Kyle Mills

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github.com/millskyle

languages

Python, SQL,
C/C++, Fortran,
BASH, PHP,
JavaScript (with
AngularJS), HTML

skills/ software/tools

Matlab, iPython
Notebook, MPI,
OpenMP Python
(with Numpy,
Matplotlib, etc.), Git,
Linux, Gnuplot,
LATEX, Slack, web
design,
programming,
scripting, teaching,
scientific graphic
design

References
available upon
request

education

2015– present	**M.Sc.** Master's of Science candidate	*University of Ontario Institute of Technology*

Modelling and Computational Science
Original research thesis and course-based Master's *in progress,*
current 4.30 GPA

2011– 2015	**B.Sc.** Bachelor's of Science	*University of Ontario Institute of Technology (UOIT)*

Physics (Honours), minor in Mathematics.
Graduated with Highest Distinction with 3.92 GPA.
President's list 2011, 2013, 2014, and 2015.
Dean's list 2012.

experience

2013–present — **Teaching assistant** — *UOIT*
- Supervise laboratory experiments for physics courses.
- Design and instruct introductory Raspberry Pi physics laboratory experiments.
- Conduct tutorials to assist students in understanding advanced physics concepts.

2015–2016 — **Programming/Electronics course content design** — *UOIT*
- Design course content to introduce Faculty of Education students to programming and electronics.
- Lead tutorials and extra-curricular workshops to teach students about Linux and Raspberry Pis.

2014 — **Research assistant** — *Computational Laboratory for Energy and Nanoscience*
- Performed large-scale, distributed computations of atomic-scale materials science problems, working toward the design of lightweight aluminum composites.
- Worked in collaboration with researchers at National Research Council, Ottawa, Ontario.
- Experience building and running highly parallelized programs.

2012–2014 — **Summer student, Energy Settlements Dept.** — *Veridian Connections, Ajax*
- Wrote complex SQL database queries for reports, audits, etc.
- Assisted system administrator with server maintenance.
- Wrote scripts to automate tasks and increase employee efficiency.
- Assisted with generation, validation, and distribution of electricity bills.

awards

2016   **NSERC Alexander Graham Bell Canada Graduate Scholarship**   *(value: $17500)*
National scholarship awarded to 2 top performing graduate students.

2015   **Ontario Graduate Scholarship**   *(value: $15000)*
Provincial scholarship awarded to students based on academic performance and research potential.

2014   **Rotoract UOIT Scholarship**   *(value: $1000)*
Scholarship awarded to the 16 top-performing students at the University of Ontario Institute of Technology.

2014   **NSERC-CSRNG Undergraduate Student Research Award**   *(value: $6000)*
National award given to students who show research potential and excellent academic performance

publications and presentations

2015   **Designing lightweight aluminum composites: A first principles density functional theory approach.**
Conference of Metallurgists, Toronto, Ontario
Presented research at Canadian metallurgy conference in the computational materials science symposium.

2015   **Comparison of theoretical methods with boron nitride nanostructures.**
Undergraduate Summer Research Showcase, Oshawa, Ontario
Competitive poster presentation at the University of Ontario Institute of Technology

2015   **Long-lived ligand-to metal charge-transfer state of an oxidovanadate complex**
Designed cover image chosen to appear on the cover of the July 30, 2015 issue of the Journal of Physical Chemistry C.

2014   **Aluminum wetting of hexagonal boron nitride.**
National Research Council Security and Disruptive Technologies 2014 Tech Day, Ottawa, Ontario
First place winning poster in competitive poster presentation.

2014   **Designing lightweight aluminum composites: A density functional theory approach.**
Canadian Undergraduate Physics Conference, Queen's University, Kingston, Ontario
Presented original research in a competitive talk aimed at other Canadian undergraduate physics students.

2014   **Aluminum wetting of hexagonal boron nitride.**
Undergraduate Summer Research Showcase, Oshawa, Ontario
Competitive poster presentation at the University of Ontario Institute of Technology.

notable projects/extra-curricular

2015   **Interval Scheduling Algorithm with Applied Constraints**
- Developed a scheduling web app that utilizes Monte Carlo methods and graph theory to optimize students' schedules. Available at http://scheduler.uoitphysics.ca.

2015   **Science Rendezvous Weather Balloon Launch (HABEX) Team Lead**
- Coordinated and lead the launch team of a HABEX weather balloon for UOIT's Science Rendezvous.
- Coordinated with local authorities to ensure a safe launch.
- Represented UOIT Physics to community members and families.
- Designed website displaying results and footage from the activity (http://uoitphysics.ca/balloon).
- Perform interviews with local media contacts.

2015–
present   **President, Academic Skills Club**
- Design and teach workshops for undergraduate and graduate students to develop useful scientific research and programming skills.

2014–
2015   **Vice President, UOIT Physics Society**
- Build and maintain website (uoitphysics.ca), manage social networking.
- Build email distribution system for mailing list (PHP, MySQL, HTML)
- Act effectively as main contact between physics faculty and students.