Jason Bane

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Education

- **University of Tennessee** **Knoxville, TN**
  Ph.D. in Nuclear Physics *August 2012 – Planned December 2019*
  Thesis: The EMC Effect in A=3 Nuclei
- **University of Tennessee** **Knoxville, TN**
  Secondary Education Certification in Math and Science *August 2009 – May 2010*
- **University of Tennessee** **Knoxville, TN**
  Bachelor of Science, Physics & Minor in Education *August 2004 – May 2009*

Experience

- **University of Tennessee, Department of Physics and Astronomy** **Knoxville, TN,**
  Graduate Research Assistant *May 2014 – Present*
  - Designed and constructed front end electronics for an electron spectrometer.
  - Created module layouts and cable maps for efficient reuse of products.
  - Tested high voltage cards and laid high voltage cables for an electron spectrometer.
  - Used Oscilloscopes to test signals, debug logic modules, and map out inconsistent signals.
  - Maintained and refurbished individual detector components of a spectrometer including checking the quality of Photo Multiplier Tubes and plastic scintillators.
  - Calibrated detectors and used online analysis tools in Java to control the quality of data during an experiment.
  - Performed analysis on a large set of data involving multiple nuclear targets using Python, C++ , ROOT, and fortran.
  - Instructed new researchers on the use of hardware and software used in the field

- **University of Tennessee, Department of Physics and Astronomy** **Knoxville, TN,**
  Graduate Teaching Assistant *August 2012 – May 2015*
  - Designed and implemented observational and planetarium based astronomy labs.
  - Educated students on the use of refracting telescopes and equatorial mounts.
  - Instructed students in laboratory exercises to help conceptualize physics topics.
  - Tutored students for homework assistance and test prep.

- **Clay County Tennessee Education Department** **Celina, TN**
  Secondary Educator & Football Coach *August 2010 – May 2012*
  - Created lesson plans that included interactive, creative thinking, and discussion driven curriculum for a diverse body of geometry students.
  - Constructed lessons that used hands-on lab activities, demonstrations, and interactive computer lessons to instruct high school Juniors and Seniors in algebra-based physics.
  - Used discussion-based problem-solving lessons to help remedial math students to improve their algebra, geometry and trigonometry skills for post-secondary education.
  - Provided an equitable and inclusive atmosphere for diverse students.
  - Math and reading focused tutoring.

Core Technical Skills

Hardware: Detector maintenance and wiring, front end electronics design and implementation, logical trigger design and testing
Languages: C, C++, LaTeX, Python, shell script, SQL
Software: Microsoft Office, Libre Office, Texstudio, vim, atom
Operating Systems: Linux(Red Hat), Windows, MacOS

Honors

- Jefferson Science Associates graduate fellowship award (2018)
- Chancellor's honors for extraordinary professional promise (2016)
- DOE Office of Science Graduate Student Research program award (2015)
- Dean's List 2009 Academic Year (2010)

References

Nadia Fomin, Professor
Department of Physics and Astronomy
University of Tennessee at Knoxville
(865) 974-1509, nfomin@utk.edu

Cynthia Keppel, Hall A and C Leader
Jefferson Lab Accelerator Facility
(757) 584-7580, keppel@jlab.edu

Douglas Higinbotham, Staff Scientist
Jefferson Lab Accelerator Facility
(757) 584-7851, doug@jlab.edu

Evan McClellan, Post-doctoral Fellow
Jefferson Lab Accelerator Facility
randallm@jlab.org

Interests

Football, coaching, programming, boating, and traveling.