

QUALIFICATIONS

- 15 years of diverse computer aided quantitative analysis enabling me to comprehend complex statistical relationships and a broad spectrum of scientific research.
- 12 years of successful teaching from primary to collegiate venues demonstrating interpersonal abilities and connecting with radically diverse audiences.
- Experience collaborating with a cadre of reputable international scientists, engineers, & mathematicians, pro recording & mastering engineers, and local education professionals has given me a strong foundation for successfully creating quality work.
- Co-authoring, designing, publishing, and selling my own book; managing the marketing and web development has also given me great experience in the current market.

EDUCATION

1996-2000 **B.S.** in Physics, **Rutgers University**, New Brunswick, NJ

2001-2007 **Ph.D.** in Experimental Nuclear Physics, **Arizona State University**, Tempe, AZ

2006-2007 **Professional Degree, Conservatory of Recording Arts & Sciences**, Gilbert, AZ

2012-Now **Ph.D. student** in Education Statistics & Measurement, **Rutgers University**, New Brunswick, NJ

EMPLOYMENT

- 2012-Now **GAANN Fellow** *Rutgers Graduate School of Education, New Brunswick, NJ*
Currently completing coursework on statistics, regression, multi-level modeling, and IRT. Working with educational statisticians to develop Q-matrix validation techniques. Long-term research goals include targeting validity and assessment frameworks for social intelligence as well as physics education.
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- 2007-2012 **Teacher, Coach, Advisor** *JP Stevens HS, Edison, NJ*
I taught physics & chemistry to freshmen and seniors, Level 2 through Honors. I managed the *national champion* Model UN team. I tutor math, chemistry, and physics as well as mentor disadvantaged students experiencing untold crises. I led and managed several research teams of 20+ honors student with ongoing projects. Helped coach a wrestling team from worst county record to district placewinner in four years. Also played roles as a union rep and legislative liaison, curriculum developer, robotics advisor, and technology liaison.
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- 2009-2011 **Physicist** *Twinleaf LLC, Princeton, NJ*
I worked with the chief scientist and director, managing research projects essential to the development of the world's most precise optical atomic magnetometers. Individual projects included finite element analysis and multivariable optimization of magnetic shielding, saddle coils and solenoids constraining for highly uniform steady state DC fields ($\Delta B/B < 0.2\%$). Pioneered the design of flexible circuits for generating highly uniform 3D fields ($B \sim 1 \mu T$). Managed quotes and purchases of permeable alloys, shielding, optics, and custom circuits.
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- 2003-2007 **Research Associate** *Arizona State University, AZ & MIT-Bates Laboratory, MA*
My dissertation thesis was the focal point of this DOE project. MIT provided the base of operation for double-polarized electron scattering on a deuterium target to extract data on the electromagnetic structure of the neutron. My analysis required iterative cross-correlation of data and monte carlo simulations, extensive calibration and quantitative analysis.

REFERENCES

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