

# Cyrus Vandrevala | Vitae

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*Somewhere, something incredible is waiting to be known  
-Carl Sagan*

## Education

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<b>Purdue University</b> <i>Doctor of Philosophy, GPA – 3.73</i> Completed a Ph.D. in Physics with a Concentration in Computational Science	<b>West Lafayette, IN</b> 2010–2016
<b>Marquette University</b> <i>Bachelor of Science, GPA – 3.70</i> Graduated with a Dual Major in Biomedical Engineering and Physics, Magna Cum Laude	<b>Milwaukee, WI</b> 2005–2009

## Ph.D. Research

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**Title:** *The Development of a Computerized Interactive Teaching Assistant on Purdue's Computerized Homework in Physics (CITA on CHIP)*

**Supervisors:** Andrew Hirsch, Lynn Bryann, Hisao Nakanishi, & Laura Pyrak-Nolte

**Description:** I developed and analyzed an interactive tutorial system for the homework sets in introductory physics.

## Work Experience

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Research.....

<b>Purdue University</b> <i>Graduate Research Assistant</i> I completed my thesis, titled "The Development of a Computerized Interactive Teaching Assistant", in August 2016. Over the past three years, I developed and implemented different online tutorials in the introductory physics classes (electricity and optics). Additionally, I conducted surveys and focus group interviews to determine how students use the system during their study sessions.	<b>West Lafayette, IN</b> 2015–2016
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<b>Marquette University</b> <i>Undergraduate Research - Particle Physics</i> I helped design and build a positron beam at Marquette University using a Na-22 source.	<b>Milwaukee, WI</b> 2009–2010
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<b>Marquette University</b> <i>Undergraduate Research - Radio and X-Ray Astronomy</i> I analyzed radio data from the Very Large Array (VLA) and X-ray data from the Chandra, Swift, and Newton-XMM satellites in order to explore the evolutionary link between Type Ib/c and Type II supernovae.	<b>Milwaukee, WI</b> 2008–2009
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Teaching.....

<b>Purdue University</b> <i>Teaching Assistant</i>	<b>West Lafayette, IN</b> 2010–2014
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I taught online and on-campus sections of introductory physics courses.

**Marquette University** **Milwaukee, WI**  
*Teaching Assistant / Adjunct Faculty* *2008–2010*

I taught on-campus sections of introductory physics classes. My duties included giving lectures, running labs, and grading assignments.

**Marquette University** **Milwaukee, WI**  
*Tutor* *2006–2009*

I tutored small groups of students in physics, chemistry, and mathematics. Additionally, I was appointed as the Physics Tutor Mentor; my responsibilities included meeting with other physics tutors to track student progress through the semester to address any problems.

**Other**.....

**8th Light Inc.** **Chicago, IL**  
*Software Crafter* *2016–Present*

I am a software consultant at 8th Light, Inc.

**Purdue University** **West Lafayette, IN**  
*Web Developer* *2012–2013*

I helped develop and implement the online version of PHYS 24100 at Purdue University. My responsibilities included editing video lectures, coding new homework questions, and setting up online recitations. Most of the work was done in Perl and Ruby. The online section of PHYS 24100 is still running today, with enrollment increasing every summer. The summer of 2015 had a class enrollment of around 200 students.

**Boston Scientific** **Spencer, IN**  
*Process Validation Engineer* *2007*

I worked as a co-op validation engineer at Boston Scientific. We performed tests on extruded plastics in order to see which industrial parameters would produce the safest tubes for medical devices. I also helped develop procedures to standardize the testing of materials at the company.

**Biddeford Blankets** **Mundeline, IL**  
*Warehouse Worker* *2005–2006*

I stocked boxes in a warehouse.

**Hawthorn Lanes Bowling Center** **Vernon Hills, IL**  
*Customer Service Representative* *2001–2004*

I ran children's birthday parties, cooked food in the cafeteria, and ran the cash register.

## Grants

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**Computerized Interactive Teaching Assistant Grant Renewal** *2016*  
*Purdue University*

Renewal for the one year grant to create an interactive teaching assistant for the CHIP homework system in the physics department.

**Computerized Interactive Teaching Assistant Grant** *2015*  
*Purdue University*

A one year grant to create an interactive teaching assistant for the CHIP homework system in the physics department.

**Personal Travel Grant** *2014*  
*Purdue University Graduate Student Government*

A \$500 travel grant to attend a Ruby on Rails conference.

**WSGC Travel Grant** *2010*  
*Wisconsin Space Grant Consortium*

A \$500 travel stipend to attend the 215th American Astronomical Society Meeting.

**WSGC Rocket Design Competition**

*Wisconsin Space Grant Consortium* 2009  
A \$1000 grant to design and build a rocket for a competition.

**WSGC Undergraduate Research Grant**

*Wisconsin Space Grant Consortium* 2008  
A \$4000 grant for research and travel for my astronomy research.

## Awards, Scholarships, and Honors

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**Recognition Award**

*SIAM* April 2015  
An award recognizing my duties as president of the Purdue chapter of SIAM

**The Akeley-Mandler Award for Teaching Excellence**

*Purdue University* April 2013  
An award given to graduate students who invest their own personal time and effort to ensure that their students excel

**Outstanding Graduate Student Teacher Award**

*Purdue University* May 2012  
A departmental award from physics at Purdue given to graduate students who demonstrate excellence in teaching

**Applied Management Principles Program**

*Purdue University* May 2012  
Completed a two-week long series of seminars covering some of the major topics in business administration and entrepreneurship

**Committee for the Education of Teaching Assistants Teaching Award**

*Purdue University* April 2012  
An award given by the department to commemorate excellence in teaching

**Purdue University Graduate Teaching Certificate**

*Purdue University* May 2011  
Completed extra seminars and had my teaching style critiqued in the classroom in order to improve my teaching

**Baronial Award of the Millstone**

*Society of Creative Anachronism* 2010  
A service award through the Society of Creative Anachronism

**Stephen Weinreich Memorial Award**

*Marquette University* 2009  
An award given to a senior physics major at Marquette University who demonstrates leadership through service and academic distinction

**Scholastic Honors Award**

*Marquette University* 2009  
An award given to seniors who maintain a high GPA during their entire undergraduate career

**Dean's Honor List**

*Marquette University* 2008  
An award given to students who maintain a GPA of 3.50 or better during the first three semesters of college

**Dean's Award to Outstanding Sophomores**

*Marquette University* 2007  
An award given to sophomores who maintain a high GPA during the second year of college

### Dean's Award to Outstanding Freshmen

Marquette University

2006

An award given to freshmen who maintain a GPA of 3.90 or better during the first year of college

### Marquette University Ignatius Academic Excellence Scholarship

Marquette University

2005

A competitive scholarship that rewards \$4500 per semester to students who excelled academically in high school

## Conference Presentations and Posters

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**April 2016:** NARST 2016    *"The Development of Purdue's Computerized Interactive Teaching Assistant (CITA)"*

**April 2016:** CSESC 2016    *"The Development of Purdue's Computerized Interactive Teaching Assistant (CITA)"*

**March 2016:** Purdue AGSERS 2016    *"The Development of Purdue's Computerized Interactive Teaching Assistant (CITA)"*

**July 2015:** PERC 2015    *"The Development of Purdue's Computerized Interactive Teaching Assistant (CITA)"*

**July 2015:** AAPT Summer Meeting 2015    *"The Development of Purdue's Computerized Interactive Teaching Assistant (CITA)"*

**October 2014:** Purdue University    *"Git Workshop"*

**April 2014:** Purdue CSESC 2014    *"Tunable Permittivity in Hyperbolic Metamaterials"*

**March 2014:** APS March Meeting 2014    *"Tunable Permittivity in Hyperbolic Metamaterials"*

**April 2013:** Purdue CSESC 2013    *"Quantum Computing 101"*

**January 2010:** 215th American Astronomical Society Meeting    *"Using Radio and X-Ray Observations to Explore Supernovae with Evolving Optical Classifications"*

**August 2009:** 19th Annual WSGC Conference    *"A Comparative Study of Type IIb Supernovae"*

## Organizations

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- o American Physical Society
- o Society of Physics Students
- o Sigma Pi Sigma

## References

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References are available upon request.

## Publications

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- [1] B. T. Rentz, C. M. Vandrevalla, C. J. Stockdale, K. W. Weiler, and R. A. Yingst, editors. *A Comparative Study of Type IIb Supernovae*, Milwaukee, WI, August 13-14 2009. Wisconsin Space Grant Consortium, Proceedings of the 19th Annual Wisconsin Space Conference.
- [2] P. W. A. Roming, T. A. Pritchard, P. J. Brown, S. T. Holland, S. Immler, C. J. Stockdale, K. W. Weiler, N. Panagia, S. D. Van Dyk, E. A. Hoversten, P. A. Milne, S. R. Oates, B. Russel,

- and C. Vandrevala. Multi-wavelength properties of the type iib sn 2008ax. *The Astrophysical Journal*, 704:L118 – L123, October 20 2009.
- [3] Peter Roming, T. Pritchard, P. Brown, S. Holland, S. Immler, C. Stockdale, K. Weiler, N. Panagia, S. Van Dyk, E. Hoversten, P. Milne, S. Oates, B. Russel, and C. Vandrevala. Shock breakout from the type iib sn 2008ax as observed by swift uvot. *Bulletin of the American Astronomical Society*, 41(342.03):448, 2010.
- [4] C. J. Stockdale, M. S. Heim, C. M. Vandrevala, F. E. Bauer, S. D. Van Dyk, K. W. Weiler, D. Pooley, S. Immler, and V. Dwarkadas. Supernovae 1996aq and 2004dk. *International Astronomical Union Central Bureau Electronic Telegram*, 1714(1), 2009.
- [5] C. J. Stockdale, B. Rentz, C. M. Vandrevala, K. W. Weiler, S. Immler, S. D. Van Dyk, N. Panagia, J. M. Marcaide, D. Pooley, R. A. Sramek, and S. Ryder. Supernova 2009gj in ngc 134. *International Astronomical Union Circular*, 9056(1), July 2009.
- [6] Christopher Stockdale, M. Heim, C. M. Vandrevala, B. T. Rentz, K. W. Weiler, N. Panagia, S. D. Van Dyk, F. E. Bauer, S. Immler, R. A. Sramek, D. Pooley, S. D. Ryder, and J. Marcaide. Using radio and x-ray observations to explore supernovae with evolving optical classifications. *Bulletin of the American Astronomical Society*, (430.24), January 2010.
- [7] Christopher Stockdale, C. Vandrevala, K. Weiler, R. A. Sramek, J. Marcaide, S. Immler, S. Van Dyk, and D. Pooley. Vla radio observations of the type ii supernova 2008ax. *Bulletin of the American Astronomical Society*, 41(490.06):466, January 2009.
- [8] C. M. Vandrevala, B. T. Rentz, C. J. Stockdale, S. Immler, K. Weiler, and R. A. Yingst, editors. *Understanding the Evolution of Supernova Progenitors*, Milwaukee, WI, August 13-14 2009. Wisconsin Space Grant Consortium, Proceedings of the 19th Annual Wisconsin Space Conference.