Blake Alexander Benyard

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EDUCATION:

MOREHOUSE COLLEGE, Atlanta, GA **Expected Graduation: May 2017**
Bachelor of Science in Physics, Chinese and Mathematics Minor
Current GPA: 3.73/4.0

Honors and Awards:

- Scholarship; Greater Cleveland College Now Program, 2013-2017 Academic years
- Scholarship; ARCS Scholars Program, 2015-2016, 2016-2017 Academic years
- Scholarship; Morehouse College Tuition Scholarship, 2013-17 Academic years
- Morehouse College Dean's List; 2013-14, 2014-15 Academic years

INTERNSHIP EXPERIENCE:

HBCU-UP Pre-Freshman Bridge Summer Science Program, Morehouse College **June 2013 - July 2013**

- Conducted physics research on Graphite, Bio-Materials, and Lithium Battery efficiency in near-space conditions.
- Designed a High Altitude Research Platform (HARP) payload to launch research experiments in high altitudes.

Chinese Language Summer Study Abroad Program, Shanghai University **May 2014 – June 2014**

- Studied Mandarin language at Shanghai University for four intensive weeks.
- Acquired advance speaking skills in Mandarin language.

Science Undergraduate Laboratory Program, Nuc. Physics, Los Alamos National Lab **June 2015 – August 2015**

- Collected gamma spectroscopy data with and without collimation for the International Threat Reduction team at LANL.
- Characterized two Sodium-Iodine detectors to determine performance effectiveness of detecting radioactive nuclide.
- FWHM, Centroid energy, Detector gain, and linearity of the detectors were investigated as a function of count rate.
- Integrated programming language, R to plot performance characteristics and determine the detector efficiency.

Science Undergraduate Laboratory Program, Electrodynamics, Los Alamos National Lab **June 2016 – August 2016**

- Conducted radiofrequency (RF) testing at LANL using Teflon, lexan, and various sized foam samples.
- This work will include measuring the dielectric constant and loss tangent of different materials, and measuring the shielding effectiveness of RF enclosures using Octave (GNU) programming.

Publications:

- **Benyard, Blake, Quinn Marksteiner (2016).** *Using the Perturbation Method To Measure the Dielectric Constants of Compressible and Irregular Shaped Materials.* Manuscript in preparation.

Conference Presentations:

- **2014 Emerging Researcher's National (ERN)**
  Poster Presentation: *The Design, Launch, and Recovery of a High Altitude Research Platform*

LEADERSHIP EXPERIENCE:

The Avant-Garde Learning Community, Morehouse College **August 2014 - Present**

- A competitive development program for men with disciplined minds who will lead lives of leadership and service.
- Created a campus-wide program implementing network workshops and college preparation.
- Involved in a leadership retreat and participated in several community services projects in the Atlanta area.

Makerspace Engineers **Fall 2014 – Present**

- A student-run program where students administer personal research in a lab on campus.
- Designed drones and built robotic parts with a hands-on 3D printer.

SKILLS:

- Proficient programming skills (MATLAB, R, R Studio)
- Compatibility and team-work skills.
- Advanced understanding of Mandarin language.
- 3-D modeling and printing skills using 123 Design.

PROFESSIONAL EXPERIENCE:

Morehouse College Chemistry Dept., Bio-materials Lab, Lab Assistant **August 2015 - Present**

- Conducting research on-campus for preparation and fabrication of thermos-sensitive water filtration membranes.
- Creating a cost-effective water filtration membrane for pure water disparity in the Great Lakes Region of Africa.
- Demonstrated mastery in 3-D design by designing a water bottle and filter.

ACTIVITIES:

- Morehouse College Cross Country **Fall: 2013, 2014, 2015, 2016**
- Morehouse College Track & Field **Spring: 2014, 2015, 2016**
- National Society of Black Physicists (NSBP), Atlanta, GA **October 2014 - present**
- National Society for Collegiate Scholars (NSCS), Atlanta, GA **November 2013- present**
- Society for Physics Students (SPS) **September 2014- present**
- Sigma Pi Sigma **December 2015- present**
- Clerical Assistant in Chemistry Dept. **August 2014 – May 2015**
- Pi Mu Epsilon **April 2016 – present**
- Phi Beta Kappa **April 2016 – present**