

# Jason Saroni

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## EDUCATION

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- Iowa State University (ISU)** – Ames, Iowa, USA Aug 2019 - Present
- Doctor of Philosophy in Physics and Quantum Computing
  - Top score in PhD qualifying exam, classical physics
- Brandeis University** – Massachusetts, Waltham, USA Aug 2017 - May 2019
- Master of Science in Physics
- University of Notre Dame** – Indiana, South Bend, USA Aug 2012 - May 2016
- Bachelor of Science with major in Physics
  - Hesburgh-Yusko Scholar 2016
  - Sigma Pi Sigma National Physics Honor Society member
- African Leadership Academy (ALA)** – Johannesburg, South Africa 2010-2012
- Leadership, Entrepreneurship, and African Studies curriculum
  - Top in 11<sup>th</sup> grade SAASTA South African Olympiad physical sciences 2011
  - Completed Cambridge A-level Exams in Physics, Chemistry, Math, and English
- Lesotho High School** – Maseru, Lesotho 2006-2010
- Top performer in national Junior Certificate exam 2008

## EXPERIENCE

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- Condensed Matter Physics Research** – Waltham, South Bend, and Ames, USA 2014 – 2015 and 2018 – Present
- 2022 APS March Meeting Focus Session Speaker: Simulating thermal quantum quenches with a variational quantum algorithm
  - Graduate research assistance for condensed matter theory with research focus including quantum computing at ISU
  - Used high performance computing cluster, Python, C, C++, and AI for soft condensed matter simulations at Brandeis University
  - Awarded College of Science Summer Undergraduate Research Fellowship for 10 week research during the summer of 2015
- Research Experience for Undergraduates** – South Bend, USA June 2014 – Aug 2014
- Worked on ab-initio nuclear theory for 10 weeks in Research Experience for Undergraduates (REU) program.
  - Made an oral poster presentation at the Summer Undergraduate Research Symposium (SURS) and a poster presentation at the Fall Undergraduate Research Fair (FURF), both at the University of Notre Dame
- London International Youth Science Forum (LIYSF)** – London, United Kingdom 2011  
*Imperial College London*
- Selected for participation in LIYSF having achieved top spot in 11<sup>th</sup> grade section of SAASTA South African science Olympiad physical sciences – Met leading experts in different fields and aspiring scientists from all over the world at Imperial College London in a two-week science immersion program
- STEM Ambassador and Physics Club Co-President** – South Bend, USA 2015-2016  
*Extracurricular Activities at the University of Notre Dame*
- Holding office hours every week to help retention of STEM students in my dorm and running physics club activities
- Green dorm** – Johannesburg, South Africa 2011 - 2012  
*COO, ALA student run environmental organization*
- Co-led an organization that saved ALA more than \$1000 by supporting creative ways to save energy

## Other Experience

- Participated in IBM's quantum open science quantum computing project Dec 2020-Apr 2021
- Quantum computing and sensing summer school Jun 2021-July 2021
- Graduate teaching assistance, Brandeis University and Iowa State University 2017 - 2021

## SKILLS AND INTERESTS

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- Programming experience in Python, Mathematica, C, C++, and MATLAB
- Fluent in English and Sesotho with a developing grasp on French

### **Future Publications**

Simulating Thermal States using Adaptive Variational Quantum Dynamics and Density Matrix Quantum Monte Carlo