GEORGE SHILLCOCK

Liverpool, Great Britain
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A researcher in mathematical biology and graduate student who thrives in curiosity driven science, interested in epidemiology, ecology and evolution. Also a skier, cyclist, boulderer and guitar fanatic.

HIGHER EDUCATION

Western University
M.Sc. Applied Mathematics *September 2020 – May 2022*

Second Year:
Awarded a graduate fellowship to research the consequences of mixed mode transmission on the coevolution of host and parasite. Lead and participated in the mathematical biology seminar 'Flower Hour'.

First Year:
Took courses in numerical analysis, mathematical biology, neural networks, scientific computing.

University of Glasgow Second Class Division 1
Mathematics MSci. *September 2014 – June 2019*

Fifth year research project: Discrete Iterated Maps
A presentation of discrete time, autonomous iterated maps and classification of the local stability types of dynamical systems by considering the principle invariants of the Jacobian matrix.

Fifth year courses:
Advanced methods in differential equations, applied asymptotic methods, elasticity, classical field theory.

Fourth year research project: Catastrophe Theory
Involved deriving conditions under which families of functions were structurally stable under perturbation, from which the canonical forms of universal unfoldings of germs were induced. These concepts were applied to the psychology of stress in competitive athletes.

Fourth year courses:
Continuum mechanics & elasticity (A5), fluid mechanics (C2), mathematical biology (B1), mathematical physics (A2), numerical methods (B1), partial differential equations (C1)

Third year: Simon Fraser University *Vancouver, Canada*
International Exchange *September 2016 - June 2017*
Studying abroad required me to adapt to a new school system with a significant course work component. My ability to communicate and collaborate with a diverse group of colleges and friends was pivotal in succeeding. Living in a new country and adjusting to new cultures required me to be resilient and gave me a global outlook.

Other courses:
Mathematics (A3, B1), computer science (C2), philosophy (C1), physics (B2)

TECHNICAL SKILLS

Programming languages	Python, MATLAB, Mathematica, Maple
Software & Tools	LaTeX, Microsoft Office
Published online resources	Wolfram Demonstrations

CONFERENCES

Tomorrow's Mathematicians Today in association with the IMA. *February 2019*

Presented a talk at the University of Greenwich on iteration, recursive functions, and the connection between the Ackermann function and hyper-operations.

WORK EXPERIENCE

Tutor *September 2021 – January, 2022*
Self Employed *London, Canada*

Teaching first- and second-year undergraduate level courses in mathematics such as calculus, linear algebra, and methods of finite mathematics. Providing methods of revision and demonstrating how to reason and express mathematical ideas optimally. In this role I employed concise and clear expression, a patient and engaging attitude, and knowledge of the misunderstandings typical of those new to the subject.

Tutor *September 2020 – January, 2022*
Caledonia Tutors *Glasgow, Scotland*

Teaching high school level mathematics courses for students preparing for A-level, SQA higher, and national 4 and 5 exams. I utilised my creativity, persistence, and knowledge of active learning techniques to keep the attention of young students while working remotely.

Teaching Assistant *October 2018 – April 2019*
University of Glasgow, Mathematics Department *Glasgow, Scotland*

Grading and providing feedback on the continuous assessments of second year mathematics students. I communicated effectively with my colleagues to maintain a fair and standardised response, and my growth-orientated attitude helped students to progress.

Alumni Telephone Campaigner *February – April 2016*
University of Glasgow, Development and Alumni Office *Glasgow, Scotland*

I engaged with Alumni to continue their involvement in the university and raised funds for university initiatives and its charity trust. My ability to collect information whilst maintaining a personable and professional conversation was essential to this role.

Commis Chef *November 2019 – March 2020*
Hotelplan UK *Tignes, France*

As a part of a diverse team working in a fast-paced kitchen, I was required to delegate tasks efficiently and communicate effectively, while maintaining a high attention to detail. This role extensively tested my mental stamina and ability to remain calm under pressure.

ACHIEVEMENTS & CERTIFICATES

SHARCNET High Performance Computing Summer School
Certificate in Equality & Diversity (CPD)
Silver Duke of Edinburgh Award
Sports Leadership UK Level 1
National Academy for Gifted and Talented Member
Academic Integrity Module (UWO)
Protecting Vulnerable Groups (PVG) scheme member
Prefect at Chesterfield High School
Liverpool Physics Olympics Round Winner
Young Engineers Certificate Award

REFEREES

References available upon request.