



2 April 1996



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## Education

Precision Medicine  
PhD | University of Edinburgh  
Present

Statistics for Computational Biology  
Distinction  
MSc | Aberystwyth University  
September 2019

Mathematics  
2:1  
BSc | Aberystwyth University  
August 2018

## Skills

Statistics:  
Linear & Stochastic Modelling,  
Transcriptomics, Data Visualization,  
Statistical Epidemiology

Computing Languages:  
R, Python, Bash,  $\text{\LaTeX}$ , Markdown

Mathematics :  
Mathematical Biology, Asymptotic  
Methods, Partial Differential  
Equations

Public Engagement :  
Public Speaking, Poster Creation,  
Designing & Leading Workshops

## Extra-Curricular

President of Aberystwyth  
Mathematics Society  
|2016-2017  
- Chaired meetings  
- Represented students & liaised with  
staff  
-Organized outreach events  
- Asked students to provide their  
thoughts on university mental health  
provisions. I presented these  
statistics to staff

Publicity & Events Officer of  
Aberystwyth Mathematics Society  
|2015-2016  
- Booked and arranged speakers and  
dining events  
- Promoted the Mathematics Society  
and the practice of mathematics

# Nathan Constantine Cooke

## Research

Sep'19- PhD Thesis : Precision Medicine in Crohn's Disease and Ulcerative  
Colitis: Predicting Disease Flare and Disease Progression  
University of Edinburgh  
Supervised by Dr Catalina Vallejos and Dr Charlie Lees

May-Sep'19 MSc Dissertation: Analysis Techniques Applicable to Time-Limited  
Gene Expression Data  
Aberystwyth University  
I investigated methods of finding circadian & circatidal rhythms in  
transcriptomics data from *Talitrus saltator* samples. I was super-  
vised by Dr Kim Kenobi

## Work Experience

2018-19 Undergraduate Demonstrator  
Aberystwyth University  
Supporting first-year mathematics students in assignment work-  
shops  
-May'18 Student Ambassador  
Aberystwyth University  
Assisted the Mathematics Department at open days. Answered  
questions and led guided tours around the campus

## Activities & Achievements

May'17 NUS Society Award Nomination  
During my presidency, Aberystwyth Mathematics Society was the  
only mathematics society nominated at the 2017 NUS society  
Awards  
Apr'17 UMABERSU Most Improved Society Award  
During my presidency, Aberystwyth University's Student Union  
awarded their Most Improved Society Award to Aberystwyth Math-  
ematics Society  
Mar'17 Stalls  
Organized and ran a stall aimed at primary and secondary school  
pupils for National Science Week. Over 1000 pupils attended the  
event  
Dec'16 Workshops  
Designed and led workshops to promote STEM to Year 9 school  
pupils  
Nov'16 Conference  
Attended The Institute of Mathematics and its Applications' Early  
Career Mathematicians Autumn Conference at Warwick University  
Mar'16 Posters  
Created posters promoting prominent women in mathematics for  
International Women's Day which were displayed around campus  
2016-17 Presentations  
Gave presentations on student life to prospective students and  
their families at open days

## Curated Selection of Modules Taken

Master's Machine Learning For Intelligent Systems  
Became competent with feature-based and deep-learning meth-  
ods which was used to detect atrial fibrillation from ECG signals  
Frontiers in the Biosciences  
Developed a wide understanding of Bioscience topics whilst also  
gaining a specialized understanding of CRISPR gene editing  
Undergrad Topics in Biological Statistics  
Studied Generalized Linear Models, Time Series Analysis, Tran-  
scriptomics and Statistical Epidemiology