Amy Fare

Data | Computing | Education

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EDUCATION

Western University, London *September 2018 - April 2020*
Master of Science, Astronomy

McMaster University, Hamilton *September 2014 - April 2018*
Bachelor of Integrated Science
Minor in Physics

EXPERIENCE & PROJECTS

FDM Group
AWS Trainee *January 2021 - Present*
Receiving training in IT fundamentals and AWS Cloud Services.

Oxford Learning Centres
Math, Science, English Teacher *June 2020 - Present*
Provided interactive after–school tutoring in Math, Science, and English, teaching in both one–on–one and group settings.

Freelance
Private Tutor *2016 - Present*
Delivering curriculum support and teaching new material in Math and Science to students from Grade 1 through university. Tailoring teaching style to students' unique needs to support them through the fast-paced, and unpredictable environment of virtual classes during the COVID-19 pandemic.

Western University

Research Assistant *May 2017 - April 2020*
Worked as a research assistant under the supervision of Dr. Els Peeters, studying the composition of polycyclic aromatic hydrocarbon populations in reflection nebulae and HII regions.

Graduate Teaching Assistant - tutorial *September 2018 - April 2020*
Led tutorials and laboratory sessions for undergraduate first-year Physics courses offered at Western University, as well as the Integrated Science program, and graded exams and other assignments.

McMaster University

Honours Thesis *January 2017 - April 2018*
Developed N-body simulations of globular clusters with helium-rich secondary populations, ran them on *SHARCNET* GPU clusters, and studied their results.

Research Assistant *May 2015 - August 2016*
Worked as a research assistant under the supervision of Dr. Doug Welch, using photometric data to produce interactive finder charts which enablie astronomers to monitor variable stars.

MIIETL Student Scholar *2015 - 2016*
Designed an interactive undergraduate course centred around planetarium use by students, and tested the effectiveness of planetariums as supplements to traditional lectures.

PUBLICATIONS

Fare, A., Webb, J.J. and Sills, A., 2018. The effect of stellar helium abundance on dynamics of multiple populations in globular clusters. *Monthly Notices of the Royal Astronomical Society*, 481(3), pp.3027-3032.

CONFERENCES & PRESENTATIONS

Canadian Undergraduate Physics Conference (CUPC) *October 2017*
Presented work on grandPAHs to an audience of undergraduate students and graduate judges from diverse physics disciplines.

American Association of Variable Star Observers (AAVSO) *November 2016*
Presented variable stars in globular clusters to an audience of professional and advanced amateur astronomers.

Canadian Undergraduate Physics Conference (CUPC) *October 2016*
Presented research on variable stars in globular clusters to an audience of undergraduate students and graduate judges from diverse physics disciplines.

International Planetarium Society Conference (IPS) *June 2016*
Presented pedagogical research on planetariums in higher education to an audience of planetarium & museum directors, educators, and researchers.

McMaster Research in Teaching and Learning Conference *December 2015*
Presented pedagogical research on planetariums in higher education to an audience of researchers.

SCHOLARSHIPS & AWARDS

Western University

NSERC USRA *April 2018*
Undergraduate Pre-thesis Award *April 2017*
(Half of) sponsored trip to Ottawa for CUPC *October 2017*

McMaster University

(Half of) sponsored trip to Ottawa for CUPC *October 2017*
Sponsored trips to Boston, Halifax, and Warsaw for AAVSO, CUPC, and IPS *2016*
William McKeon Memorial Academic Grant in Physics *2015*
$1000 entrance scholarship *2014*

EXTRA-CIRRUCULAR

International Genetically Engineered Machine: McMaster Team *2016 - 2017*
As the head of the dry lab (programming team), I recruited and managed a team of programmers, doing computational biology research in coordination with the wet lab. We developed an agent-based model of quorum sensing in bacteria populations.

SKILLS & EXPERIENCE

Programming	Python, C++, Lua, SQL, Perl, R, MATLAB, Java, Machine Learning
Publishing	LaTeX, HTML/CSS/Javascript
Working	UNIX-like operating systems, ArcGIS