
CAROLINE SODERMAN

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Mob:

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Education

2014-present **St John's College, University of Cambridge**, MSci (Earth Sciences), Graduating 2018

- *Part III (4th year)*: Masters project investigating the proto-Icelandic plume-head in Rum via isotope geochemistry and petrology. Submitted January 2018. Taught modules: Continental Tectonics, Magma Dynamics, Rifting and Magmatism, Evolution and Composition of the Earth's Mantle, Planetary Chemistry and Evolution, Magnetism of Earth and Planetary Materials.
- *Part II (3rd year), 1st class*: Earth Sciences. Mapping project of sediments and volcanoclastics in Change Islands, NL, Canada. Map constructed on ArcGIS and Inkscape. Taught modules: Geophysics, Petrology, Mineralogy.
- *Part IB (2nd year), 1st class*: Earth Sciences, Materials Science.
- *Part IA (1st year), 1st class*: Earth Sciences, Materials Science, Chemistry, Maths.

2007-2014 **King Edward VI High School for Girls, Edgbaston, Birmingham**

2014 A-Levels: Chemistry (A*), Geography (A*), Maths (A*), Further Maths (A*), Physics (A*) General Studies (A*), AQA Baccalaureate project on rock strata dating and correlating methods.

2012 GCSEs: 13 A*s including Mandarin Chinese and Astronomy (placed in top 12 in the country).

Academic Prizes and Scholarships

- 2017 **Winifred Georgina Holgate Pollard Memorial Prize**, highest Part II Earth Sciences mark.
Reekie Memorial Prize, highest quality departmental mapping report.
Mineralogical Society Student Award, outstanding Petrology and Mineralogy performance.
Wright Prize, 1st Class result of special merit, St John's College.
Hughes Year Prize, highest third year performance in any subject, St John's College.
United Steel Companies Scholarship, first class result, St John's College.
Dave Johnston Mapping Prize (currently nominated), Tectonic Studies Group, GSL.
- 2016 **University Wiltshire Prize**, excellence in Earth Sciences.
Hollinshead-Howles Prize, highest Part I mark in Natural Sciences at St John's College.
Quass Year Prize, highest performance by second year student, St John's College.
United Steel Companies Scholarship, 1st class result, St John's College.
- 2015 **United Steel Companies Scholarship**, 1st class result, St John's College.
College Prize, 1st class result, St John's College.
- 2014 **Foundation Scholar** on entry and leaving prizes in Geography, Chemistry and Mathematics, King Edward VI High School for Girls
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Relevant Experience

2017 **Masters project**

Characterising a Rum dyke using aluminium-in-olivine thermometry, modelling using Petrolog, and stable isotope systems (Mg and Fe). Gained experience in an SX100 Electron Probe Microanalyser, SEM, Thermo Neptune Plus, Python and LaTeX, and laboratory skills including hand and machine polishing of samples, clean lab usage and column chemistry. The project has used these analytical tools to suggest a very hot, isotopically heavy and oxidised parental melt from the early Icelandic plume-head under Rum, different in REE and isotopic composition from contemporaneous picritic lavas in Baffin Island. It explores how the results link to the mantle source compositions in the plume-head (such as metasomatised mantle or oxidised pyroxenite domains), the scale of thermal anomalies and large scale plume-head heterogeneity.

- 2016 **Mapping Project**
6 week independently organised fieldwork to Newfoundland investigating the geology and structure of the Change Islands. Geology dominated by the tectonic effects of Iapetus closure, including orogenic uplift, associated erosion and volcanism. A significant part of mapping included volcanoclastics, not studied extensively in the undergraduate course.
- 2014-present **Museum Enabler, Thinktank Science Museum, Birmingham**
Responsible for running workshops, hosting school groups, completing retail tasks and overseeing science engagement and promotion.
- 2013-2017 **Student Helper, Extreme Physics Competition, Ogden Trust**
Ran regional physics competitions for GCSE students. Focused on organisation, leadership and science promotion and outreach. Participated in 'Extreme Physics' roadshow around secondary schools promoting the study of the sciences.
- 2012 **Work Experience, Lapworth Museum of Geology**
Developed museum activity sheets, and object of the month features including videos on Shotton's maps of Normandy for the D-Day Landings ([link](#)) and the Odessa meteorite ([link](#)) for outreach purposes.

Positions of Responsibility

- 2017-2018 **Sedgwick Club, President**
Directed 6 member committee of the student Earth Science society. Responsible for recruitment, careers events, academic conferences and liaising with department staff.
- 2016-2017 **Lady Margaret Boat Club, Women's Vice Captain and Chief Cox**
Organised training camps for 20 athletes. Oversaw race entries, recruitment and training of new coxes.
- 2016-2017 **St John's College General Athletics Club, Women's Field Sports Representative**
Represented approximately three hundred female College athletes. Represented 15+ women's sports captains in meetings with senior staff. Assisted in the improvement of equality of recognition of male and female athletes in College.
- 2015-2016 **Lady Margaret Boat Club, Chief Cox**
Oversaw the recruitment and training of novice coxes.
- 2013-2014 **King Edward VI High School for Girls, Dance Vice-President**
Directed one hundred members. Awarded prize for outstanding contribution to sport.
- 2011-2014 **Edgbaston Watersports, Assistant Sailing Instructor**
Taught sailing, water safety and supervised other water sports including kayaking and paddle boarding for groups of up to twenty children aged seven to eighteen.

Additional Achievements

- Member of St John's College Women's Hockey 1st XI since 2014, promoted to division one in 2017, and member of the Mixed Cuppers XI.
- Coxed College 1st VIII every year. Took university Headship in both the Men's Mays and Lents 2017 for the first time since 1981.
- Member of winning DanceSport Cuppers Team, 2014.
- Gold Duke of Edinburgh Award, achieved 2014.