Ryan Beauchemin

Personal Information

Place and Date of Birth:	California | 09 November 1991
Current Address:	203 Intern Way, Durham, NC
Phone:	+1 (919) 628 6854
email:	ryan.w.beauchemin@gmail.com

Work Experience

Jan 2013-Current | Research Assistant at the Department of Astronomy and Physics, *UNC*

Currently in the process of creating the largest lookup table for Gamma Ray Burst afterglows using all known documentation for each burst available on the SAO/NASA Astrophysics Data System, which provides, among many other data, information about magnitudes in different bands as a function of time after the burst.

Oct 2013-Jan 2013 | Teaching Assistant at the Department of Astronomy and Physics, *UNC*

This was done for the lab component of Dr. Daniel Reichart's Introduction to Astronomy course. Objectives were to help students understand the material, and to make sure they enjoyed the material as well. I've found that the best way that I could help students is to make them laugh, and provide them with fun mnemonics. It was an awesome experience, and at the end, I felt really close to the students in the lab.

Jun 2013-Oct 2013 | Summer Intern at the Astronomy Research Center, *Raleigh*

Began designing videos that would be informative to patrons of the Museum of Natural Science, then actively completed research on the formation of dust lanes in barred spiral galaxies, with galaxies selected based on resolutions and pattern speeds previously calculated by Dr. Patrick Treuthardt. Answering questions about astrophysical phenomena and conducting Hα sun observations on the roof were also a part of daily work, but my help with research involved using IRAF and DS9 to correct over 40 galaxies for inclination, and then to create B-R color index maps for each to intensify the dust features. The preliminary results were presented at AAS 2014, and the **abstract** is available on ADS.

Jan 2013-Jun 2013 | STEM Lab Assistant at Wake Technical Community College, *Raleigh*

Worked with students in need of help with classes in STEM fields, though this was mostly dedicated to physics and mathematics. This service was free of charge for students, and was provided through Wake Tech's Math Club at the price of two candies an hour.

Jan 2011-Current | Waiter and Bartender at Tyler's Taproom, *Raleigh, Durham, Carrboro*

Since most undergraduate research is unpaid, this is a necessity, though the perks of working at a bar and meeting people from all over the world are significant. Many of the grants and scholarships that I apply for are heard from kind bar patrons and regulars.

Education

July 2015 | Bachelor of Science Degree in Physics, **University of North Carolina**, Chapel Hill

Major: Astrophysics | *Emphasis on Galaxy Evolution and Morphology*

GPA: –/4.0 | Courses and Grades

July 2012 | Associate Degree in Science, **Wake Technical Community College**, Raleigh

Graduated with the highest honors | *Emphasis on Physics and Astronomy*

GPA: 3.9/4.0 | Courses and Grades

Fall 2009 | High School Dual Enrollment Semester at **La Sierra University**, Riverside

GPA: 4.0/4.0 | Courses and Grades

Leadership and Organizations

2014-Current	Became a member of Dr. Dan Reichart's GRB team at UNC
2013-Current	Became a member of UNC's Society of Physics Students
2012-2013	Became a National Community College Aerospace Scholar (NASA)
2012-Current	Became a member of the Mu Alpha Theta Math Honor Society
2011-2012	Senator of the Student Government at Wake Technical CC
2011-Current	Became a member of the Phi Theta Kappa Honor Society
2010-2013	Became member, then officer of Wake Technical CC's Math Club
2009-2010	Vice President of the Student Government at Loma Linda Academy
2008-2009	Parliamentarian of the Student Government at Loma Linda Academy

Awards and Certificates

2013	Certified to teach Physics and Astronomy courses at UNC
2013	Recipient of North Carolina Space Grant
2013	Accepted as student astronomer at NRAO WV for ERIRA-UNC
2013	Second place at the southeast regional calculus competition in GA
2012	First place at the North Carolina Calculus competition in Gastonia
2012	Second place at NASA-MSFC NCAS rover competition
2012	Third place school wide SML competition through AMATYC

Computer Skills

Basic Knowledge:	Adobe Suite, Basic, C++, emacs, ftp, GADGET, GALEV, html, Linux, MATLAB, Python, SSH, Windows, Xcode, X11
Intermediate Knowledge:	Adobe Photoshop & Illustrator, DS9, Excel, IRAF, Keynote, LaTeX, Mac OSX, PowerPoint, SKYNET (PROMPT use), Terminal, Word

Languages

English:	Mothertongue
French:	Intermediate Knowledge
Spanish:	Basic Knowledge

Interests

Research: Galaxy Evolution and Morphology, Gamma Ray Bursts, Cosmology, Dark Matter Density and Distribution (within a galaxy), Observational Radio Astronomy, Kinematics leading to Star Formation, and Modeling (Stellar, Galactic, and Cosmological).

Downtime: Hiking, Running, Swimming, Climbing, Painting, Reading, Making and Listening to Music, Singing and Dancing, and Watching Netflix.

Bachelor of Science Degree in Physics: Astrophysics at the University of North Carolina, Chapel Hill

Grades

Course	Grade	Credit Hrs
Introduction to Astronomy II	A-	3
Modern Radio Astronomy (ERIRA)	A	1
Stars, Galaxies, and Cosmology	A-	1
Astrophysics II	–	3
Advanced French	B	3
Modern Physics	B-	3
Modern Physics Lab	A-	1
Mechanics I	–	3
Electrodynamics I	C	3
Electrodynamics II	–	3
Quantum Mechanics I	–	3
Numerical Techniques in Physics	–	4
Research in Physics	–	1
Epistemology in Physics	A	1
	Total	17 (33)
	Gpa	**3.094**

Note: Due to the unforeseen requirement that each student at UNC graduates within eight semesters, as a transfer student, I have been forced to take my sophomore and junior major requirement courses simultaneously, leading to a disheartening drop in GPA; however, I assure the reader this is not due completely to a lack of understanding, but is due mostly to a difficult load, and I will have a normal senior year to make up for it.

Associate of Science Degree at Wake Technical Community College, Raleigh

Grades

Course	Grade	Credit Hrs
Calculus I	A	4
Calculus II	A	4
Calculus III	A	4
Differential Equations	A	3
General Physics I	A	4
General Physics II	A	4
General Chemistry I	A	4
General Psychology	A	3
Introduction to Astronomy I	A	4
Introduction to Sociology	A	3
Introduction to Programming	A	3
Introduction to Logic	B	3
Elementary French I	A	4
Music Appreciation	A	3
Western Civilization I	B	3
British Literature I	B	3
Public Speaking	A	3
Painting I	A	3
Tennis	A	1
	Total	69
	Gpa	**3.857**

Dual Enrollment at La Sierra University, Riverside

Grades

Course	Grade	Grade Points
College English I	A	3
College English II	A	3
	Gpa	**4.0**