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EDUCATION

Massachusetts Institute of Technology Cambridge, MA
Bachelors of Science in Nuclear Science and Engineering June 2016
Bachelors of Science in Physics; Minor in Creative Writing GPA: 4.4/5.0
Coursework: Nuclear Reactor Physics, Nuclear Rocket to Mars Design Class, Thermal-Fluids Engineering, Python, Metaphysics, Advanced Poetry Workshop, Autobiography Workshop, Advanced Essay Workshop

Gabrielino High School San Gabriel, CA
Salutatorian in class of 451, GPA: 4.0/4.0 (Unweighted) June 2012

INDUSTRY EXPERIENCE

TerraPower LLC. Bellevue, WA
Consultant Sept. 2015-Present

- Writing quality assurance and summary technical reports for individual fuel assemblies from past experiments
- Performing quality assurance of fuel performance data obtained from past national laboratory experiments
- Upscaling and populating a fuel performance database built in a prior summer internship
- Continuing analysis of fuel performance for various projects and contributing to verification and validation efforts

Fuel Performance Analysis Intern June 2015-Aug. 2015

- Built python-interfaced SQLite database for fuel performance data and connected it to in-house software to automate generation of input files for simulations
- Analyzed fuel performance through finite element methods using Abaqus; efforts resulted in a technical memo
- Contributed to verification and validation efforts, along with calculations for characterization of fuel performance and safety risks for various projects and experiments
- Gave monthly presentations on progress and results to entire engineering and management team

Navigant Consulting, Inc. Burlington, MA
Consulting Intern, Global Energy Strategy and Operations Jan. 2016

- Performed tasks such as proposal writing, market research and analysis, and deliverables creation for 8 different client projects within the Energy Strategy division related to microgrids, renewables, and storage
- Conducted an independent win/loss analysis of proposals for a medium-scale (\$120k) project and presented findings and recommendations for improvement of future proposals to director and associate director
- Took charge in researching and writing up two subtasks for a winning multi-client renewable energy proposal to large utilities
- Conducted market research and supply/value chain analysis and created relevant deliverables for midpoint and final reports to a client

ARES Corporation Vienna, VA
Offshore Floating Nuclear Plant SuperUROP Project, MIT Cambridge, MA
Intern, Research and Innovation Scholar; Advisor: Prof. Neil Todreas Aug. 2015-Oct. 2015

- Designed and tested a security system—physical barriers, instrumentation ranges of sonar and radar, security force weaponry ranges—for MIT's proposal of the offshore floating nuclear plant (OFNP)
- Helped to scale industry security simulation tools to cover ocean siting installations and underwater attack scenarios

Forecast and Modeling Group, OneWest Bank N.A. Pasadena, CA
Financial Analyst Extern January 2015

- Understand and provide details on profit and loss statements for executives, with goal of developing insights to cut costs
 - Contribute to development of forecast models for expenses by providing details to make informed assumptions
- Presented work to the CEO, CFO, Head of Consumer Banking, Head of Risk Management, and Head of Human Resources
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RESEARCH EXPERIENCE

- Computational Reactor Physics Group, MIT** Cambridge, MA
Researcher; Advisors: Prof. Kord Smith, Prof. Ben Forget, Jon Walsh, Ph.D Candidate Sept. 2014-Present
- Contribute to development of the open-source OpenMC Monte Carlo neutron transport code used to build models and run simulations of nuclear core reactors and the particle interactions that take place inside
 - Writing and optimizing methods to preserve accurate kinematics of resonance scattering while reducing memory requirements by 1-2 orders of magnitude by using, for the first time, on the fly cross section calculations with the multipole algorithm
 - Investigated the dependence of system behavior (core reactivity) on different models for treating the resonance elastic scattering of neutrons from different nuclides and determined when to apply corrections to practical assumptions; efforts and findings resulted in a conference paper and podium presentation at the 2015 ANS Student Conference, as well as a research report published in the MIT Undergraduate Research Journal
- Short Lab, MIT** Cambridge, MA
Researcher; Advisors: Prof. Michael Short, Dr. Boris Khaykovich Sept. 2014-Dec. 2014
- Demonstrate a novel way of creating model materials to simulate and study radiation damage in nuclear core reactors
 - Investigate how much hydrogen gas is trapped within structural materials after irradiation in fission and fusion reactors, and how the gas affects mechanical properties
- Institute for Nuclear Physics, Johannes Gutenberg University** Mainz, Germany
Researcher; Advisors: Prof. Andreas Thomas, James Linturi, Ph.D. Candidate June 2014-Aug. 2014
- Tested a superconducting coil used to polarize targets for the Mainz Microtron (MAMI), a particle accelerator
 - Optimized the coil through models using Finite Element Method Magnetics (FEMM) and MATLAB to study its magnetic field and current capacities in order to reach operating requirements for polarization of photons
 - Monitored the progress of the A2 experiment when MAMI was in operation through three 8-hour shifts
- Laboratory for Electrochemical Interfaces, MIT** Cambridge, MA
Researcher; Advisors: Prof. Bilge Yildiz, QiYang Lu, Ph.D. Candidate Feb. 2014-May 2014
- Contributed to electrochemical and electrical characterization of the cathodes of various solid oxide fuel cells
 - Conducted experiments using scanning tunneling microscopy and spectrometry to determine the surface atomic and electronic structure of various materials
- Early Childhood Cognition Lab (ECCL), MIT** Cambridge, MA
Researcher; Advisors: Prof. Laura Schulz, Julian Jara-Ettinger, Ph.D. Candidate Sept. 2013-Dec. 2013
- Ran and analyzed behavioral studies on toddlers at the Boston Children's Museum
 - Explored the experimental trajectory of young children's perceptions of different levels of morality and culpability
- Singapore University of Technology and Design (SUTD)** Singapore
Researcher; Advisor: Prof. Dario Poletti June 2013-Aug. 2013
- Modeled analytic solutions to the many-body Schrödinger equation under various conditions using MATLAB to gain insight into the behavior of ultracold atoms and to study the dynamics of complex quantum systems
- Physics Teaching Assistant*
- Instructed a classroom of 50+ students in problem-solving activities twice a week
 - Provided additional assistance to struggling students in mastering physical concepts
- Peer Mentor; MIT-SUTD 5th Row Leadership Programme*
- Mentored 60+ students in club and campus-building activities, providing training in professional and leadership skills
- Gabrieli Lab, MIT** Cambridge, MA
Researcher; Advisors: Prof. John Gabrieli, Jennifer Minas Feb. 2013-May 2013
- Worked on a 9-session study to see how brain measures affect adult's ability to learn new languages
 - Assisted in MRI and EEG data collection and analysis; Administered, scored, and analyzed behavioral sessions
- Wavefront Control Lab, MIT** Cambridge, MA
Researcher; Advisor: Prof. Kerri Cahoy Sept. 2012-Dec. 2012
- Explored the prospect of utilizing deformable mirrors in space telescopes and satellites
 - Designed, conducted, and optimized two-tiered optical experiments to be placed in CubeSats

WRITING

Author of research report in reactor physics published in the MIT Undergraduate Research Journal	2015
Co-author, Presenter of poem, "Here We Are", for the dedication of the MIT memorial to Officer Sean Collier	2015
Author, Presenter of paper in reactor physics at American Nuclear Society Conference	2015
First Place Winner , Boit Manuscript Prize for Poetry, Ilona Karmel Writing Prizes, MIT Writing Department	2015
First Place Winner , Isabelle de Courtivron Writing Prize, MIT Center for Bilingual/Bicultural Studies,	2015
Blogger for LittleWildHeart.com, an inspirational blog for young professional women	2015
Blogger for DAAD (German Academic Exchange Program) RISE (Research Internships in Science/Engineering)	2014
Blogger for MIT MA Gamma Chapter of Pi Beta Phi Fraternity for Women	2013-2014
Editor in Chief of The Tongva Times, 1 st place winner of American Scholastic Press Newspaper Contest	2010-2012

AWARDS AND HONORS

Department of Energy (DOE) Nuclear Energy University Programs (NEUP) Undergraduate Scholarship	2015-2016
MIT School of Engineering Lord Foundation Research and Innovation Scholar	2015-2016
MIT Elliott H. Lieb Scholar	2014-2016
DAAD (German Academic Exchange Service) RISE (Research Internships in Science and Engineering) Scholar	2014
MIT IACME (Industrial Advisory Council for Minority Education) Student Prize sponsored by Lockheed Martin	2013
National Merit Scholarship Semifinalist	2011
Kiwanis International Scholarship	2011
AP Scholar with Distinction	2011

LEADERSHIP AND ACTIVITIES

Course Mentor for Physics and Nuclear Engineering for Pi Beta Phi	2015-2016
Tutor for Physics with MIT's Seminar XL (in small classes of 6-10 students) and Tutoring Services Room	2013-2014
Treasurer for RUNE (MIT's Literary Journal) and MIT's Literary Society	2013-2014
Publicity & Marketing Chair for Jr. Panhel (Executive Committee of MIT's Panhellenic Community)	2013-2014
Editor in Chief of The Tongva Times, 1 st place winner of American Scholastic Press Newspaper Contest	2010-2012

SKILLS AND INTERESTS

Computer: Python, MATLAB, Fortran, FEMM, Abaqus, Microsoft Office
Other: Certified to conduct research on human subjects, Certified to assist in running MRI and EEG scans
Interests: Writing, philosophy (particularly theories of time), fiction reading, music, cooking, yoga, traveling