

# Ari Silburt

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## EDUCATION

### University of Toronto, Department of Astronomy & Astrophysics

Sep 2012 – Aug 2017

Doctor of Philosophy, Astrophysics

- **Cumulative GPA:** 3.96/4.0
- **Thesis:** “Statistics, Formation and Stability of Exoplanetary Systems”
- **Awards:** \$80,000 in scholarships, awarded for research and academic excellence. Notable awards include NSERC PGS-D Grant, Walter C Sumner Fellowship, and NSERC CGS-M Grant.
- **Experience:** - 4 first-author, 1 second-author scientific publications.
  - [HERMES](#): Created, tested, debugged an N-body code for simulating planetary systems.
  - MCMC, Bayesian Stats, Gaussian Processes, Solar System Dynamics, Chaos Theory.

### Mount Allison University, Department of Physics

Sep 2008 – May 2012

Bachelor of Science, First Class Honours in Physics w/ Distinction, Double Minor in Math/Astronomy

- **Cumulative GPA:** 4.2/4.3
- **Thesis:** “Improvement of the Compton Beam Asymmetry”.
- **Awards:** \$28,000 in scholarships awarded for academic and research excellence.
  - Dr. R. N. Varma Memorial Award – Graduating Physics student with highest GPA.

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## DATA SCIENCE & ANALYTICS

Sep 2015 – present

- UTSC workshops on the fundamentals of machine learning – algorithms (CART, neural networks, regression, etc.), best practices (CV, training/testing, hyperparameter tuning) and theory.
- 1 machine learning [publication](#), and other machine learning [projects](#).
- Using a Convolutional Neural Network via [Keras](#) to characterize craters on the Moon.

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## TEACHING, PUBLIC SPEAKING, TEAMWORK

### Professional Swing Dance Teacher and Troupe Member

Jan 2014 – present

- Team of 13 instructors at “Bees’ Knees Dance”: teaching dance and developing curriculum.
- Part of professional dance troupe “That Swing”: created an international award winning choreography, performed 29 dance gigs for corporate clients, competed in 14 dance competitions.

### Science Communicator

Sep 2012 – present

- Presented 18 lectures to physicists and public (e.g. “[Interstellar: The Science Behind the Movie](#)”).
- Created and presented 40 planetarium shows to the public at the University of Toronto Planetarium.
- Scientific Consultant for WJ Gastle’s novel “Mission 32 (Will Hunter Chronicles Book 1)”.
- Regular volunteer for “Astrotours” monthly astronomy tour: operating telescopes, public interaction.

### Teaching Assistant

Sep 2009 – present

- Taught 17 introductory and advanced physics courses as a Teaching Assistant.
- Created Assignments, lead tutorials and class lectures, proctoring and marking.

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## SKILLS AND INTERESTS

- Computer – C, Python, Jupyter Notebooks, Github, Linux/Mac/Windows OS, HTML/CSS.
- Clubs and Extra-Curriculars – Music Producer and Composer, UofT “AstroTours” Volunteer, Division I “Woodsworth” UofT Intramural Basketball, Intramural Hockey, Baseball, Lacrosse, Mount Allison Astronomy Society.