

# Curriculum Vitae

---

**Gustafsson, Nils Sebastian**

07791 102 480

[nils.gustafsson.13@ucl.ac.uk](mailto:nils.gustafsson.13@ucl.ac.uk)

[www.ucl.ac.uk/~ucbpngu](http://www.ucl.ac.uk/~ucbpngu)

4 Stanley Hill

Amersham

Bucks

HP7 9HR

## PERSONAL STATEMENT

I am a physics graduate with research experience in fields as diverse as computational modelling of chaotic systems, experimental nanophysics and biochemistry. More recently my research focus has been on the application of modelling techniques used in statistical physics to biological problems. For example, the work performed by the stochastic stepping of biological molecular machines. I also have a strong involvement in image analysis and experimental optics specifically their combined application to nanoscopy (microscopy below Abbe's diffraction limit) and photochemistry. I also have extensive experience in experimental biology specifically in protein expression, purification and crystallisation. My success in a number of research studentships demonstrates my ability to quickly integrate into an existing working group and identify how my role will form a part of a larger project, especially in bridging gaps across disciplines. This includes completing tasks under time pressure in a concise and accurate manner to then be presented in both verbal and written formats. I am a conscientious worker and a confident individual with the ability to work effectively on my own and as part of a team.

**DEGREE:** MSci (Hons) Physics FT (4) – 1<sup>st</sup> Class  
MRes/PhD – Modelling Biological Complexity (Finishing Oct 2017)

**QUALIFICATIONS:** Exscitec Platinum Award, equivalent to 12 Open University level 1 credits  
A Levels: Maths (A), Further Maths (A), Physics (A),  
Chemistry (A), Music AS (A)  
8 GCSEs at A\* Inc. Maths, English and Separate Sciences, 2 GCSEs at A

**UNIVERSITY:** University College London –  
CoMPLEX Oct. 2013 – Oct 2017  
University of Birmingham – Physics Oct. 2009 – July 2012  
Oxford University – Physics Oct. 2007 – July 2009

## PUBLICATIONS

Maurer SP, Cade NI, Bohner G, Gustafsson N, Boutant E, Surrey T. [EB1 Accelerates Two Conformational Transitions Important for Microtubule Maturation and Dynamics](#) Curr Biol. 2014;S0960-9822(13)01601-1

## RESEARCH EXPERIENCE

- Jun. 2014 – Present MRes/PhD student in the Microtubule Cytoskeleton Laboratory, Cancer Research UK
- Apr. 2014 – Jun. 2014 MRes/PhD student in the Biological Physics group in the Department of Physics and Astronomy, UCL
- Feb. 2014 – Apr. 2014 MRes/PhD student in the Buzz Baum Research Group at MRC-LMCB, UCL
- Nov. 2013 – Jan. 2013 MRes/PhD student in Quantitative Imaging and Nanobiophysics Group, MRC-LMCB, UCL
- July 2013 – Sep. 2013 Scientific officer in the Microtubule Cytoskeleton Laboratory, Cancer Research UK
- Oct. 2012 – Apr. 2013 Research studentship at the Medical Research Council, Mitochondrial Biology Unit, University of Cambridge.

- July 2011 – Sep. 2011 Summer studentship at Nanoscale Physics Research Laboratory, The University of Birmingham.
- July 2007 – Aug. 2007 Summer studentship at the Department of Medical Physics and Bioengineering, UCL.
- July 2006 Nuffield bursary project at the Department of Medical Physics and Bioengineering UCL.
- March 2005 Work experience at the Institute of Child Health, UCL.

## ACADEMIC AWARDS

- Tessella Prize for “The Most Innovative Use of Software in a Final Year Project”, 2012.
- Exscitec Platinum Award, 2007.
- 1<sup>st</sup> prize in a national verbal presentation competition at Showcase Science, 2007.
- An invitation to present a poster at the Royal Society, 2007.
- Award for “Best Multi-Disciplined Approach to Problem Solving” at Exscitec Science Fair, 2006.
- 1<sup>st</sup> prize in the Regional British Science Association Poster Competition, 2006.
- British Science Association Silver Crest Award, 2006.

## SKILLS AQUIRED

- Methodical research techniques in a variety of cross disciplinary fields
- Confident and clear presentation and verbal skills
- Computer literate and experienced using database, graphical and image processing software
- Experience in computer programming languages C/C++, C#, Java and Python
- Experience writing plugins for the java based image processing software, ImageJ (FIJI)
- Experience of GPU programing using both CUDA and OpenCL and the use of APIs such as aparapi
- Experience using MatLab, Mathematica and NI software Lab Windows CVI and LabView
- Highly competent mathematical and analytical skills both theoretical and applied
- Experience in double entry bookkeeping, bank reconciliation, VAT returns and annual accounts preparation
- Knowledge of GAAP relating to small Ltd. Companies, partnerships, LLPs and charities
- Experience using Quiken bookkeeping and PTP Accounts Production software
- Experience in stock control and as a cashier
- Experience working in services and with children

## EMPLOYMENT

- July 2013 – Sep 2013: Scientific Officer, Microtubule Cytoskeleton Lab, CRUK
- Apr. 2013 – July 2013: Part Time Accounts Assistant at C D Nash Ltd Accountants.
- July – Aug. 2012: Accounts Assistant at C D Nash Ltd Accountants.
- June – July 2010: Accounts Assistant at C D Nash Ltd Accountants.
- July 2009: Accounts Assistant at C D Nash Ltd Accountants.
- July 2008: Accounts Assistant at C D Nash Ltd Accountants.
- Dec. 2007 - Jan 2008: Commis chef at The Swan, Amersham.
- Feb. 2007 - May 2007: Part Time Stock Control Assistant at Tesco, Amersham.
- Sep. 2005 - June 2006: Part Time Leisure Assistant at Chesham Leisure Centre.
- July 2005: Accounts Assistant at C D Nash Ltd Accountants.
- 2005-2007 Trombone session musician at Tring Theatre.
- 2004-2007 Volunteering with autistic children at Chesham Leisure Centre.

## PERSONAL ACHIEVEMENTS

- Grade 8 on the trombone, 3 on the piano and 5 in music theory.

- School awards for commitment and ability in gymnastics, science and music.
- School awards for academic achievement.
- Charities officer on the St. Edmund Hall, Oxford University, JCR Committee.
- Racing Secretary on the Oxford University Cycling Club Committee.
- Cycling from Lands end to John O'Groats to raise money for charity.
- Road Race Captain at the University of Birmingham Cycling Club.

## **INTERESTS**

- Music, cycling and politics

## **REFERENCE**

Dr Thomas Surrey, CRUK, By Request