**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](https://github.com/silburt/rebound): 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.

**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](https://arxiv.org/abs/1610.05359), and other machine learning [projects](https://silburt.github.io/projects.html).
* Using a Convolutional Neural Network via Keras to characterize craters on the Moon.

**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](https://www.youtube.com/watch?v=_mbdxCD_6rA)”).
* 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.

**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.