

Daniel Nusdeo

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- EDUCATION** *Bachelor of Science, Physics.* Earned May 2015
Southern Connecticut State University, New Haven, CT
Physics GPA: 3.34
- NOTABLE SKILLS**
- Strong critical thinker with excellent problem-solving skills.
 - Significant and thorough understanding of several physics subjects, including mechanics, lasers, optics, astrophysics, and electromagnetism.
 - Adept mathematical and computer science skills.
 - Efficient and experienced with both team-oriented and individually driven projects.
- COMPUTER SKILLS** *Proficient in:* Fortran, MatLAB, Java, Google interface, PGPLOT, Microsoft Office.
Experience in: IDL, Python, C/C++, IRAF, SExtractor, R, XML.
Operating Systems: Linux and Unix-based systems, Windows, iOS.
- RESEARCH EXPERIENCE**
- Research Astronomer* September 2015 - present
Georgia State University, Advisor: Dr. Todd Henry
- Used existing images and photographic plates to search for companions to 1048 nearby K-dwarfs.
 - Aided in acquisition of data essential to the completeness of the RECONS 50-parsec database.
 - Utilized Python and Fortran to develop tools to aid in RECONS data-mining and observing.
 - Currently in preparation for observing run using the Differential Speckle Survey Instrument at DCT in January, 2016.
- Research Assistant* October 2014 - June 2015
Milky Way Satellites, Advisor: Dr. Dana Casetti
- Used data-mining and plotting routines in Fortran and PGPLOT to sort and analyze recent RR Lyrae star discoveries.
 - Compared reduced data to simulated models of the Milky Way in order to isolate stars with unexpected kinematical and spatial features.
- Research Assistant* September 2013 - June 2015
Optical Intensity Interferometry, Advisor: Dr. Elliott Horch
- Aided in simulation and design of a new optical interferometer to be used in high resolution astronomical imaging.
 - Worked closely with research team to overcome various engineering and computation problems.
 - Prepared wireless optical interferometer and began field testing in spring of 2015.
- OBSERVING EXPERIENCE** *Lowell Observatory & Discovery Channel Telescope* June 2015
Advisor: Dr. Elliott Horch
- Took data at the Perkins and Hall telescopes to test the prototype for the Southern Connecticut Stellar Interferometer.
 - Used the Discovery Channel Telescope for speckle imaging on K-dwarfs to resolve possible companions.

PUBLICATIONS D. I. Casetti-Dinescu, D. A. Nusdeo, T. M. Girard, V. I. Korchagin, and W. F. van Altena, "A Kinematically-Distinct RR-Lyrae Overdensity in the Inner Regions of the Milky Way," *The Astrophysical Journal*, August 2015.

S. A. Weiss, D. A. Nusdeo, & E. Horch, "Simulating Portable Long-Baseline Interferometry for High-Resolution Optical Imaging," *SPIE*, submitted.

E. Horch, S. Weiss, D. A. Nusdeo, J. Rupert, P. Peronio, I. Rech, A. Giudice, and S. Tisa, "The Southern Connecticut Stellar Interferometer," *SPIE*, submitted.

CONFERENCE POSTERS Daniel Nusdeo, "Kinematical Properties of an RR Lyrae Star Overdensity in the Inner Milky Way," SCSU Undergraduate Research Conference, New Haven, CT, March 2015.

Samuel Weiss & Daniel Nusdeo, "Simulating Portable Long-Baseline Interferometry for High-Resolution Optical Imaging," SCSU Undergraduate Research Conference, New Haven, CT, March 2015.

WORK EXPERIENCE *Tutor* May 2015 - present
Tutor.com

- Regular tutoring of a high volume of high school and college students in a variety of subjects.

Journalist July 2011 - present
BeatCue.com

- Professional-level journalism for a reputable NYC music news corporation.
- Consistently accoladed as the company's most proficient and diligent writer.

Technical Assistant August 2014 - May 2015
Physics Department, Southern Connecticut State University

- Gained significant experience in organizing and maintaining digital and physical infrastructure by working closely with department management.
- Responsible for unsupervised maintenance and repair of a wide variety of physics laboratory equipment.

Guest Service Agent May 2007 - October 2014
Water's Edge Resort & Spa

- Maintained full-time work schedule prior to and throughout college education while consistently performing above employer's expectations.

OTHER ACTIVITIES

- Represented SCSU physics club at various outreach events, including club fairs and major expos.
- Accomplished musician and music producer with releases on several reputable record labels.
- Former team captain and top scorer in the Connecticut Hockey League; accoladed as a strategic and defense-oriented forward.
- Self-taught in computer maintenance, including networking, hardware repair, programming, and PC building.