THOMAS WILLIAM BELL

twilliambell97@gmail.com ⋄ 613-585-1973
twilliambell.wordpress.com ⋄ GitHub: TWilliamBell

SKILLS

⋆ **Advanced analytics skills** (mathematical statistics, optimization, numerical methods, and mechanistic modelling)
⋆ **Programming** (scientific and statistical programming in R, Python, and MatLab, key skills for developers such as Git-based version control)
⋆ **Communication** (organizing large groups, writing and speaking to lay and specialist audiences)

EDUCATION

Masters of Mathematics *September 2019 - Present*
Department of Applied Mathematics
University of Waterloo
Cumulative GPA 91%

Bachelors of Science (Honours) *September 2015 - June 2019*
Biology and Mathematics
McMaster University
Cumulative GPA 11.1 (rough percentage 85-90%)

Bachelors of Art *September 2015 - June 2019*
Philosophy
McMaster University
Philosophy GPA 11.3 (rough percentage: 85-90%)

RESEARCH WORK EXPERIENCE

Graduate Research in Mathematical Modelling *September 2019 - August 2020*

Modelled mitochondrial O_2 consumption and ATP generation in rat proximal tubule, medullary thick ascending limb, and hepatocyte cells using ordinary differential equations. Awarded $17,500 in my first year by NSERC for this work.

Undergraduate Research on the Statistics of Sexual Dimorphism *May 2018 - August 2018*

Conducted a meta-analysis of the relationship between sexual size and shape dimorphism across taxa, requiring the design of non-parametric statistical procedures for the standardized presentation of results. Awarded $6000 over 4 months by NSERC (including value matching from McMaster) for this work.

Undergraduate Research in the History of Philosophy *May 2017 - August 2017*

Conducted original research on John Locke's work on embodiment. Awarded $6000 over 4 months by McMaster University for this work.

NON-RESEARCH WORK EXPERIENCE

Teaching Assistant *May 2020 - Present*

Instructed tutorials and marked for multiple courses, including several second-year mathematics courses for engineers and mathematicians.

Tutor *September 2016 - April 2019*

Tutored students through an online service supported by McMaster's Student Success Centre.

Teaching Assistant *October 2017 - April 2018*

Instructed in the Math Help Centre, and marked for two courses, including a second-year mathematics course.

OTHER RESEARCH EXPERIENCE

Undergraduate Thesis *September 2018 - April 2019*

Developed cellular automata models to describe cancer cell proliferation.

Volunteer Research Assistant *February 2017 - April 2017*

Worked on a meta-analysis of the kidney graft failure literature.

OTHER RELEVANT EXPERIENCE

Treasurer, McMaster Public Health Association *September 2017 - April 2019*

Had to coordinate financing and gain access to a couple thousand dollars in funding to organize the Emerging Professionals in Public Health Conference, attended by roughly 60 participants.

Executive Assistant, McMaster Philosophers' Society *September 2017 - April 2019*

Organized events and participated in outreach campaigns that doubled our membership over the course of two years.

Co-President, Effective Altruism Hamilton *September 2017 - April 2019*

Organized events encouraging participants to think critically about their philanthropic activities.

CONFERENCE PRESENTATIONS

Mitochondrial Dynamics in the Thick Ascending Limb of the Nephron *August 2020*

Poster presentation at Dynamics Days Digital 2020.

A Mathematical Model of Mitochondrial Diseases *Indefinitely Delayed due to COVID-19*

Accepted contributed lecture to the SIAM/CAIMS Annual Meeting 2020.

The Humanity of Morality *April 2019*

Delivered to the Great Lakes Philosophy Conference 2019.

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

American Mathematical Society *December 2020 - Present*

Society for Industrial and Applied Mathematics *December 2019 - Present*

Part of the Life Sciences, Dynamical Systems, and Control & Systems Theory working groups.

REFERENCES

Dania Sheaib: dsheaib@fgcu.edu, (239)-710-9217

Stéphanie Abo: sabo@uwaterloo.ca