LMS ELECTIONS TO COUNCIL AND NOMINATING COMMITTEE 2021: CANDIDATE BIOGRAPHIES

Candidate for election as President (I vacancy)

Ulrike Tillmann

Candidates for election as Vice-President (2 vacancies)

Iain Gordon

Catherine Hobbs

Candidate for election as Treasurer (I vacancy)

Simon Salamon

Candidate for election as General Secretary (I vacancy)

Robb McDonald

Candidate for election as Publications Secretary (I vacancy)

Niall MacKay*

Candidate for election as Programme Secretary (I vacancy)

Chris Parker

Candidates for election as Education Secretary (I vacancy)

Kevin Houston

Candidate for election as Member-at-Large (Women and Diversity) (1 x 2-year vacancy)

Sara Lombardo

Candidates for election as Member-at-Large of Council (5 \times 2-year terms; * in the event of Niall Mackay being elected Publications Secretary, there will be 5 \times 2-year terms and 1 \times 1-year term)

Shabnam Beheshti

Elaine Crooks

Andrew Dancer

Jessica Enright

Anotida Madzvamuse

Frank Neumann

Rachel Newton

Graham Niblo

Brita Nucinkis

Alina Vdovina

Candidates for election to Nominating Committee (2 x 3-year terms vacant)

Nira Chamberlain

Gianne Derks

Philip K. Maini

Reidun Twarock

CANDIDATE FOR ELECTION AS PRESIDENT (I VACANCY)

Ulrike Tillmann FRS, Professor of Mathematics, University of Oxford; Director of the Isaac Newton Institute and N M Rothschild & Sons Professor, University of Cambridge (from 1 October 2021)

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PhD: University of Stanford, 1990

<u>Previous appointments:</u> SERC Research Assistant, University of Cambridge 1990-1992; Tutor and Lecturer, Merton College and University of Oxford 1992-2010; EPSRC Advanced Fellow 1997-2003.

Research interests: Topology and its applications.

LMS service: LMS Prizes Committee, 2007-2009, 2015-2018; LMS Publications Committee, 2007-2012; LMS Council, 2008-2014; LMS Research Meetings Committee (Chair), 2011-2014; Editor: LMS Proceedings/Journal/Bulletin, 2004-2007; LMS Student Texts, 2007-2017; LMS Lecture Notes, since 2018; Founding and Managing Editor of Journal of Topology, 2007-2017.

Additional information: LMS Whitehead Prize recipient 2004; LMS Mary Cartwright Lecturer 2006.

CANDIDATES FOR ELECTION AS VICE-PRESIDENTS (2 VACANCIES)

lain Grant Gordon, Professor of Mathematics, University of Edinburgh

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PhD: University of Glasgow, 1998

<u>Previous appointments:</u> Seggie Brown Fellow, University of Edinburgh 1998-1999; EU Research Fellow, University of Bielefeld and University of Antwerp 1999-2000; Lecturer then Reader, University of Glasgow 2000-2006; Professor of Mathematics, University of Edinburgh 2006-present; EPSRC Leadership Fellow 2008-2013; Head of School of Mathematics, University of Edinburgh 2014-present

Research interests: Representation theory and noncommutative algebra, and their connections with combinatorics and algebraic geometry.

LMS service: Member of Council (and in this respect member of Programme Committee and Publications Committee) 2005-2009; Member of Research Meetings Committee 2010-2012; Editor, Proceedings of the London Mathematical Society 2012-2015; Member of Prizes Committee 2017-2020; Vice-President 2019-; Member of Women in Mathematics Committee 2019-

Additional information: Member of ICMS Management Committee and Board 2006-present; Member of EPSRC Mathematics Programme SAT 2011-2014; Member of REF2014 Mathematical Sciences subpanel; Member of INI Steering Committee 2016-2019

Personal statement: I previously wrote "I think it is critical for the long-term health of the mathematical sciences community to advocate effectively for itself, both in its own terms and in terms of its place in culture and its utility in the modern economy. Given the increasing role the mathematical sciences play in a more quantitative society and some of the large investments that are being made in STEM research in the UK, there are opportunities and there are threats. It is always crucial that the theoretical parts of the discipline remain strong and vibrant, taking advantage of opportunities whenever possible, working broadly and openly so that the whole of the discipline flourishes. In the current environment, it is important to continue to support intellectual and geographic diversity, but also benefit from the large-scale funding." I still try to act on this: helping coordinate the LMS response to covid-19, supporting Early Career Researchers and, through the Research Reboot scheme, those who faced increased pressures during the pandemic; participating in discussions around major issues including Additional Funding for Mathematical Sciences; and starting discussions within the LMS on environmental sustainability. I do this as an advocate for the community coming together, in its diversity.

Catherine Hobbs, Associate Dean Research and Enterprise, Faculty of Environment and Technology, University of the West of England, Bristol.

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PhD: University of Liverpool, 1993.

<u>Previous appointments:</u> 1992–94 Teaching Fellow, University of Nottingham; 1994–2010 Lecturer/Senior Lecturer/Head of Department/Associate Dean, Oxford Brookes University. 2010-2018 Head of Department of Engineering Design and Mathematics, University of the West of England, Bristol. 2001 Visiting Research Fellow University of Auckland; 2005–6 Visiting Fellow, Heilbronn Institute for Mathematical Research, University of Bristol. Research interests: Singularity Theory and its applications, particularly to physical sciences.

LMS service: 1997-2000 and 2013-2017 Member at Large, LMS Council; 1998-2001 Chair LMS Women in Mathematics Committee; 2003-2007 and 2013-2018, member LMS Women in Mathematics Committee; 2003-2005, 2008-2010, 2013-14 Member of LMS Nominating Committee; 2008-2013 LMS representative on BMC Scientific Committee; 2015-present Member of LMS Publications Committee; 2017-present LMS Vice President; 2017-present Member of LMS Education Committee; 2017-present Chair of LMS Personnel Committee; 2019-present Member of the LMS Newsletter Editorial Board.

Additional information: Chair of Heads of Departments of Mathematical Sciences Committee 2014–2017; Member of EMS Women in Mathematics Committee 2004–2010; Member of Standing Committee of European Women in Mathematics, 2001–2007; Fellow of the IMA; Member of IMA Council 2016-present. Principal fellow of the HEA. National Teaching Fellow 2019.

Personal statement: I have had a long association with the LMS and have a firm belief in the importance of the Society to UK mathematics, as a membership organisation as well as a publisher and supporter of research mathematics across the broad range of mathematical activity in the UK. I have been involved in a number of aspects of LMS business over the last 24 years, including women in maths, publications and education committees. During my tenure as Vice President thus far I have taken on chairing Personnel Committee and become a member of the LMS Newsletter Editorial Board alongside my continuing membership of various other LMS Committees. I have the role of overseeing LMS Communications as part of my portfolio. I have represented the Society nationally and internationally. I would be honoured to be able to continue to work for the Society as Vice President.

CANDIDATE FOR ELECTION AS TREASURER (I VACANCY)

Simon Salamon, Professor of Geometry, King's College London

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DPhil: University of Oxford, 1980

<u>Previous appointments:</u> Visiting Assistant Professor, University of Maryland; Postdoc, SNS Pisa; Member, IAS Princeton; Lecturer and Reader, University of Oxford, 1984-2001; Reader, Imperial College 2004-05; Professore ordinario, Politecnico di Torino, 2000-11.

<u>Research interests</u>: Differential geometry, complex and quaternionic structures, twistor theory, Einstein metrics, special holonomy, Lie groups, nilmanifolds.

LMS service: Editorial Board, 1995-98; Co-Managing Editor, PLMS, 1998-2000; Treasurer 2020-21.

Additional information: Head of Department of Mathematics, King's College London, 2013-17. Co-Editor-in-Chief, EMS Surveys in Mathematical Sciences, 2014-17.

<u>Personal statement:</u> Managing the Society's finances in the present era presents special challenges. There is a desire to catch up on all the activities that have been postponed in the last 18 months, and practising mathematicians need LMS support now more than ever. I would aim to broaden the Society's membership, also internationally. At the same time, the LMS must use its assets wisely to cushion future falls in publications income, and invest in new opportunities in the area of communicating mathematics and promoting its importance.

CANDIDATE FOR ELECTION AS GENERAL SECRETARY (I VACANCY)

Robb McDonald, Professor of Mathematics, University College London

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PhD: 1991 University of Western Australia

<u>Previous appointments</u>: 1991-93 Royal Society Endeavour Fellow, University of Oxford; 1993-94 Australian Research Council Research Fellow, Monash University; 1994--present Lecturer, Reader and Professor, UCL.

<u>Research interests</u>: fluid mechanics, vortex dynamics and applied complex analysis. Application of mathematics to geoscience.

LMS service: General Secretary from November 2020

Additional information: 2011-18 Head of Department of Mathematics UCL; Fellow of the IMA

Personal statement: Having benefited personally from LMS support through its research funding schemes and Good Practice workshops, and witnessed the positive impact of the society's activities (e.g. the undergraduate research bursary scheme), I am keen to help the society realise its ambitions. While HoD at UCL I enjoyed working with departmental and university colleagues, as well as those from other London and UK universities, in supporting mathematical science, and addressing the challenges of equality and diversity of our discipline. I hope these experiences will be useful in the LMS General Secretary role. This is an exciting time to be mathematician with the proposed new Academy of Mathematical Science, increased funding opportunities and the public and policy makers

increasingly aware of the important role science and mathematics does and can play in society. If elected General Secretary, I look forward to working with LMS colleagues and the mathematical community in ensuring LMS is well-placed to create and take advantage of opportunities, and that it has a strong voice in education, research and promotion of all areas of mathematical science. Finally, partly owing to my UCL association, I am aware of the remarkable history of the LMS—a history deserving of recognition and celebration.

CANDIDATE FOR ELECTION AS PUBLICATIONS SECRETARY (I VACANCY)

Niall MacKay, Professor of Mathematics, Department of Mathematics, University of York

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PhD: University of Durham, 1992

<u>Previous appointments:</u> 1992-93: JSPS fellow, RIMS, Kyoto University; 1993-95: PPARC Research Fellow and fellow of Queens' College, Cambridge; 1995-98: Stokes Fellow, Pembroke College, Cambridge; 1998-99: Lecturer, University of Sheffield; 2000-date: University of York: Lecturer (2000), Senior Lecturer (2005) Reader (2009), professor (2014); Head of Department 2015-2021.

Research interests: Integrable systems and quantum groups; operations research and history.

LMS service: LMS Education Committee 2004-09 and 2011-14; Editorial Adviser 2005-14; Council Member-at-Large from November 2020; Publications Committee and Personnel Committee from February 2021; LMS Newsletter Editorial Board from April 2021.

Additional Information: Member of QAA MSOR benchmark statement review group 2005-08, Advisory Committee on Mathematics Education (ACME) 2011-14, MEI "Critical Mathematics" advisory group 2013-15, loP Curriculum Committee 2013-15, and various other committees and working groups for the ILTHE, HEA, QCDA etc. Member of EPSRC Peer Review College 2003-10. External examiner, Mathematical Tripos, University of Cambridge 2014-17. Editorial Board member, *Teaching Mathematics and its Applications*, 2014-2021.

Currently Chair of Correspondents for the INI and ICMS (2019-date).

Personal Statement: I stepped back from a wide range of external commitments when I became Head of Department at York in 2015. I step down as HoD in 2021, and am now enjoying renewing my involvement with the LMS, with whom I enjoyed a long spell on Education Committee culminating in my term on ACME, and a similar term as Editorial Adviser for Mathematical Physics. I am fully aware that it will not be easy to be Publications Secretary in an era of great change in academic publishing. I hope to preserve our income as far as possible, so that it can continue to be used to support the academic mathematics community, and to preserve and enhance the quality and standing of the LMS journals within world mathematics and thereby their value to UK mathematicians, both collectively and as individual authors and readers.

CANDIDATE FOR ELECTION AS PROGRAMME SECRETARY (I VACANCY)

Chris Parker, Professor of Pure Mathematics, University of Birmingham.

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PhD: University of Manchester, 1988.

Research interests: Group theory, representation theory and related areas.

<u>LMS service:</u> Regional organizer Midlands Region (2006-2019), chair Early Career Research Committee 2017-, chair Research Meetings Committee 2016, Programme Secretary 2018-2020, Member of the LMS Covid Response working party.

<u>Additional information:</u> Editor in Chief of Journal of Group Theory. Organizer of Groups St Andrews in Birmingham 2017, organized numerous other workshops and conferences.

Personal statement: The breadth, health and vibrancy of the mathematical community in the UK is in no small part due to the backing provided by the LMS. Through my leadership of the Early Career Research Committee, I have witnessed the impact of the support offered to our undergraduate and postgraduate students, postdoctoral researchers and new lecturers. The activities of the Early Career Committee encourage the development of mathematicians nationwide. If re-elected as Programme Secretary, I will continue to be a strong advocate in support of these activities and will seek to advertise the support available as widely as possible. I will also emphasise the importance of continued support for Early Career Researchers in the difficult post-Covid environment. It is evident from meetings that we have held this year that postgraduate students and postdoctoral researchers regard it as essential to build research networks. Providing opportunities for this kind of career development will be one of my priorities this coming year and is something that the LMS is well placed to provide. I will also continue to speak in

support of mathematics as a research activity that can be practised at a world class level in institutions across the country.

CANDIDATE FOR ELECTION AS EDUCATION SECRETARY (I VACANCY)

Dr Kevin Houston, Senior Lecturer, University of Leeds.

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PhD: University of Warwick, 1995.

<u>Previous appointments:</u> 1994–1996 Postdoctoral Research Assistant, University of Liverpool; 1996–2000 Lecturer/Senior Lecturer Middlesex University; 2000–2006 Lecturer University of Leeds; 2006–present Senior Lecturer University of Leeds.

Research interests: Singularity Theory, Discrete Differential Geometry and the applications of geometry.

LMS service: Education Secretary, involves chairing Education Committee, membership of LMS Council, Finances and General Purposes Committee, and the Joint Mathematical Council; Member of Education Committee 2012—present; Chair of Education subcommittee on Public Engagement 2012—2018 which involved being LMS representative on the Joint Promotion of Mathematics committee; LMS representative on British Science Festival Mathematics Section Committee.

<u>Additional information:</u> My Education Committee work has involved organising the LMS Popular Lectures, the LMS and Gresham Lecture and working with other bodies such as IMA, Gresham College, RSS, JMC (of which I am a trustee), and the British Science Association.

I have been heavily involved in outreach activities for many years. I have visited many schools talking to many teachers and thousands of students. Also, I have presented at high profile events such as the British Science Festival. I am an organiser of conferences for maths communicators: MATRIX2016 and Talking Maths in Public.

My best-selling textbook for undergraduates How to Think Like a Mathematician has been translated into four other languages and I have published a second book Complex Analysis: An Introduction. I am a regular presenter at the Induction Course for New Lecturers in the Mathematical Sciences.

From 2014–2018 I was on the Steering Committee and Management Committee of MAGIC, one of the Taught Course Centres for postgraduate teaching via video conferencing. This project, initially funded by EPSRC, broadens the education of PhD students in the UK.

I have been Education Secretary for four years and in the last two years, amongst other activities, have participated in ACME Contact Group for A Levels, have been involved in extending the LMS CPD grant scheme to HE institutions, introduced a training scheme for mathematics outreach, and created an LMS website for helping mathematicians with recent accessibility legislation.

<u>Personal statement:</u> I have a strong interest in teaching with 30 years experience of teaching in HE institutions and an institutional award for teaching excellence. My education interests are broad, from face-to-face teaching, publications, digital and innovative exhibitions.

The Covid-19 crisis has affected mathematics and mathematicians at all levels. My experience of deepening links with other learned societies has helped in our response. For example, with others I produced a survey and helped disseminate good practice in take-away open-book assessment in mathematics. More significantly, I founded, along with representatives of the IMA and RSS, a highly successful project on Teaching and Learning Mathematics Online (TALMO) with more than I 200 participants.

We face a diverse set of problems resulting from the pandemic, for example, national examinations and in particular the lack, over the last decade, of an increase in student recruitment in HE. Furthermore, other problems have not gone away, eg, the consequences of Brexit and mathematics teacher recruitment and retention. The LMS is vital in addressing these and I believe I have a good track record in responding to them in a robust and practical manner. I am keen to continue serving the LMS and its members as the Education Secretary.

CANDIDATE FOR ELECTION AS MEMBER-AT-LARGE (WOMEN AND DIVERSITY) (I VACANCY)

Sara Lombardo, Professor of Mathematics, Loughborough University

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PhD: University of Leeds, 2004.

<u>Previous appointments:</u> I have held various post-doctoral positions in Leeds, Manchester, Rome and Amsterdam, before returning to the UK in 2010, accepting a Senior Lectureship at Northumbria University in Newcastle upon

Tyne. I was promoted to Reader in 2014 and served as Head of Mathematics between 2014 and 2017. I obtained a personal Chair in 2017 and I am currently an Associate Dean at Loughborough University.

<u>Research interests:</u> Integrable systems, a lively area of mathematics which brings together algebra, analysis and geometry to tackle fundamental problems often motivated by mathematical physics.

<u>LMS service</u>: since 2017 member of the Women in Mathematics Committee, now Women and Diversity in Mathematics Committee, and of the Good Practice Scheme steering group.

Additional information: I am a member of the IMA Council and IMA Research Committee. I am a member of the EPSRC Strategic Advisory Team for Mathematical Sciences and will chair the team from January 2022. I have organised several research workshops and conferences, in the UK and abroad, often as chair of the organising committees. I have been guest editor of volumes and collections and I am currently on the editorial boards of two journals. Since 2021, I serve on the Scientific Steering Committee of the Isaac Newton Institute. I have led Equality, Diversity and Inclusion initiatives, both nationally and internationally. I have led Northumbria University towards its first institutional Athena SWAN award.

<u>Personal statement:</u> I am a keen advocate of the role of mathematics in the society, and of the unique contribution that mathematical sciences bring to other STEM disciplines and to the economy. I believe that it is important to promote interdisciplinary research as well as to emphasise the importance of fundamental research, especially in this moment of changes and uncertainty. I also believe that embracing diversity – in all its aspects – is key to successfully tackle research challenges and to create a welcoming and truly inclusive environment for the UK mathematics community. The LMS clearly has one of the key roles to play with the Women and Diversity in Mathematics Committee and I am keen to contribute with my experience, ideally influencing also the EPSRC and UKRI.

CANDIDATES FOR ELECTION AS MEMBER-AT-LARGE OF COUNCIL (5 \times 2-YEAR TERMS OR 5 \times 2-YEAR TERMS AND I \times I-YEAR TERM)

Shabnam Beheshti, Senior Lecturer in Mathematics, Queen Mary University of London

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PhD: University of Massachusetts, 2008

<u>Previous appointments:</u> 2008-2009 Visiting Fellow, Tata Institute of Fundamental Research; 2013 Visiting Researcher, Mathematical Sciences Research Institute, Berkeley; 2009-2014 Assistant Professor of Mathematics, Rutgers University; 2014-2015 LMS Grace Chisholm Young Fellow, QMUL.

Research Interests: Mathematical Relativity, Geometric Analysis, PDEs, Differential Geometry, Relativistic Hydrodynamics, Complex Analysis.

LMS service: None (yet).

Additional information: Recipient of the following LMS Grants: Grace Chisholm Young Fellowship (2014), Research in Pairs (2016), Celebrating New Appointments (2018), and Undergraduate Research Bursary (2019, 2021). Longstanding member of the American Mathematical Society (AMS) and Association for Women in Mathematics (AWM), new member of European Women in Mathematics (EWM), Athena SWAN Champion (2017/18); parallel session speaker and invited guest panellist at the European Congress of Mathematicians (ECM 2021). Referee for international journals in Analysis, Physics and Mathematical Physics. Over 10 years, I have co-organised multiple workshops at the interface of PDEs, Geometry, Combinatorics, most recently in Relativistic Hydrodynamics (Oberwolfach, 2020).

<u>Personal statement:</u> Having been the recipient of significant LMS support, from my arrival in the UK to my most recent grant success, I am aware of the significant impact this learned society has, and can continue to have, in supporting a diverse body of mathematical researchers in the UK. I feel that now is the right time for me to serve the LMS in a greater capacity, and would do so with enthusiasm.

Society support of mathematicians at all career stages, extends far beyond research funding; LMS activities underpin discussions on research, equality & diversity, education, public engagement, and policy-making at both local and national levels in a way that only a well-recognised body can achieve. During my time as Athena SWAN Champion, our School formed valuable connections across the UK through LMS Good Practice Workshops and saw the LMS benchmarking guide make a national impact.

As universities face a new and significant post-pandemic challenges, I believe the LMS is well-placed to advocate on behalf of the broader UK mathematical community and ensure long-term sustainability of the profession. I hope to use my international research, education and EDI experience to contribute positively to the mission of the Society.

Elaine Crooks, Professor, Swansea University

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PhD: University of Bath, 1996

<u>Previous appointments:</u> Lecturer/Associate Professor Swansea, 2007-2019; Darby Fellow, Lincoln College, Oxford, 2002-2007; Junior Research Fellow, Balliol College, Oxford, 1999-2002; EPSRC postdoc 1996-1999; short term postdoc positions in Lausanne, Paris, Rome.

<u>Research interests:</u> Nonlinear partial differential equations; singular limits of elliptic and parabolic systems; reaction-diffusion-convection systems and travelling waves; applications of PDE to biology; geometric methods for image processing.

LMS service: Editorial Advisory Board 2009-2018; Member-at-Large of Council; from 2019; Publications Committee, from 2020; Council Diarist, from 2020; LMS Representative to ICIAM, since 2021.

Additional information: EPSRC Peer Review College, from 2018; Participation in various panels for EPSRC, including as chair, and for UKRI Future Leaders Fellowships; Deputy Head of Mathematics for Research and Engagement/Acting Head of Mathematics, Swansea University, 2019-2021; Head of the School of Mathematics and Computer Science, Swansea University, from 2021; Co-director of Swansea Centre for Biomathematics, from 2016. Personal statement: Having benefited from the LMS in many ways since my time as a PhD student, I would like to continue to contribute to the ongoing success of the LMS through being a Member-at-Large of Council. I bring a perspective of someone who does research with the flavour of both pure and applied mathematics, and think that much less distinction should be made between the two. I believe that research of the highest quality is, and should be, undertaken at institutions all over the UK, and LMS grants and research schools should continue to enable as many mathematicians as possible, including early career researchers, to grow and fulfil their potential as researchers and academics. I also feel that a crucial role needs to be played by learned societies such as the LMS in advocating the nature and needs of their discipline to institutions, funders and government.

Andrew Dancer, Oxford University

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PhD: Oxford University 1992

<u>Previous appointments:</u> 1990-3 Junior Research Fellow at Peterhouse, Cambridge, 1993-94; Research Fellow at MPI Bonn, 1994-5; Research Fellow at IHES, 1995-9; Assistant, then Associate Professor at McMaster University, Canada. <u>Research interests:</u> Differential and symplectic geometry and related areas of mathematical physics.

Additional information: Director of the Bath-Bristol-Imperial-Oxford-Warwick Taught Course Centre 2007-2013; Director of Graduate Studies at the Mathematical Institute, Oxford 2014-2017; Managing Editor (with R. Heath-Brown) of Quarterly Journal of Mathematics 2007-2017.

<u>Personal statement:</u> I have a strong interest in graduate education and have served as graduate studies director in my department and also as director of a taught course network. A top priority for the UK must be to attract the best doctoral students from around the world and to give them a training that will enable them to compete with the graduates of other leading doctoral programmes worldwide.

At a time when the political environment poses unprecedented challenges for UK science, it is more vital than ever that the UK maintain its links with European institutions and funding networks. The LMS has a vital role to play here in representing the interests of the mathematical community to government.

Jessica Enright, Senior Lecturer, School of Computing Science, University of Glasgow.

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PhD: University of Alberta 2011, Topic: Set representations of graphs.

<u>Previous appointments:</u> 2018-2019 Lecturer in Global Academy of Agriculture and Food Security, University of Edinburgh. 2015-2018 Lecturer in Mathematical Biology, University of Stirling. 2012-2015 postdoctoral research associate modelling animal disease outbreaks, University of Glasgow.

Research Interests: Graph theory and complex networks, particularly graphs and networks with temporal, spatial, or geometric structure. Combinatorial games on graphs. Applications and modelling involving infectious disease. LMS service: LMS Newsletter Editorial Board Member since 2020.

Additional information: From 2016 to 2018 I was a member of the EPSRC early-career forum for mathematics. I have been the General Secretary of the Edinburgh Mathematical Society since 2017, and a member of the Young Academy of Scotland since 2018. I have regularly contributed to industrial study groups, and have been active in events run by the Virtual Knowledge Exchange in Mathematics during the pandemic.

<u>Personal Statement:</u> Through the last decade working in the UK, I have been privileged to take on roles allowing me to serve the mathematics community and advocate for the mathematical sciences. I am keen to take these activities forward as part of LMS council. I work at the intersection of mathematics and theoretical computing science, and so believe I could particularly well represent society members who work across disciplines.

The LMS and the maths community more broadly face challenges (e.g. related to changing funding and publication models and the marketisation of higher education), but I believe that a renewed appreciation of the importance of mathematics to our wider society by policy-makers will lead to opportunities. I strongly believe that these can best

be captured by advocating for and supporting the whole mathematics community with a coordinated approach, and this would inform my approach to council service. Supporting diversity within mathematics is important, including across mathematicians' backgrounds and identities, career stages, research interests, and geographic locations.

Anotida Madzvamuse, Professor in Mathematical and Computational Biology, University of Sussex

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DPhil: University of Oxford, 2001

Previous appointments: 06-2016 – Professor in Mathematics, University of Sussex; 03-2013 – 06-2016 Reader in Mathematics, University of Sussex; 10-2011 – 02-2013 Senior Lecturer in Mathematics, University of Sussex; 09-2006 – 09-2011 Lecturer in Mathematics, University of Sussex; 01-2011 – 12-2012 LMS MARM and Visiting Professor, University of Nairobi, Kenya; 01-2010 – 122012 Visiting Professor, Auburn University, AL, USA; 06-2009 – 09-2009 Visiting Professor, Bogazici University, Istanbul, Turkey; 08-2003 – 09-2006 Assistant Professor, Auburn University, AL, USA; 10-2000 – 08-2003 EPSRC Postdoctoral Research Fellow, University of Oxford.

Awards: Royal Society Research Merit Award Holder (2016 -2021); Theodore von Kaman fellowship, awarded by RWTH University of Aachen (2013).

Research interests: My research is at the forefront cutting-edge of Science in Mathematical and Computational Biology. I have contributed to the emergence of new areas of research including (i) modelling, analysis and simulations of reaction-diffusion systems on growing domains and evolving surfaces, (ii) modelling, analysis and simulations of bulk-surface partial differential equations (BS-PDEs) with applications to experimental and material sciences, (iii) the formulation, derivation, analysis and implementation of novel numerial methods for bulk-surface PDEs, and (iv) the development of new mathematical models in experimental sciences and plant biology. Hence, my research encompasses Applied Mathematics, Mathematical and Computational Biology, Pattern Foundation, Transport Processes in Cell motility, Cell migration in Cell Motility, Numerical Analysis (bulk-surface finite elements, finite elements, moving grid finite elements, bulk-surface virtual element methods, finite differences, multi-grids, phase-fields), Coupled Bulk-Surface Partial Differential Equations, Multiscale Modelling in Biology, and Inverse Problems in Biology.

LMS service: A key part of my research agenda is to train and mentor a new generation of early career fellows with unique and transferable expertise and techniques at the interface between Mathematical and Experimental Sciences. Over the last 10 years, I have graduated more than 15 PhD students and currently supervise 6 PhD students (Sussex(I), UK; University of Nairobi (I), Kenya; University of Zimbabwe (2), Zimbabwe; University of Limpopo (2), SA). During the same period, I have supervised 9 Postdoctoral Research Fellows in the areas of cell motility (2), NHS Sussex Integrated datasets: Machine learning and data analytics (2), pattern formation (2), numerical analysis (I) and NHS COVID-19 modelling (2). In particular, during the pandemic, to mitigate the impact of COVID-19 within the Sussex region, I managed a research team of around 9 research assistants funded and supported jointly by the Higher Education Infrastructure Fund (Sussex), Brighton & Hove City Council and the NHS.

I contribute to the LMS vision and agenda, I am on the LMS Mentoring African Researchers in Mathematics (MARM) board where I contribute to the research activities in Africa through identifying and supporting joint collaborations between UK and African Mathematicians. I am a former MARM mentor, I have partnered with the University of Nairobi from 2010 to 2012 to deliver postgraduate lectures to MSc students as well as working in close collaboration with junior and senior faculty at the University.

Additional information: In 2020, I was awarded a GCRF-EPSRC grant to support capacity building and research training in Sub-Saharan Africa through the https://www.icms.org.uk/events/workshops/UKAPASI UK-Africa Advanced Postgraduate Study Institute in Mathematical Sciences (UK-APASI) workshop series and research training groups. The network trained around 35 participants from ODA countries in Sub-Saharan Africa on modelling infectious diseases, climate change, financial mathematics for agro-based economies, ecology and pattern formation. Supported by substantial funding from the NSF and the British Council, in 2010, I was co-founder of the https://masamu.auburn.edu/ MASAMU Program in partnership with my collaborators from the University of Auburn in Alabama https://cws.auburn.edu/apspi Prof. O. Jenda, and the Southern Africa Mathematical Sciences Association (SAMSA) in Africa. The primary goal of the Masamu (masamu means mathematics in Southern Africa) Program is to enhance research in Mathematical Sciences and related areas within SAMSA institutions in Sub-Saharan Africa and beyond through promotion of international research collaboration. This program has since trained annually around 30-45 researchers across Africa in all areas of Mathematical Sciences.

I am a member of the UKRI EPSRC panel, the Royal Society Future Leadership Fellowship and the Isaac Newton Institute Gateway for Mathematics Scientific Advisory Panel.

<u>Personal statement:</u> I am interested in the advancement of mathematics (pure, applied as well as statistics) and its applications to experimental and social sciences including health. My vision is to train a new generation of mathematicians who are at the interface between mathematics and its applications where a strong pure mathematics

foundation is key to understanding complex processes in other disciplines. My expertise is in the translation of experimental/biological observations into new mathematical models that are amenable for analysis and computations, and therefore will enrich the mathematical sciences. I am also passionate to help advance mathematics in continents that are deprived of world-leading expertise, I work tirelessly with collaborators in Latin America, Africa, India and China to advance training and knowledge in mathematical sciences. In doing so, I support the UK to continue to be world-leading in mathematical sciences.

More recently, I have become an advocate for accelerating change in diversity, equality and inclusion in Mathematical Sciences. I think the LMS has a unique position to help understand issues around diversity, equality and inclusion and to provide and guide HEIs to establish environments conducive to breaking barriers surrounding inequalities for ethnic minority researchers and faculty.

Frank Neumann, Associate Professor, School of Computing and Mathematical Sciences, University of Leicester Email: fn8@le.ac.uk

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PhD: Georg-August-Universität Göttingen, Göttingen, Germany (1996)

<u>Previous appointments:</u> 1996-2000 Research Assistant (C1), Georg-August-Universität Göttingen; 2000-2002 Postdoctoral Research Fellow (Marie Curie Programme), CRM Barcelona; 2002- Lecturer/Senior Lecturer/Associate Professor, University of Leicester

Research interests: Algebraic Topology, Algebraic Geometry and its interactions. Recently, especially homotopy theory and cohomology of algebraic and differentiable stacks.

LMS service: Member-at-Large LMS Council, Member LMS Research Grants Committee; Chair, board member and mentor LMS MARM (Mentoring African Research in Mathematics) initiative, LMS representative for the University of Leicester, Local organiser for LMS funded joint research groups TTT (Transpennine Topology Triangle) and EMSG (East Midlands Seminar on Geometry), Co-Organiser of LMS Midlands Regional Meetings 2006 & 2018, Coorganiser of LMS-CMI Research School on Homotopy Theory and Arithmetic Geometry 2018; Member IMA-LMS-BSHM Organising Committee for the virtual 'Black Heroes in Mathematics' conferences (2020 & 2021) Additional information: Member of the EMS Committee for European Solidarity (2013-2018); Correspondent for Isaac Newton Institute Cambridge and International Centre for Mathematical Sciences Edinburgh; Co-organiser of British Topology Meeting BTM 2002 & 2009 & 2017; Co-organiser BIRS Workshop on 'Moduli, Motives and Bundles - New Trends in Algebraic Geometry', Casa Matematica, Oaxaca, Mexico 2022; Co-organiser ICMS LAGOON online research seminar on Algebra and Geometry (since 2020); Co-organiser HIMR Workshop on Topological Methods in Group Representation Theory 2019, Co-organiser 'Workshop on Number Theory and Algebraic Geometry' at British Mathematics Colloquium BMC 2011; Scientific Organiser of CRM research programme 'Homotopy Theory and Higher Categories', CRM Barcelona 2009, Co-organiser of XVI Spanish Topology Meeting Almeria 2009, Member of the scientific organisation committee for the 'International Mediterranean Congress of Mathematics (CIMMA 2005) Almeria 2005.

Personal statement: I am currently a Member-at-Large of the LMS Council and a member of the LMS Research Grants Committee. I strongly support the LMS in its aims to promote and protect mathematics in the UK and elsewhere. I am the chair of the LMS-IMU-AMMSI MARM board and since several years engaged with supporting and mentoring research activities in the developing world and in particular Sub-Saharan Africa. I do believe these initiatives are extremely important for the global involvement of the LMS and I like to continue to bring into Council my ideas and experiences. In these uncertain times, I think it is crucial that the LMS strengthens and expands its international engagement. As a member of the EMS Committee for European Solidarity which supports mathematicians from less developed regions in Europe, I experienced how important and valuable international solidarity is. I also strongly believe that the UK regional engagement of the LMS is very important and I see a crucial part of my role in Council also in supporting and strengthening this local engagement. Finally, having a long experience in outreach with schools and the general public I like to assist Council with strategies and programmes on outreach and public engagement.

Rachel Newton, Reader in Number Theory, King's College London

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PhD: University of Cambridge 2012

<u>Previous appointments:</u> 2012 – 2013 postdoc, Leiden University; 2013 – 2014 postdoc, Max Planck Institute for Mathematics (MPIM); 2014 postdoc, Leiden University; 2014 – 2015 European Post-Doctoral Institute Fellow, MPIM and IHES; 2016 – 2021 Lecturer/Associate Professor, University of Reading; 2020 – present UKRI Future Leaders Fellow.

Research Interests: Number theory, especially rational points on algebraic varieties, local-global principles and Braeur-Manin obstructions.

<u>LMS service</u>: Member of the Early Career Research Committee since 2017; LMS representative and chair of the 2021 Cecil King Travel Scholarship assessment panel; LMS Departmental Representative for the University of Reading 2016 – 2017.

Additional information: Co-organiser of the Egham – Reading – London Arithmetic Statistics Seminar, an LMS Scheme 3 research network running since 2019; member of the EPSRC Mathematical Sciences Early Career Forum since 2018; member of the Women in Numbers Steering Committee since 2016; regular participation in panels for EPSRC and NSF; UCU departmental representative for Mathematics and Statistics at Reading 2020 – 2021; co-organiser of several conferences in number theory as well as broader interest events such as the LMS Women in Mathematics Day (Reading 2022), LMS Prospects in Mathematics Meeting (Reading 2017) and Young Researchers in Mathematics (Cambridge 2010).

<u>Personal statement:</u> The LMS Prospects in Mathematics Meeting in 2006 was my first glimpse of contemporary mathematical research, and a chance to meet other undergraduate mathematicians who went on to become my friends and collaborators. Since then, I have spoken at or co-organised many of the LMS-sponsored events I attended as a young researcher. I see Council membership as another way of giving back.

The community-building activities of the LMS are especially important during the pandemic. I am particularly concerned about the difficulties facing early career mathematicians without strong professional networks or job security, and the danger of hybrid meetings inadvertently creating second-class citizens.

If elected, I will seek to make our community more open and inclusive. The LMS has a key role to play at an early stage in providing guidance to pupils and their teachers. In my experience as a student at a state school with no further maths provision, the biggest barrier to success was poor advice. My PhD students have made me keenly aware of the visa-related and cash-flow issues that face international researchers on low pay and I think there is an opportunity for the LMS to help remove some of these barriers to participation.

Graham Andrew Niblo, Professor of Mathematics, University of Southampton

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PhD: University of Liverpool 1988

<u>Previous appointments:</u> 1987-88 Postgraduate RA, University of Michigan; 1988-90 SERC Postdoctoral Research Fellow; 1990-92 SERC PDRA to Peter Kropholler, QMC, London; 1992-2006 Lecturer/Reader, University of Southampton; 1998 Visiting Researcher Rutgers, Newark; 2007-2011 Head of Pure Mathematics, University of Southampton; 2012-15 Head of School of Mathematical Sciences, University of Southampton; 2011-2012 Leverhulme Fellowship and Visiting Researcher University of Oxford.

<u>Research interests:</u> Geometric group theory, low dimensional topology, K-theory, non-commutative geometry, applications of pure mathematics, and especially the interaction of these topics.

Additional information: 2015-2017 Member of the EPSRC Mathematical Sciences Strategic Advisory Team; 2018-2020 Chair of the EPSRC Mathematical Sciences Strategic Advisory Team; 2020- Member of Council of the IMA (coopted 2020, elected 2021); 2020- Member of the EPSRC Science and Engineering Technology Board; 2012- Fellow of the IMA; 2002- Director and author of the National Cipher Challenge (a schools outreach programme).

LMS service: Editorial advisor for LMS publications 2008-2018; co-organizer of LMS Regional Meetings on "Limit Groups", "Geometry, Analysis and Logic in Groups" and "Hyperbolic Geometry".

<u>Additional information:</u> Co-organiser of LMS scheme 3 collaborative seminars, including the Bristol-Oxford-Southampton "Geometric and Analytic Methods in Group Theory workshop".

Personal statement: The LMS, working together with other learned societies, has a crucial role to play in promoting the integrated nature of the mathematical sciences. At a time when curiosity driven research is under threat in some quarters, we share an interest in demonstrating how the many strands of enquiry across mathematics weave together to make a distinctive and powerful contribution to our culture. As an active researcher in pure mathematics and ex head of a broad-based mathematics department I will bring a wide perspective to this issue. I will use my experience of working constructively with EPSRC and with the IMA to build bridges, and I look forward to working with colleagues in the LMS to engage with and tactfully challenge opinion formers and decision makers, to maintain the health of our discipline for future generations of mathematicians and the wider benefit of society.

Brita Nucinkis, Professor of Mathematics, Royal Holloway, University of London

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PhD: 1997, Queen Mary and Westfield College, University of London

<u>Previous appointments:</u> 1997-1999 Research assistant/fellow University of Southampton; 1999-2004 Assistant Professor, ETH Zuerich, Switzerland; 2004-2012 Lecturer/Senior Lecturer/Professor, University of Southampton; 2013- Professor, RHUL.

Research interests: Group Theory, homological algebra, cohomology of groups, algebraic topology

LMS service: In November 2017 I was elected to Council as Member-at-Large, and was re-elected in November 2019. I took over as Chair of the Society Lectures and Meetings Committee in November 2019, and have been serving on Grants Committee for one year now. From 2017-2019 I served as Council Diarist, and have been a member of the Council Covid-19 Working Group throughout the pandemic.

Additional information: I am a research active pure mathematician with experience in quite varying environments. All through my time at UK institutions I have benefited tremendously from the opportunities offered by the LMS, be it from attending meetings as a Ph.D student, Women in Mathematics meetings as a new postdoc, to later unbureaucratically obtaining funding for various research projects and meetings. In light of current funding trends becoming more utilitarian, it is very important for the mathematics community to have a unified voice in defending basic research. I will continue contributing to this, and will help preserve the uncomplicated and vital funding the LMS is currently providing.

Dr Alina Vdovina, Senior Lecturer, School of Mathematics and Statistics, Newcastle University UK.

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<u>PhD:</u> 1996 Moscow State University. 2005 Habilitation, University of Bonn.

<u>Previous appointments:</u> 2002-04 --- Lise-Meitner Habilitation fellowship, University of Bonn; 2001-02 --- Visiting assistant professor, SUNY Binghamton; 2000-01 --- Visiting professor, Max-Planck-Institute fur Mathematik, Bonn; 1999-00 --- ATER at ENS of Lyon; 1998-99 --- NATO fellowship at Institute Fourier, Grenoble

<u>Research interests:</u> geometry and analysis on groups acting on buildings; fundamental groups of algebraic varieties; geometry of Riemann surfaces; knot theory; geometric and combinatorial group theory; constructing C*-algebras and computing their K-theory; non-commutative geometry and operator theory.

I have more than 45 scientific papers written alone or in collaboration with 35 collaborators. Please see my homepage for details.

LMS service: LMS Newsletter Editor-in-Chief since June 2021, Member of LMS Research Grants Committee and Society Lectures and Meetings Committee since 2016, LMS Council member 2015-2019; 2005-2006 Member of the organizing committee of BMC2006; organizer of LMS funded conferences "Beauville surfaces and groups", 2012 and LMS Durham Symposium 2013, Joint IMA/LMS conferences (on zoom) "Topological methods in data science", October 2020 and "Mathematics in human society", October 2021.

<u>Personal statement:</u> Six years ago, when I was first elected, I believed that maintaining high standards of research is the key purpose of the LMS, and that one of the best ways to achieve this is by the active promotion of various forms of collaboration within mathematics as well as between mathematics and other fields.

I believe that as a member of the Research Grants Committee, Society Lectures and Meetings Committee, my past work as a member of the Council, and my recent work as LMS Newsletter Editor-in-Chief, I have helped the LMS to meet its principal obligation: the advancement of mathematics.

For example, in the Research Grants Committee we expanded and developed further research grant schemes and put much emphasis on collaboration. In view of recent cuts to many of the Society's activities, it is important to have people in the Council with such a wide experience as mine to prioritise the key directions.

I would continue to emphasise that some of the key Society projects such as: the Hardy Lecturer Series, the Invited Lecturer Series, Grant Schemes 2 and 4, printed copies of the LMS Newsletter on demand, and help to mathematicians at vulnerable stages of their career, should remain intact despite cuts.

Even though the LMS already supports mathematicians at vulnerable stages of their career, for example via the Early Career Researchers Committee, in the current increasingly harsh environment the LMS should provide more support for those between jobs, retired and minorities.

CANDIDATES FOR ELECTION TO NOMINATING COMMITTEE (2 X 3-YEAR TERMS VACANT)

Nira Chamberlain, Professional Head of Discipline - Data Science Atkins - SNC Lavalin

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Home page: About Dr. Nira - Dr Nira Chamberlain CMATH FIMA FORS CSci

PhD: Portsmouth University 2013

Research interests: The Black Heroes of Mathematics, The Gambler's Ruin Problem, Mathematical Modelling of Project Management, Modelling the Competition, Mathematical and Machine Learning algorithms

<u>LMS service</u>: I have worked with the LMS leadership on several initiatives including Black Heroes of Mathematics Conferences and Protect Pure Mathematics Campaign.

Additional information: In the last 30 years, I have worked all over Europe solving complex industrial problems through mathematical modelling. In the last decade I have won the Big Internet Math Off – maths communication title – World's Most Interesting Mathematician as well as this I have been recognised as the Science Council UK's

Top 100 Scientists, Power List 5th Most Influential Black Person in the UK (2018), The Financial Times Top 100 Most Influential BAME in UK Tech (2019), Honorary member of the Mathematical Association (2020) and I was the first Black Mathematician to appear in the UK's Who's Who.

I am currently the President of the Institute of Mathematics and its Applications (terms ends 31st December 2021), a Visiting Fellow at Loughborough University and the Professional Head of Discipline – Data Science at SNC Lavalin Atkins.

<u>Personal statement:</u> All throughout my career, I have worked hard to build and enhance a powerful mathematical identity. Whether you are pure or applied, industry or academia we should not be apologising for being a mathematician, we should be proud to be mathematicians. Through the LMS Nominating Committee I wish to identify and support those who will be "Champions" and strong defenders of the field Mathematics.

Gianne Derks, Professor of Mathematics, University of Surrey

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PhD: University of Twente (NL), 1992

Research interests: My research is in nonlinear dynamical systems in the areas of partial differential equations, geometry and mechanics, patterns and symmetry, and biological models. Recurrent topics in my research are slow-fast systems, solitary waves and fronts in symplectic and multi-symplectic systems, relative equilibria in Hamiltonian systems and effects of perturbations on those objects. Apart from mathematical questions in those areas, I am also interested in applications in physics, engineering and life sciences. Currently I am working on mathematical modelling of cancer treatments, pharmacokinetic-pharmacodynamic (PKPD) dynamics, and sleep-wake and circadian cycles. LMS service: I'm a member of the Research Grant Committee (since in 2015) and a member of the Climate Working group.

Additional information: I am one of the founding members of the Quantitative Systems Pharmacology network (QSP-UK, 2015-); I was a member of the programme committee of the 2021 SIAM Applications of Dynamical Systems conference as well as the 2018 SIAM Conference on Nonlinear Waves and Coherent Structure; I was a supporting organizer of the LMS funded scheme 3 Mathematics in Life Sciences network (2015 – 2018); I was chair of the selection committee for the J.D. Crawford Prize, awarded at the 2015 SIAM Conference on Applications of Dynamical Systems; I am a member of the editorial board of the Journal of Geometric Mechanics; I am a member of the London Mathematical Society (LMS), the Society for Industrial and Applied Mathematics (SIAM), and the Royal Dutch Mathematical Society (KWG).

<u>Personal statement:</u> It is important to me that the LMS puts inclusion, diversity and equality at the centre of its mission and activities. As a member of the Nominating Committee I would strive for diverse and broad slate of candidates. This would include aiming for a broad range of candidates from a wide spectrum of mathematical research areas. Mathematics gains strength from inputs and ideas from various angles and working together across its full spectrum.

Philip K. Maini, Statutory Professor of Mathematical Biology, Mathematical Institute, University of Oxford

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D.Phil: University of Oxford 1985.

<u>Research Interests</u>: Mathematical modelling in biology and medicine, with particular application to pattern formation and collective cell migration in developmental biology, and investigating a range of problems in tumour growth and development.

<u>Personal Statement</u>: Having experience of being on many international journal editorial boards and on the management committees of a number of UK research centres, I feel that I have acquired a broad knowledge of the applied mathematics landscape in the UK. As such, I would be in a good position to nominate people from this section of the UK mathematics community to serve on LMS committees.

Reidun Twarock, Professor of Mathematical Virology, University of York

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PhD: Technical University of Clausthal, Germany, 1997

Appointments: Dorothea Erxleben Fellow (1997-2000); Marie Curie Fellow (2000-2001); EPSRC Advanced Research Fellow (2004-2008); Royal Society Leverhulme Trust Senior Research Fellow (2014-2015); EPSRC Established Career Fellow (2018-2023); Royal Society Wolfson Fellow (2018-2023). Lecturer (2001-2005), City University; Reader (2005-2009) and Professor (since 2009), University of York.

<u>Research interests:</u> Group, graph and tiling theory in virology; mathematical models of viral life cycles, viral evolution and viral infections with focus on viral geometry.

LMS Service: Research Policy Committee (2013-2016).

Additional Information: EPSRC Strategic Advisory Teams in Mathematics (2007-2013) and Healthcare (2008-2011); EPSRC Mathematics Taxonomy Working Group (2015); member of the EPSRC College since 2005; Scientific

Steering Committee of the Isaac Newton Institute for Mathematical Sciences (2010-2013); co-organiser of a semester programme on "Mathematical Molecular Biosciences" at the Mathematical Biosciences Institute in Ohio (2015); regular conference organisation: instigator, with experimentalists Peter Stockley (Leeds), of the Mathematical Virology workshop series; co-organiser of special sessions on Mathematical Virology, e.g. with Roya Zandi at the Society of Mathematical Biology Conference in 2021, and with Marco Vignuzzi at the General Meeting of the American Society of Virology in 2017; Gold Medal of the Institute of Mathematics and Its Applications (2018). Personal Statement: Through my work at the interface of mathematics and virology, I have first-hand experience of the synergies between mathematics and its application areas. Partnerships with experimental science and industry can act as a catalyst for the development of new mathematical approaches, and mathematics can enable discoveries in the sciences and instigate innovations in industry. I am planning to foster the partnership of mathematics with its application areas, both in the sciences and in industry.

I am also actively engaged in public engagement activities. We are developing Virtual Reality experiences of our geometric models of virus architecture in collaboration with computer artists at Goldsmiths and London Geometry, funded by a Wellcome Trust public engagement grant associated with our Wellcome Trust Investigator Award. These are shown at galleries, e.g. The Lowry Gallery in Manchester ("Inside The HSVI, Herpes Simplex Virus in VR - Artistic variations" as part of the exhibition "The State of Us" in 2019/2020), and we are also developing an associated home-use app option. I am planning to foster public engagement activities, e.g., through interactions with MathsWorldUK.