LMS ELECTIONS TO COUNCIL AND NOMINATING COMMITTEE 2019: CANDIDATE BIOGRAPHIES

Candidate for election as President (I vacancy)

Jon Keating

Candidates for election as Vice-President (2 vacancies)

Alexandre Borovik Iain Gordon Catherine Hobbs

Candidate for election as Treasurer (I vacancy)

Robert Curtis

Candidate for election as General Secretary (I vacancy)

Stephen Huggett

Candidate for election as Publications Secretary (I vacancy)

John Hunton

Candidate for election as Programme Secretary (I vacancy)

Chris Parker

Candidates for election as Education Secretary (I vacancy)

Kevin Houston

Candidate for election as Librarian (Member-at-Large) (I vacancy)

Mark McCartney

Candidates for election as Member-at-Large of Council (5 x 2-year terms and 1 x 1-year term vacant)

Elaine Crooks Andrew Dancer Tony Gardiner Thomas Jordan Anotida Madzvamuse Frank Neumann Brita Nucinkis Richard Pinch Marika Taylor Alina Vdovina

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

Shahn Majid Beatrice Pelloni Mary Rees Colin Sparrow

CANDIDATE FOR ELECTION AS PRESIDENT (I VACANCY)

Jonathan Peter Keating FRS, Henry Overton Wills Professor of Mathematics, University of Bristol (until 31 August 2019); Sedleian Professor of Natural Philosophy, University of Oxford (from 1 September 2019)

Chair of the Heilbronn Institute for Mathematical Research

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PhD: University of Bristol, 1989

<u>Previous appointments</u>: Royal Society Research Assistant, University of Bristol 1989–1991; Lecturer in Applied Mathematics, University of Manchester 1991-1995; Reader in Applied Mathematics, University of Bristol 1995-1997; BRIMS Research Fellow, Hewlett-Packard Laboratories, Bristol 1995-2001; Professor of Mathematical Physics 1997-2012; Head of Department 2001-2004; EPSRC Senior Research Fellow 2004-2009; Dean of Science, University of Bristol 2009-2013.

<u>Research interests</u>: Mathematical Physics – in particular Matrix Theory, Quantum Chaos, and Semiclassical Asymptotics – and connections with Number Theory.

LMS service: South West and South Wales Regional Organiser 1996–1999; Member of Prizes Committee 2016, 2017, 2018.

Additional information: Frölich Prize, 2010.

CANDIDATES FOR ELECTION AS VICE-PRESIDENTS (2 VACANCIES)

Alexandre Borovik, Professor, University of Manchester

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<u>PhD:</u> 1982.

<u>Previous appointments in the UK</u>: 1992-present time: Lecturer, Reader, from 1998 -- Professor at UMIST and University of Manchester.

<u>Research interests:</u> group theory, model theory, combinatorics, mathematics education. 91 peer reviewed papers on mathematics, 3 research monographs, 2 textbooks.

LMS service: Council Member, 2006-12 and 2014 - present time. Programme Committee 2007-10, Research Meetings Committee 2007-10, Education Committee 2010-12, Web Working Group 2010-19, Standing Orders Review Group 2013 - present time. Founder (2011) and one of the editors of The De Morgan Forum, education.lms.ac.uk, the LMS blog on mathematics education, and The De Morgan Gazette, online magazine on mathematics education; the blog has had more than 4 million views during 8 years of its existence so far.

Additional information: CV and list of publications: <u>http://www.borovik.net/CV.pdf</u>.

<u>Personal statement</u>: I served the LMS in various roles since 2006. Lately, my work focused on the review of the LMS' Standing Orders: Royal Charter, Statutes, and By-laws – I was a member of the Standing Orders eview Group (SORG) set up in 2013. The proposed changes will be put to the vote at the AGM, and I invite all members to support them.

SORG carried out a detailed analysis of how Standing Orders work in the day-to-day functioning of the LMS, offering a unique insight into the life of our Society. I have agreed to stand for election because I feel that I can use my experience and my knowledge for the good of the LMS. The update of Standing Orders is an opportunity to review our Society's long-term priorities. In particular:

* In the increasingly challenging academic environment, the LMS should focus on its core charitable aim: supporting research in mathematics. In the current political climate it is particularly hard to know what could foster a proper appreciation of mathematics. Our grant schemes promote a healthy mutually respectful mathematical culture and it is best the LMS focus on or start from that.

* Standing Orders need to be supported by efficient governance procedures at the level of Council and Committees. It is important affairs are conducted so that the LMS membership feel that what is done reflects the interests of the subject. That is the essence of a membership society. You may wish to find more at futurelms.wordpress.com

Iain 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

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

<u>LMS service:</u> 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-present

<u>Additional information:</u> 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-present

<u>Personal statement</u>: 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. The LMS has a central role in this arena: as a supporter and funder of mathematical research and education throughout the country; as a voice for a large part of the community, which works in chorus with other learned societies; and as an instigator and driver for new ideas that can help the community take advantage of the opportunities that exist and to create new ones. I hope to help the LMS with all of these things.

Professor 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. <u>Research interests:</u> 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.

<u>Additional information</u>: 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.

<u>Personal statement</u>: I have had a long association with the LMS and a firm belief in the importance of the Society to UK mathematics, as a representative 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 20 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 have represented the LMS nationally and internationally. I am currently involved in reviewing LMS communications. I would be honoured to be able to continue to work for the Society as Vice President.

CANDIDATE FOR ELECTION AS TREASURER (I VACANCY)

Robert Turner Curtis, Professor of Combinatorial Algebra, University of Birmingham.

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PhD: University of Cambridge 1972

<u>Previous appointments</u>: SRC Research Fellow, Cambridge, 1972–76; Visiting Professor, Bowdoin College, 1977–80; Lecturer, Senior Lecturer, Reader and Professor, University of Birmingham, 1980–2010.

<u>Research interests</u>: Presentations and representations of finite groups; sporadic simple groups; symmetric generation of groups; the geometric and combinatorial structures on which groups act: graphs, codes, lattices, block designs.

<u>LMS service</u>: Council member at large 2001–07; Prizes Committee 2004–5; Programmes Committee 2001–4; Librarian 2003–07; Regional co-ordinator (5 years); Treasurer 2011–date.

<u>Additional information</u>: Head of School of Mathematics 1997–2002; Council of the University of Birmingham (5 years); Chairman of 55th BMC 2003; Scientific Committee of BMC 2002–2004.

<u>Personal statement</u>: I see the role of the LMS as being more important now than it has ever been. As Government seeks ways to cut back on its expenditure it is imperative that a well-informed and articulate voice makes the case for Mathematics and, in particular, for the continued funding of mathematical research. Through the CMS, its own Education Committee and other bodies, the Society is hugely influential in defending the interests of the mathematical community. Moreover, as financial support for research becomes increasingly difficult to obtain, the role of the LMS in providing grants becomes correspondingly invaluable.

As Treasurer I am taking measures to ensure the continued financial security of the Society, so that it can support these essential activities now and in the future. Besides finance, the other main responsibility of the Treasurer is the membership of the Society. I am keen to improve communications between our elected Council and our members, and for this reason I have re-established a network of departmental representatives. There is evidence that this structure is already bearing fruit.

CANDIDATE FOR ELECTION AS GENERAL SECRETARY (I VACANCY)

Dr Stephen Huggett

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DPhil: University of Oxford 1981.

<u>Research interests</u>: Twistor theory; Graph theory.

<u>LMS service</u>: General Secretary, 2012– ; Chair, International Affairs Committee 2004–2011; Programme Secretary 2001–2011; Member of Education Committee 1992-2001.

Additional Information: Secretary of the European Mathematical Society 2007–2014.

CANDIDATE FOR ELECTION AS PUBLICATIONS SECRETARY (I VACANCY)

John Robert Hunton, Professor of Pure Mathematics, Durham University.

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PhD: University of Cambridge 1990.

<u>Previous appointments</u>: 1989–91 SERC Postdoctoral Research Fellow (held at the University of Manchester and at MIT); 1991–95 Research Fellow, Trinity College, Cambridge; 1994/5 William Gordon Seggie Brown Fellow, University of Edinburgh and honorary Research Fellow, University of St Andrews; 1995–2003 Lecturer/Reader, University of Leicester; 2001–2002 Leverhulme Research Fellow; 2003–2013 Professor of Geometry, University of Leicester.

<u>Research interests</u>: Algebraic Topology, K-theory and Dynamics, Aperiodic Patterns, and especially the interaction of these topics.

LMS service: Publications Secretary since 2013. Council member, member Finance and General Purposes Committee, International Affairs Committee, Library Committee and Personnel Committee 2013 - present. Council, Member-at-Large 2011-2013. Editorial advisor for LMS publications on K-theory and Algebraic Topology, 2006– 2013. Publications Committee 2012–2013. LMS representative on Scientific Steering Committee of the British Mathematical Colloquia 2011–2017. LMS Council representative, Nominating Committee 2012. LMS Council representative on Cecil King Mathematics Travelling scholarship interview panel 2013.

Additional information: Chair of British Mathematical Colloquium 2011; member of EPSRC College since 1999 and of Strategic Advisory Team for Mathematical Sciences 2009–2013; Member, academic subcommittee contributing to Deloitte report on 'Assessing the Economic impact of Mathematical Science Research' 2012/3; representative of the Learned Societies at the Burgess inquiry on RCUK Open Access policy 2014/15; chair of panel session at Berlin ECM discussing publishing for early career researchers 2016; Selected Exhibitor at Royal Society Summer Science Exhibition 2009 presenting contemporary pure and applied mathematical research on aperiodic geometry to Government, Policy Makers and the General Public; co-organiser 1996–2011 of LMS scheme 3 collaborative seminar Transpennine Topology Triangle; co-organiser over last 18 years of multiple workshops on various algebratopology-geometry interactions.

<u>Personal statement:</u> Concerning publications, the LMS has a dual role to play: it is a recognised body supporting and representing the publication related interests of the mathematical community, and it is also an internationally respected academic publisher itself. Moreover, this latter role provides the vast majority of the Society's income, and so directly supports mathematicians via the many LMS grant schemes and activities. In the current, rapidly

changing climate, the Society needs to keep a constant eye on the potential - and real - threats Mathematics faces in this area, working to mitigate them where possible, understanding what is happening at members' institutions, providing mathematicians with good quality information, maintaining the quality, recognition and viability of its publications, and clearly articulating - positively and constructively - the needs of mathematics to the national and international debates. If re-elected, I would endeavour to continue to use my experience and links with the mathematical and wider public communities to aid the LMS in addressing this spectrum of important activities, in particular continuing to lead the development of the Society's Publishing Strategic Plan which, in collaboration with representatives of our editors, authors, advisors, etc, is current work in progress.

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.

<u>Research interests:</u> Group theory, representation theory and related areas.

<u>LMS service:</u> Regional organizer Midlands Region, chair Early Career Research Committee 2017-, chair Research Meetings Committee 2016, Programme Secretary 2018.

Additional information: Editor in chief of Journal of Group Theory.

Organizer of Groups St Andrews in Birmingham 2017, organized numerous other workshops and conferences.

<u>Personal statement:</u> 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 involvement with 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. As a researcher, I have often benefited from LMS schemes for collaborative research and conferences. All these activities together form a portfolio of support which encourages mathematics across the country as well as promotes it internationally. If elected as Programme Secretary, I will be a strong advocate in support of these activities and will seek to advertise the support available as widely as possible. I will also speak in support of mathematics as a research activity that can be practised at a world class level in institutions across the country.

CANDIDATES 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, LMS and Gresham Lecture and working with other bodies such as IMA, Gresham College, RSS, JMC, 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 just published a second book Complex Analysis: An Introduction. I am a presenter at the Induction Course for New Lecturers in the Mathematical Sciences, participating in 2018 and 2019.

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 two years and in the past year, amongst many other activities, have participated in ACME Contact Group for A Levels, have been involved in extending the LMS CPD grant scheme to HE institutions, and negotiated increases to Education Committee grants budgets.

<u>Personal statement:</u> I have a strong interest in teaching with 29 years experience of teaching in HE institutions and an award for teaching excellence. My education interests are broad, from face-to-face teaching, publications, digital and innovative exhibitions.

We face a diverse set of problems in mathematics education in the coming years. The effects of Brexit regarding the Erasmus scheme, student recruitment, and lecturer employment are all still unclear. To name just a few other important issues: TEF; falling HE maths applications; changes to GCSE and A Level Mathematics; the crisis in mathematics teacher recruitment, retention and training. The LMS is a vital body in addressing all these problems. For the teacher crisis, under my leadership, we have created an Education Committee sub-committee to coordinate the LMS response.

The LMS represents the mathematics community and can therefore ensure that the deficit in mathematical skills in the UK is closed in a robust and practical manner.

The key to success in approaching all these issues is liaising with like minded organisations which I am well placed to do due to my relations with bodies such as IMA, ORS, and RSS.

I am keen to continue serving the LMS and its members as the Education Secretary.

CANDIDATE FOR ELECTION AS LIBRARIAN (MEMBER-AT-LARGE) (I VACANCY)

Mark McCartney, Senior Lecturer in Mathematics, University of Ulster

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PhD: Queen's University, Belfast, 1993.

<u>Previous appointments</u>: Lecturer in Mathematics, University of Abertay (1994–98). Research Officer, University of Ulster (1998–99).

<u>Research interests</u>: Mathematical modelling of predator-prey systems and traffic flow. The use of mathematical modelling in education. The history of applied mathematics and natural philosophy in Britain in the 19th and early 20th centuries.

<u>LMS service:</u> Librarian and member of Council at large. Member of the Editorial Board (Reviews Editor) of the LMS Newsletter.

<u>Additional information:</u> Current President of the British Society for the History of Mathematics (BSHM), having served previously on the Council of the BSHM as both Publicity Officer and Education Officer. Over the last decade, co-organiser of multiple workshops on the history of mathematics. Associate Editor of the International Journal of Mathematical Education in Science and Technology.

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

Elaine Crooks, Professor, Department of Mathematics, 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; reactiondiffusion-convection systems and travelling waves; applications of PDE to biology; geometric methods for image processing.

LMS service: Editorial Advisory Board 2009-2018.

<u>Additional information</u>: EPSRC Peer Review College, from 2018; Participation in various panels for EPSRC, including as chair, and for UKRI Future Leaders Fellowships; Deputy Head of Department for Research and Engagement, from 2019; Co-director of Swansea Centre for Biomathematics, from 2016.

<u>Personal statement:</u> Having benefited from the LMS in many ways since my time as a PhD student, I would like to repay this, and contribute to the ongoing success of the LMS, by becoming 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 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 funders and government.

Andrew Dancer, Oxford University

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PhD: Oxford University 1992

Previous appointments:

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.

Anthony (Tony) David Gardiner

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PhD: University of Warwick 1973.

<u>Previous appointments:</u> Assistant lecturer, University of East Africa (Dar-es-Salaam) 1968-69. DAAD Fellow, Universität Bielefeld 1970-72, Tübingen 1973. SERC Post Doc, Royal Holloway College 1972-74. University of Birmingham: Lecturer 1974-89; Reader in Mathematics and Mathematics Education (1989-2012).

<u>Research interests:</u> Permutation groups; Algebraic graph theory; History of mathematics; Mathematics education. <u>LMS service:</u> Council 1992-97 and 2015-present. Education Committee 1996-2000 and 2011-present. Major role in the committee that produced the influential report "Tackling the mathematics problem" 1995. Helped set up the Cecil King Travel Scholarship 2000. Education Secretary 2011-2012. Link for Undergraduate Summer Schools 2015-17. Holgate lecturer 2015-19.

Additional information: Texas A&M University "International Award for Excellence in Mathematics Education" 2016. I0th International Congress on Mathematics Education (Copenhagen), Invited Lecture 2004. European Mathematical Society, Chair of Education Committee 2000-04. President, Mathematical Association 1997-98; member of Council (various periods 1988-2013). Set up UK Mathematics Trust 1996 (now involving 700K pupils per year in 30+ events). Paul Erdös Award (World Federation of National Mathematics Competitions) 1995 and Senior Vice President 2006-08. UK IMO Team Leader 1990-95. My work with undergraduates and teachers began in East Africa (1968) and with schoolchildren in Birmingham (1975). I have published more than 20 books of serious mathematics aimed at schools, teachers and undergraduates – most recently "The essence of mathematics through elementary problems". Most recently I have made major contributions to the UK versions of Singapore primary mathematics textbooks, and published a wide-ranging critique - "Teaching mathematics at secondary level". Since 1995 I have worked consistently behind the scenes, pressing Ministers and officials to improve standard provision in schools. (The LMS has a role to play here, but needs to work with others.)

<u>Personal statement:</u> The sustainability of academic mathematics in the UK depends on a reliable supply of good home-grown students (part of "the people pipeline"). In this we face serious challenges. The recent welcome increases in A-level entries and undergraduate application numbers may be followed by a significant and immediate downturn (from negative reactions to the new GCSE and A level, from the new funding regime at age 16-19, and from the shortage of suitable teachers and teacher-support). If elected, pressing issues would include:

- undergraduate teaching (e.g. TEF)
- negative pressures on the uptake of A level Mathematics and Further Mathematics
- the supply, preparation and development of mathematics teachers
- the development of an improved core school curriculum
- the provision of quality universal textbooks.

Thomas Jordan, Senior Lecturer in Pure Mathematics, University of Bristol

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PhD: University of Manchester (2005)

Previous appointments: Research assistant, University of Warwick 2005-2007

<u>Research interests:</u> Ergodic theory, fractal geometry and geometric measure theory

<u>Personal statement</u>: Throughout my career I have benefitted a lot from the activities of the LMS. In particular several of the small grant schemes, including the conference grants, visits to the UK, joint research groups and undergraduate research bursaries. I feel it is important that these schemes are maintained and if possible enhanced as the value of these small grants is large.

I have a keen interest in both undergraduate and postgraduate education and have lectured large first year courses for each of the last five years. I would like to bring my experience from this into work the LMS already does on education. I also feel it is important that we promote that mathematics is an international activity and also continue to look at ways of improving diversity within the study of mathematics (particularly at the postgraduate level and beyond). Essentially I am standing because I have benefitted a lot from the LMS and would like to get involved in the good work the LMS does.

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

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PhD: University of Oxford, 2001

Previous appointments:

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

<u>Research interests</u>: 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, finite differences, multi-grids, phase-fields), Coupled Bulk-Surface Partial Differential Equations, Multiscale Modelling in Biology, Inverse Problems in Biology.

LMS service: I have been an LMS member for nearly 15 years. My major service to the LMS has been in my role as a mentor for the LMS Mentoring African Researchers in Mathematics (MARM) where I have partnered with the University of Nairobi from 2010 to deliver postgraduate lectures to MSc students as well as working in close collaboration with junior and senior faculty at the University. As a result, I was able to recruit two PhD students (now fully graduated with PhDs from the University of Sussex), Dr Victor O Juma and Dr Benard K Kiplangat. I recruited Victor to an EU Horizon2020 MSC-ITN fellowship within the network: Integrated Component Cycling in Epithelial Cell Motility (https://incern.rwth-aachen.de) of which he was one of the 15 PhD candidates. Victor was recruited three months after all the other students had been recruited and yet he was the first of the full cohort to graduate with a PhD. I recruited Benard through a competitive Chancellor's International Research Scholarship (CIRC) Award at the University of Sussex.

<u>Additional information:</u> I have supervised and graduated 13 PhD Students in a timely fashion since 2008. Four hold permanent faculty positions in the UK, UK and Middle East, some of the recent PhD graduates currently hold postdoctoral research positions in the UK, Europe and Africa, three of them in Cancer Research Laboratories as well as research institutes in Europe. Recently, I have been appointed a member of the UKRI EPSRC panel, the Royal Society Future Leadership Fellowship and the Isaac Newton Institute Gateway for Mathematics Scientific Advisory Panel. I am a co-founding member of the MASAMU programme, an initiative between the British Council and the National Science Foundation (as well as the LMS) to advance mathematics in Africa in general. I have just been recently awarded a GCRF UKRI EPSRC grant to establish a UK-Africa Postgraduate Advanced Study Institute in Mathematical Sciences in Africa (http://samsa-math.org/home-2/programmes/masamu/).

<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.

Frank Neumann, Associate Professor in Pure Mathematics, School of Mathematics and Actuarial Science, University of Leicester

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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

<u>Research interests</u>: Algebraic Topology, Algebraic Geometry and its interactions. Recently, especially homotopy theory and cohomology of algebraic stacks.

LMS service: Chair, board member and mentor of the LMS MARM (Mentoring African Research in Mathematics) initiative, LMS representative for the University of Leicester, Local organiser for the LMS funded joint research groups TTT (Transpennine Topology Triangle Sheffield-Leicester-Liverpool-Manchester) and EMSG (East Midlands Seminar on Geometry Nottingham-Loughborough-Leicester-Sheffield), Co-Organiser of LMS Midlands Regional Meeting 2006 & 2018, Co-organiser of LMS-CMI Research School on Homotopy Theory and Arithmetic Geometry 2018

Additional information: Member of the EMS Committee for European Solidarity (2013-2018); Correspondent for the Isaac Newton Institute Cambridge; Co-organiser of British Topology Meeting BTM 2002 & 2009 & 2017; Coorganiser of workshop on 'Number Theory and Algebraic Geometry' at the 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 Peronal statement: I am the chair of the MARM board of the LMS and since several years engaged with supporting and mentoring research activities in the developing world and in particular Sub-Saharan Africa. The great success of the MARM initiative of the LMS has proved that even small resources and the engagement with small research groups can make a real difference. I do believe these initiatives are extremely important for the global involvement of the LMS and I would like to bring into Council my ideas and experiences concerning these initiatives. It is also important for me to support the LMS in its general international activities and in particular with partner societies in Europe. In these uncertain times, I think it is crucial that the LMS strengthens its international engagement and I would like to support this strongly through Council. For several years I was a member of the EMS Committee for European Solidarity which supports mathematician from less developed regions in Europe to be able to attend or organise conferences or pursue research projects and I saw how important international solidarity for mathematicians is. I believe my experiences here would be very useful for the work of Council. I also strongly believe that the regional engagement of the LMS in the UK regions is very important. I have many experiences as a local organiser of several LMS Regional Meetings, involvement with joint research groups and as an LMS representative and I would be happy to assist Council in supporting and strengthening the regional engagement of the LMS. Finally, being responsible for outreach with schools and the public at Leicester and based on my experiences I would be happy to assist Council with strategies on outreach and public engagement.

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

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

Previous appointments:

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 have been the Council Diarist since then. I am now attending the Society Lectures and Meetings Committee for which I am the designated Chair to start in November 2019. I have (co)-organised several LMS-funded meetings: an LMS/EPSRC summer school on homological algebra, and LMS regional meeting and workshop, and a LMS Durham Symposium, and I am currently part of the LMS 3 network "Functor categories for groups".

<u>Additional information:</u> 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 the meetings mentioned above. 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 am planning to contribute to this and to help preserve the uncomplicated and vital funding the LMS is currently providing.

Richard Pinch, Retired civil servant.

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PhD: Oxford, 1983

<u>Previous appointments</u>: 1998-2018 Mathematician at GCHQ: including Head of Profession for Mathematics; Deputy Director Heibronn Institute for Mathematical Research. 1984-1998 Research and teaching fellowships, Cambridge University. 1983-4 Lecturer, University of Glasgow.

<u>Research interests:</u> Computational number theory: primality test and Diophantine equations. Algebraic combinatorics.

LMS service: LMS Popular lecture 1994.

<u>Additional information:</u> Currently Vice-President (Professional Affairs and Industry), IMA; member, ICMS board. Previously member Turing Gateway Advisory Board; EPSRC Mathematics SAT; Bond Review Steering Group.

<u>Personal statement:</u> This is a challenging time for mathematics in the UK. To take advantage of current opportunities, and work in the best interests of mathematics and mathematicians, it is now necessary for the LMS to work more closely and more actively with a wider range of partners. I have experience in mathematical research and in managing the engagement between academic mathematicians and customers, and have held advisory and trustee positions – I believe this puts me in a good position to help the LMS develop new working relationships.

Marika Taylor, Professor of Mathematical Physics and Head of the School of Mathematical Sciences, University of Southampton

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PhD: University of Cambridge, 1999

<u>Previous appointments:</u> 1998-2001 Research Fellow, St John's College, Cambridge; 2001-2004 Postdoctoral research fellow, Utrecht University; 2004-2012 Assistant and Associate Professor, University of Amsterdam.

Research interests: Mathematical Physics (String Theory, Relativity, Quantum Field Theory, Quantum Information)

<u>LMS service</u>: I only joined the LMS recently, following my return to the UK. In Holland I organized symposia on the mathematics of complexity for the Dutch Royal Society, and represented mathematical sciences in various strategy and advisory documents prepared by the Dutch Royal Society for research councils and for the government. As a member of the Dutch Royal Society's Young Academy, I worked extensively on their outreach programme, initiating a series of podcasts and movies to engage young people.

<u>Additional information:</u> Served on committees and colleges for research councils including NWO (Holland); DFF (Denmark); VR (Sweden); KNAW (Holland); EU Horizon 2020; Royal Society (URF committee), EPSRC and STFC. Co-organiser of multiple international workshops exploring connections between string theory, mathematical relativity and geometry. Member of several editorial boards of journals including *Scipost*, the fastest growing open access journal in the theoretical physics community. Leader of international CERN working group Gen-HET on improving diversity within the theory community. Fellow of Alan Turing Institute, working on relations between string theory, quantum information and machine learning.

<u>Personal statement:</u> Higher education in the UK is in an unprecedented state of uncertainty and volatility. Learned societies such as the LMS have a crucial role to play in advocating the importance of mathematics and science in education and for society. There is an increasing tendency for research funding to be concentrated on work with immediate impact and the mathematics community needs to work together to support all our subdisciplines, and researchers at all career stages. I would use my considerable experience of working for research councils and with policy makers to assist the LMS in its aims.

I am very active in public engagement, locally, nationally and internationally. I currently run a programme of masterclasses on appealing topics in modern mathematics to encourage young people to continue studying mathematics. As well as my work with CERN on gender, I am also involved in research studies on developing effective interventions for improving the recruitment and retention of minorities into STEM. I would hope to use this background to support the society in its efforts to improve the diversity of the mathematics community.

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

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PhD: 2005 Habilitation, University of Bonn; 1996 PhD, Moscow State University

<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; Noncommutative geometry and operator theory.

<u>LMS service</u>: 2005-2006 Member of the organizing committee of BMC2006; organizer of LMS funded conferences "Beauville surfaces and groups", 2012 and LMS Durham Symposium 2013. 2015-present LMS Council member.

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

Shahn Majid, Professor of Mathematics, Queen Mary University of London

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<u>PhD:</u> Harvard, 1998

<u>Previous appointments:</u> 1988-89 PDRA (in Swansea); 1989-91 SERC Postdoc Research Fellow (held at Cambridge); 1991-93 SERC Advanced Fellow (held at Cambridge); 1993-2003 Royal Society University Research Fellow (held at Cambridge, Harvard, Queen Mary); 2009-10 Leverhulme Senior Research Fellow (held at Queen Mary) <u>Research interests:</u> Quantum groups, noncommutative geometry, category theory, quantum gravity <u>Additional information:</u> Joint Director of the LTCC (Pure Maths) since 2014. Former Director of Pure Maths at Queen Mary 2010-13. Member of EPSRC Electoral College. Member of the Editorial Board of IJGMMP. Member of

the 2014 international REF-type review panel for Portugal (Pure Maths) among other advisory work.

<u>Personal statement</u>: I enjoy Pure Mathematics but I also have an interest in Mathematical Physics. In fact I am curious about most areas of mathematics. It's been my particular pleasure to spot and support talented postdocs and I've had a dozen or so passing through my research group over the years. I've also enjoyed public engagement such as speaking at Techfest Mumbai, the Cambridge Science Festival, Royal Institution Master Classes and twice on national TV (one of them was telling a couple of math/physics jokes and the other was doing a bit of algebra). I also did a 12-week blog on the nature of space and time on the launch of my co-authored books of essays on that topic. I have 3 textbooks if you count a monograph on quantum geometry with Beggs which is in press. I was principal organiser of a 6-month Newton Institute programme some years ago and am currently a NI-ICMS correspondent. I'd be happy to bring some of my experience and skills to the service of the LMS.

Beatrice Pelloni, Professor of Mathematics and Head of School, Heriot-Watt University

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PhD: Yale University, 1996

<u>Previous appointments:</u> Lecturer, Reader and Professor of Mathematics, University of Reading (2001-2016) <u>Research interests:</u> Nonlinear PDEs and boundary value problems

LMS service: Member of LMS Council (2013-2016); Member of the LMS Women in Mathematics committee (2010-2015); Chair, Research meetings committee, LMS (2015-2016)

<u>Additional information:</u> Currently member of the Executive Committee of the European Mathematical Society (2016-2020)

Mary Rees, Emeritus Professor of Mathematics, University of Liverpool

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PhD: University of Warwick, 1978

<u>Previous appointments</u>: Postdoctoral positions (1978-1981) at IAS Princeton, St Hilda's College, Oxford, and IHES, Bures-sur-Yvette. Assistant and then associate professor at Minnesota 1982-4. Lecturer, senior lecturer and then professor at the University of Liverpool 1984-2018

<u>Research interests</u>: Dynamical systems, in particular complex dynamics and systems with a strong geometric structure, related geometry, including Teichum\"uller geometry and hyperbolic geometry <u>LMS service</u>: member since 1984.

<u>Additional information:</u> Elected FRS in 2002. As such I have served on various fellowship panels, including the Royal Society University Research Fellowships and Dorothy Hodgkin. I currently chair the Leverhulme Trust Senior Research Fellowships panel. I am also a member of the Lindemann Fellowships panel. I am currently an editorial advisor for the London Mathematical Society. Member of European Women in Mathematics.

<u>Personal statement:</u> The London Mathematical Society has played an important role, historically, in the development of the international mathematical community: certainly "Mathematics first" rather than "Britain first". We are, however, a community of people who happen to be mathematicians. We have to ensure that all shades of opinion are involved in organising roles, of course without any discrimination on the grounds of age, race, gender, religion or sexual orientation. I have been formally retired for a year, and have developed significant interests outside mathematics. Nevertheless I am still a working mathematician, and keep in touch with the community, including those who have started their research careers recently.

Colin Sparrow, Professor of Mathematics, University of Warwick

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PhD: University of Cambridge, 1980

<u>Previous appointments</u>: Harkness Fellow 1980-82; Research Fellow and then lecturer in Cambridge 1981-2001. <u>Research interests</u>: Dynamical systems, differential equations, bifurcations, game theory, discrete event systems. <u>LMS service</u>: Member since 1988.

Additional information: I moved from Cambridge to Warwick in 2001, as Deputy Head of Department. I was then Head of Department 2005-2018. As someone with an intense interest in PhD students and their welfare, I am pleased that I currently serve as Academic Director of the Warwick Graduate School. I am also Director of the "Warwick in Africa" programme, which amongst other things sends student volunteers to support the teaching of Mathematics and English in secondary schools in Ghana, Tanzania and South Africa.

<u>Personal statement:</u> My long period as Head of Department has given me a broad perspective on the challenges faced within mathematics, the issues that mathematics departments face within universities, and the broader challenges that arise in response to policy initiatives from the research councils and other funders, government and society. I am very aware of the important role that LMS can and does play in supporting mathematicians, and of both defending and evolving features of our environment that are critical to the continued health of our subject. I support the memorandum of understanding between the Council of LMS and the Nominating Committee which commits the latter to: "...aim to draw up slates which reflect a broad range of subject areas and experience, which represent all regions of the UK, and which have an appropriate gender balance".