Cody C. Johnston

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EDUCATION:

Vanderbilt University – Nashville, TN
Master of Science: Physics – May 2012 – GPA: 3.7 / 4.0

- Thesis Title: "On the usefulness of the Multi-Track Validator for studying secondary vertexes in the Phase 1 Tracker Upgrade of the Super Large Hadron Collider"
- Thesis Advisor: Dr. Paul Sheldon

Purdue University – West Lafayette, IN
Bachelor of Science: Physics & Mathematics – May 2009 – GPA: 3.3 / 4.0
Minors: Astrophysics, Psychology

PROFESSIONAL EXPERIENCE:

Victoria College – Science Department – Victoria, TX
Physics Instructor, January 2015 – Present

- Courses Taught: PHYS 1310: Elementary Physics (Spring 2015, 1 section); PHYS 1401: General College Physics I (Spring 2015, 1 section); PHYS 1401L: General College Physics I Lab (Spring 2015, 1 section)
- Tutored developmental math students in the Academic Café
- Communicated complex scientific, theoretical, and technical concepts to diverse student body
- Developed understanding and sensitivity to needs of students from diverse backgrounds

Eastern Washington University – Department of Physics – Cheney, WA
Lecturer of Physics, September 2013 – June 2014

- Courses Taught: PHYS 133: Introductory Physics III (Spring 2014, 2 sections); PHYS 132: Introductory Physics II (Winter 2014, 2 sections); PHYS 131: Introductory Physics I (Fall 2013); PHYS 100: Physical Science I (Fall 2013, Winter 2014); PHYS 163: Instrumentation Laboratory I (Spring 2014, 3 sections); PHYS 161: Mechanics Laboratory (Fall 2013, 2 sections)
- Instructed lecture courses in algebra-based physics and physical science and laboratory courses in physics
- Designed laboratory activities from scratch based on available equipment
- Adhered to proper laboratory techniques and scientific methods when working with scientific instrumentation

Nashville State Community College – Department of Math & Natural Sciences – Nashville, TN
Adjunct Instructor of Physics, June 2012 – August 2012

- Courses Taught: PHYS 2010: Non-Calculus Physics I (Summer 2012, 1 section)
- Taught combined lecture and lab physics course to community college students

Vanderbilt University – Department of Physics & Astronomy – Nashville, TN
Graduate Research Assistant, May 2010 – May 2012

- Researched High-Energy Particle Physics and completed Master's thesis on potential LHC upgrade
- Analyzed physics data to test hypotheses and determine limits of experimental equipment
- Validated software packages using C programming, Python, and ROOT
- Collected scientific data, wrote computer programs and scripts, modified and developed software, conducted statistical analysis, and utilized networks and databases
- Collaborated with colleagues at Fermilab, CERN, and Vanderbilt

Graduate Teaching Assistant, August 2009 – May 2012

- Courses Taught: ASTR 103: Introductory Astronomy Laboratory (Spring 2012, Fall 2011, Spring 2011, Fall 2010); PHYS 118A: General Physics I Lab (Spring 2010, Fall 2009; 2 sections each)
- Contributed expertise to improving future lab manuals
- Presented live demonstrations of physics concepts and utilized computer-based lab equipment
- Mastered teaching astronomy labs with planetarium software, web-based astronomical databases, and telescopes

Undergraduate Research Assistant, May 2008 – August 2008

- Selected for the annual "Research Experience for Undergraduates" summer program sponsored by the NSF

- Researched Extragalactic Astronomy using C programming, Perl scripting, and Supermongo for generating plots
- Analyzed computational simulations to compare theoretical predictions and observational evidence

Purdue University – Department of Physics – West Lafayette, IN
Undergraduate Research Assistant, January 2008 – May 2009

- Researched Cosmology by analyzing data from WMAP using FORTRAN code
- Collaborated with a team to build a virtual 3D model of the universe for use in science outreach

SKILLS:

- **Computer Experience**: Blackboard, Banner, Canvas, D2L, Linux, C, C++, FORTRAN, Python, Mathematica, Supermongo, ROOT, Microsoft Office, Microsoft Windows, HTML, Wordpress