Lewis Napper

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Education

2021 – · · · · **Ph.D. Mathematics, University of Surrey.**
Thesis: *Monge–Ampère Geometry and Vortices.*
Supervisors: Dr. M. Wolf and Prof. I. Roulstone.

2017 – 2021 **M.Math. 1st class (hons) Mathematics, University of Surrey.**
Thesis: *Algebraic Bethe Ansatz for* $\mathfrak{su}(2)$ *Spin Chains and Beyond.*
Supervisors: Prof. A. Torrielli and Dr. A. Prinsloo.
Average grade: 98%

2010–2017 **Therfield Secondary School and Sixth Form**
A-level: 3 *A**, 1 *A (plus* 1 *A at AS level).*
GCSE: 9 *A* including English and German Language,* 3 *A,* 1 *B*
Other: D*2 Cambridge Nationals ICT, A FSMQ Additional Mathematics

Employment History

2019 – · · · · **Teaching Assistant, University of Surrey**

– Supervised undergraduate MATLAB and R-Studio programming labs for Statistics and Numerical Methods modules. Tasks included content delivery, producing solutions, and debugging student code.

– Supported the delivery of 10 different undergraduate modules, including those in which I had no prior experience, providing students with clear and concise feedback within a week of work submission.

– Edited notes and exercises for three modules to a high standard, after which I was invited to review submissions to the Journal of Geometry and Physics.

2019–2020 **Undergraduate Researcher, University of Surrey**

– A London Mathematical Society funded research bursary supervised by Dr. J. Grant, studying the synthetic Lorentzian framework of general relativity.

– Produced a report and seminar presentation which led to two publications.

Skills

Software Skills

Scripting — Moderate MATLAB, Mathematica, R-Studio, and Python experience through undergraduate study (grade: 97%), teaching, and research projects.

Programming — Minimal C♯ and C++ (inc. SFML/GLUT) experience from reviewing and debugging other research students' code, as well as small personal projects.

Skills (continued)

Web Dev	HTML, CSS, JavaScript, and JQuery frontend skills developed through making a splash screen for Surrey Film society viewings, a hydration reminder app, and my own website. See also my Github page.
Other	Microsoft Office Suite (Word, Excel, Powerpoint), LaTeX typesetting, Adobe Photoshop, Affinity Serif Suite.

Interpersonal Skills

Report Writing	Integrated reports, including 3 research publications, into concise, co-authored projects during my Ph.D. and university Professional Skills module.
Public Speaking	Contributed 8 talks for student seminars and research conferences in the past 2 years, including invited talks at Imperial College London and the University of Sorbonne. See my website for sample slides.
Customer Relations	While working as a customer service assistant prior to university (2016–2017), my personal assistance was often requested due to the accuracy and efficiency with which I resolved customer requests.

Select Experience

Awards and Achievements

2018	**WorldQuant Regional Finalist** Part of the Surrey team for the WorldQuant Championships, for which I learnt WebSim and reached the regional final.
2017	**Surrey Merit Scholarship** Awarded to undergraduate students at the University of Surrey entering with exceptional A-level grades.
2017–2021	**Mathematics Department Prize for Excellence** Annual award for the best performance in a year of an undergraduate/master's degree.

Activities

Work Experience	1 week of work experience at MatOrtho Orthopaedic Engineering, UK (2017) including SolidWorks CAD training.
Societies	Academic secretary of the Surrey Maths Society, for which I organised weekly seminars and produced updated graphic design, and active member of the Surrey Film Society.
Arts	Presented art at the Surrey Youth Voice Awards and at my Sixth Form art festival, accompanying the latter with instrumental guitar playing. Produced both digital and traditional art for art-shares and paid commissions.

References

Dr. Martin Wolf
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University of Surrey,
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Prof. Alessandro Torrielli
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University of Surrey,
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