'i at Manoa** Honolulu, HI  
M.S. Astronomy  
Fall 2009  
Research:  
Molecular Rings around Interstellar Bubbles, and the Thickness of Star Forming Clouds (*Advisor: Jonathan P. Williams*)  
Astrometric Data Analysis in the Era of All Sky Surveys (*Advisor: Eugene A. Magnier*)

**Calvin College** Grand Rapids, MI  
B.S. Physics  
May 2007  
Minors in Mathematics and Astronomy  
GPA 3.94 (Overall), 3.99 (Major)  
Graduated with Honors

### Honors

*University of Hawaii University Research Council Award*  
Awarded in 2012

*ARCS (Achievement Rewards for College Scientists) Foundation – Honolulu Chapter*  
Awarded in 2012  
Also named Honolulu-ARCS Scholar of the Year in 2012

*Harvard Institute for Applied Computational Science:*  
*2012 Computational Challenge Winner*  
Awarded in 2012 for developing a new, efficient strategy for clearing debris off city roads after natural disasters.

*PiCloud Academic Research Grant*  
Awarded in 2011

*Smithsonian Astrophysical Observatory Predoctoral Fellowship*  
Awarded in 2011

*Friends of the IfA Award for Excellent Masters-Level Research*  
Awarded in 2008

*Barry M. Goldwater Scholarship Honorable Mention*  
Awarded in 2006

*Calvin College McGregor Sophomore Scholar*  
Awarded in 2004

*Calvin College Presidential Scholarship*  
Awarded in 2003

*Howard Hughes Medical Institute Scholarship*  
Awarded in 2003

## **Employment**

- 11/2013–Present    **Harvard-Smithsonian Center for Astrophysics**  
Senior Software Engineer
- 06/2013–12/2013    **Harvard School of Engineering and Applied Science**  
Head Teaching Fellow for CS109: Data Science
- 09/2010–11/2013    **Harvard-Smithsonian Center for Astrophysics**  
Predoctoral Research Fellow (*Advisor: Alyssa A. Goodman*)
- 09/2007–11/2013    **University of Hawai'i at Manoa**  
Undergraduate astronomy T.A. and Lab Assistant (9/2007 – 5/2008)  
Research Assistant (*Advisor: Jonathan P. Williams*)  
Research Assistant (*Advisor: Eugene A. Magnier*)
- 01/2012–06/2012    **Harvard University**  
Teaching Fellow, EMR 19 *The Art of Numbers*  
An undergraduate-level data visualization course for non-science majors  
Professor: Alyssa Goodman
- 01/2011–06/2011    **Harvard-Smithsonian Center for Astrophysics**  
Teaching Fellow, AY 201B *The Interstellar Medium*  
Graduate-level course on the interstellar medium and star formation  
Professor: Alyssa Goodman
- 06/2006–08/2008    **MIT Haystack Observatory**  
REU Student  
Title: SiO Masers in the Orion BN-KL Outflow  
Advisor: Shep Doeleman
- 06/2005–08/2005    **National Solar Observatory**  
REU Student  
Title: Supernovae Detection Techniques for Small Robotic Telescopes  
Advisor: Mark Giampapa

09/2003–05/2007 **Calvin College**  
Physics, Astronomy, and Mathematics Tutor  
Observatory Assistant  
Head Student Observer (2004–2005)  
Physics Lab Assistant / Grader

## Publications

### Journal Papers

“A Simple Perspective on the Mass-Area Relationship in Molecular Clouds”

**Beaumont, Christopher N.**; Goodman, Alyssa A.; Alves, João F.; Lombardi, Marco; Román-Zúñiga, Carlos G.; Kauffmann, Jens; Lada, Charles J. 2012 MNRAS in press

“A Bubbling Nearby Molecular Cloud: COMPLETE Shells in Perseus”

Arce, Hector G.; Borkin, Michelle A.; Goodman, Alyssa A.; Pineda, Jaime E.; **Beaumont, Christopher N.** 2011, ApJ, 742, 105

“Classifying Structures in the ISM with Support Vector Machines:  
The G16.05-0.57 Supernova Remnant”

**Beaumont, Christopher N.**; Williams, Jonathan P.; Goodman, Alyssa A. 2011, ApJ, 741, 14B

“Building an Optimal Census of the Solar Neighborhood with Pan-STARRS Data”

**Beaumont, Christopher N.**; Magnier, Eugene A. 2010, PASP, 122, 1389

“Molecular Rings around Interstellar Bubbles and the Thickness of Star-Forming Clouds”

**Beaumont, Christopher N.**; Williams, Jonathan P. 2010, ApJ, 709, 791

“Discerning the Form of the Dense Core Mass Function”

Swift, Jonathan J.; **Beaumont, Christopher N.** 2010, PASP, 122, 224

“Diverse Protostellar Evolutionary States in the Young Cluster AFGL961”

Williams, J. P.; Mann, R. K.; **Beaumont, C. N.**; Swift, J. S.; Adams, J. D.; Hora, J.; Kassis, M.; Lada, E. A.; Roman-Zuniga, C. G. 2009, ApJ, 699, 1300-1306

“Lightcurve Analysis of a Magnitude Limited Asteroid Sample”

Molnar, L.A.; Haegert, M.J.; **Beaumont, C.N.** et al. 2008 Minor Planet Bulletin 35, 9M

### Conference Presentations

“Multidimensional Data Exploration with Glue”

**Beaumont, Christopher N.**; Goodman, Alyssa A; Robitaille, Thomas P; Borkin, Michelle A  
2013 SciPy Conference, Austin, TX

“Linked Data Visualization in Astrophysics”

**Beaumont, Christopher N.**; Goodman, Alyssa A; Borkin, Michelle A; Robitaille, Thomas P  
NRAO ALMA Software Workshop 2011

“Classifying Structures in the ISM with Machine Learning Techniques”

**Beaumont, Christopher N.**; Goodman, Alyssa A; Williams, Jonathan P. AAS 2011

“SiO Masers in the Orion BN-KL Outflow”

**Beaumont, Christopher N.**; Doeleman, Sheperd S. AAS 2007