GEORGE SHILLCOCK

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An aspiring researcher and Mathematics MSci student who thrives in curiosity driven study, seeking a career in dynamical systems.

HIGHER EDUCATION

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

Fifth year courses:
Advanced Methods in Differential Equations, Applied Asymptotic Methods, Elasticity, Classical Field Theory.

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.

Fourth year courses:
Continuum Mechanics & Elasticity (A5), Fluid Mechanics (C2), Mathematical Biology (B1), Mathematical Physics (A2), Numerical Methods (B1), Partial Differential Equations (C1).

Fourth year research project: Catastrophe Theory (A2).
I gained an excellent grade in my fourth year dissertation. This involved deriving conditions under which families of functions were structurally stable under perturbation. From this canonical forms of the universal unfolding of germs were induced. These concepts were applied to the psychology of stress in competitive athletes.

Third year: Simon Fraser University *September 2016 - June 2017*
International Exchange *Vancouver, Canada*
Mathematics (C2). 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 on life.

Second year courses:
Mathematics (B1), Philosophy (C1).

First year courses:
Mathematics (A3), Physics 1 (B2), Computer Science (C2).

TECHNICAL SKILLS

Programming languages	Python, Mathematica, MATLAB.
Software & Tools	Microsoft Office, LaTeX
Published online resources	Wolfram Demonstrations in conjunction with my fifth year project.

PREVIOUS EDUCATION

Chesterfield High School *August 2009 – 2014*
A levels:
Mathematics (A*), Further Maths (B), Physics (B).

GCSE:
10 including Mathematics, IT and the Extended Project, ranging from A* to C.

CONFERENCES

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

· I presented a talk at the University of Greenwich on iterative and recursive functions and the connection between the Ackermann function and hyper-operations.

WORK EXPERIENCE

Private Tutor   *September 2018 – February 2019*

· Tutoring Mathematics to pupils studying for Higher National Diplomas, National 4, National 5 examinations.

University of Glasgow   *October 2018 – April 2019*
Marker

· Marked and provided feedback on the continuous assignment of second year Mathematics students.

University of Glasgow   *February – April 2016*
Alumni Telephone Campaigner

· Engaged with alumni to continue their involvement with the University and raised funds for the Trust.

The SEC Hydro   *March 2017 – December 2019*
Host and Bartender

· Worked as part of a close team to host the executive suites of a large music venue.

ACHIEVEMENTS & CERTIFICATES

Silver Duke of Edinburgh Award   Prefect at Chesterfield High School
Sports Leadership UK Level 1   Liverpool Physics Olympics Round Winner
Young Engineers Certificate Award   Member of National Academy for Gifted and Talented

INTERESTS

Outdoor Activities: Skiing, Cycling, Climbing, Hiking. Member of the Wakeboarding and Tennis societies.

Music: Keen interest in music and regular attendant of live music events. I play the acoustic and bass guitar.

Sports Teams:

Chesterfield High School Rugby Team (2008 – 2011)

Waterloo RUFC Under 18s (2010 – 2013)

St Marys Old Boys RUFC (2013 – 2014)

REFEREES

Prof. Ian Strachan   **Dr Mike Whittaker**
Bachelors project supervisor, Head of School   *Masters project supervisor, Senior Lecturer*
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