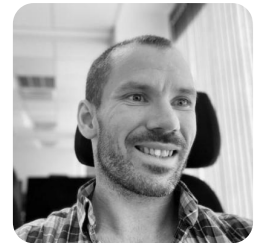# SIMON WARD
SCIENTIFIC ANALYSIS AND MODELLING
SOFTWARE FOR THE MODERN WORLD

ABOUT

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- WARDSIMON
- WARDSIMON86

EDUCATION

University College London (UCL)

PHD - EXPERIMENTAL AND COMPUTATIONAL PHYSICS

I was part of the London Centre for Nanotechnology and obtained a PhD in experimental condensed matter and materials physics. My area of specialty was experimental and theoretical descriptions of magnetism in extreme environments.

- Teaching: Computational Physics · MATLAB for Physicists
- Communication · Science Outreach
- Outreach: Science
- Sport: Badminton · Tennis

Royal Holloway, University of London

MASTER OF SCIENCE (MSC) - THEORETICAL AND MATHEMATICAL PHYSICS

Undergraduate degree in theoretical and mathematical physics, focusing on quantum mechanics, condensed matter physics and simulations.

- Sport: Mens badminton team
- · Chess

SUMMARY

Scientific software developer with a background in physics and a passion for data analysis. I'm originally from London and based in Copenhagen since 2018. With over a decade of experience, I bring my passion in physics and software development for changing the world around us and making the revelations accessible to both researchers and the public alike through intuitive UIs and engaging presentations. I've been lucky to work on projects implementing front-end, back-end and high performance computing for a variety of physical systems and deploying them to operational facilities. I enjoy finding elegant solutions to complex problems and leading development teams by example. I'm currently working as a Software Scientist at the European Spallation Source ERIC, tackling the challenges of simulating neutron scattering experiments and finding solutions to optimisation problems.

EXPERIENCE

EUROPEAN SPALLATION SOURCE ERIC
11/2018 - PRESENT

Software Scientist

- COPENHAGEN, CAPITAL REGION, DENMARK

I develop graphical applications software and frameworks for the analysis of neutron scattering experiments. I focus on improving the user experience by distilling the key aspects of each technique into intuitive workflows and providing modern solutions for their optimisation problems. I also lecture and teach students and other developers about these software packages and take part in scientific outreach to the local community.

- Architect of the simulation framework for the various neutron scattering fields
- Developed the graphical user interface for the simulation framework
- Developed optimisation algorithms for the simulation frameworks
- Specialization in large scale data analysis
- Python (Programming Language) · MATLAB · User Experience (UX) · Data Analysis · Simulations · Agile Application Development · Research

PAUL SCHERRER INSTITUT (PSI)
10/2017 - 10/2018

Software Developer

- ZÜRICH AREA, SWITZERLAND

I was responsible for developing C++ modules for simulations in high performance computing scenarios. Inelastic neutron scattering simulation software written in MATLAB was optimised for the requirements of next generation scientific facilities. I also developed web API's for data collection and storage with an integrated data analytics framework, using Python for analysis and simulation.

LANGUAGES

ENGLISH *(NATIVE SPEAKER)*
DANISH *(LIMITED WORKING)*
GERMAN *(LIMITED WORKING)*

INTERESTS

Photography

Landscapes
Astrophotography
Macrophotography

Fermentation and brewing

Beer
Mead
Pickling

Penetration Testing

Digital access
Reverse engineering
Hardware hacking

- Developed high performance computing software for simulations in the field of neutron scattering
- Web API's for data collection and storage with an integrated data analytics framework
- Web applications for data analysis and visualisation
- Django · Python (Programming Language) · MATLAB · Simulations · Science · Research · Programming · Mathematics · C++ (Programming Language)

UNIVERSITY OF GENEVA   *11/2014 - 02/2017*

Postdoctoral Researcher

📍 ZÜRICH AREA, SWITZERLAND

Working in conjunction with Paul Scherrer Institute and the Laboratory for Neutron Scattering and Imaging I was developing software for data analysis and modelling using MATLAB. Research fields covered included performing experiments on and publishing results in the field of low-dimensional quantum magnetism.

- High scientific impact publications in the field of low-dimensional quantum magnetism
- Developed software for data analysis and modelling using MATLAB
- Analytical Skills · MATLAB · Science · Research

🖑 VOLUNTEER

DMSC AKADEMIKERKLUBBER   *10/01/2022 - PRESENT*
TILLIDSVALGTE

Elected Tillidsvalgte for the DMSC Akademikerklubber, working on behalf of the members to improve the working conditions and the quality of life for the employees.

- Set up a new committee for the DMSC Akademikerklubber
- Petitioned for better working conditions for the employees
- Represented employees interests in office negotiations

UCL UNION LGBT+ BOARD   *02/01/2010 - 02/01/2012*
POSTGRADUATE REPRESENTATIVE

Elected representative for postgraduate researchers on the LGBT+ board at UCL Union.

- Organised events for postgraduate researchers
- Represented the LGBT+ community at UCL Union
- Raised awareness of issues for postgraduates