Alex Breitweiser | Quantum Physics
sabreit@sas.upenn.edu • sabreitweiser • sabreitweiser

Lorem Ipsum,

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Sincerely,

Alex Breitweiser

Attached: Curriculum Vitæ

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Education

University of Pennsylvania — **Philadelphia, PA**
Ph.D., Physics — *August 2017 - Present*
- Studying the behavior of quantum sensors in optically active systems
- Research conduced with Lee Bassett

New York University — **New York, NY**
M.S., Physics — *September 2015–December 2016*
- Focused on emergent quantum phenomena in strongly correlated materials
- Research conducted with L. Andrew Wray

University of Chicago — **Chicago, IL**
B.S. Mathematics & B.A. Physics, with General Honors — *September 2010–June 2014*

Research and Industry Experience

Quantum Engineering Laboratory, University of Pennsylvania — **Philadelphia, PA**
Graduate Student — *August 2017 - Present*
- Collected and analyzed laser microscopy data on hexagonal boron nitride samples

Wray Group, NYU Physics — **New York, NY**
Research Assistant, Assistant Research Scientist — *March 2016 - July 2017*
- Performed RIXS, ARPES, and XAS measurements at the Advanced Light Source in Lawrence Berkeley National Lab
- Ran ab-initio DFT calculations on HPC supercomputing cluster to predict electronic structures
- Created and analyzed modified tight-binding models to find approximate electronic states

BitGravity (Tata Communications) — **Burlingame, CA**
Software Engineer — *June 2014–August 2015*
- Developed C++ and Python on Unix stack for a global CDN (Content Distribution Network)
- Analyzed streaming distributed data sets, averaging several terabytes per day
- Pioneered new and improved real-time analytics that led to large customer traffic increase
- Leveraged technologies such as Redis, Hadoop, and Impala

Other programs

MIT, Johns Hopkins University — **Baltimore, MD**
Quantum Science Summer School — *Summer 2017*

Princeton University — **Princeton, NJ**
Summer School on Condensed Matter Physics — *Summer 2016*

University of Chicago — **Chicago, IL**
Directed Reading Program in Mathematics, Algebraic Number Theory — *Winter 2013*

University of Chicago (Center in Paris) — **Paris, France**
Paris Mathematics Program — *Spring 2012*

Standardized Tests

GRE Subject (2014): 960 Physics

GRE (2014): 170 Quantitative, 167 Verbal, 5.0 Writing

SAT (2009): 800 Mathematics, 790 Reading, 650 Writing

ACT (2009): 35 Composite, 35 Math, 35 Science, 34 English, 34 Reading, 31 Writing