ELECTION OF OFFICERS AND COUNCIL – 2016 **Annex A**

Biographical Notes of Candidates

Treasurer (A)

NIGEL M. BERMAN, Investment Banker, Financial Consultant.

Special Interests: I left scientific research over 25 years ago, so I cannot claim special interests. In my post-doctoral research at Amsterdam and Sussex I was a theorist with particular interest in processes producing soft x-rays.

I have been first a Junior Member and then Fellow of the society since 1981. I have previously served on the Finance Committee for a full permitted term and after a two year break returned last November and so am a current member. Membership of that committee has given me some insight into the breadth of the activities of the RAS.

I fully support the aims of the Society and recognise the benefits that it brings to not only its members but the Astronomical and Geophysical community in general. In standing for the position of Treasurer I hope to assist and facilitate the society in being able to promote and deliver those aims and benefits. In this I will be able to draw upon my experience since leaving research, which has been in the City as a stockbroker and investment banker and, unusually, both on the trading and corporate finance sides of the business. I have been a corporate broker in Cazenove, a director of corporate finance in Old Mutual Securities and worked on a proprietary trading desk in Credit Suisse, where more recently I was a CTRO (trading risk officer) in Emerging Markets.

The RAS has significant opportunities and challenges in the near future and I would hope to be able to add to the skills of the team that meet those.

Vice President (A)

HIRANYA PEIRIS, BA/M.Sci (Cambridge), PhD (Princeton). FRAS, Member of the Institute of Physics, American Astronomical Society, American Physical Society. Professor of Astrophysics, University College London, Hubble Fellow (2004-2007), STFC Halliday Fellow (2007-2012). STFC Computing Advisory Panel, DiRAC Resource Allocation Panel (2012-2014), WMAP Science Team (2002-2006), Planck HFI Core Team (2009-), LSST DESC Collaboration Council (2015-)

Special Interests: Theoretical and observational cosmology; cosmic microwave background; large scale structure; early universe theoretical physics; stellar dynamics; galaxy evolution; statistical methods; numerical methods and supercomputing.

My research aims to test fundamental physics using large cosmological data-sets, including the cosmic microwave background and galaxy surveys, using an interdisciplinary approach combining observations, theoretical physics, and advanced statistical methods. Working within some of the largest international collaborations in our field as well as in small teams gives me insight into the wide range of professional environments that the Society's membership works within, and the resulting varied career development needs. Having

worked in the USA for nearly a decade before moving back to the UK, I have developed an understanding of both the opportunities and pressures that arise due to the international nature of our field. I have engaged widely in the public understanding of science, including both traditional and new media; I believe that the Society has a vital role to play in this area to ensure that the government and the public continue to appreciate both the practical benefits of our field and the long term benefits to society of fundamental research for its own sake. If elected I will be a strong advocate for an inclusive Society that represents and supports the interests of the full range of demographics of its membership, and especially that of junior researchers.

Vice President (G)

YVONNE ELSWORTH, BSc, PhD (Manchester) FRS, FRAS, FInstP. Poynting Professor of Physics and Professor of Helioseismology at University of Birmingham. RAS Council (1993 – 1996 and 2011 – 2014) Vice President (1996 – 1998), RAE 2008 and REF 2014 sub-panel member. Many years of interaction with Research Council committees. Awarded the Payne-Gaposchkin medal of the Institute of Physics. Elected Fellow of the Royal Society in 2015.

Special Interests: My research interests are in the seismology of the Sun, and stars like the Sun is or will, in time, become. Solar data as gathered by the Birmingham-led BiSON network are providing fundamental insights into the working of the Sun. I am particularly interested in the development of the solar cycle and what it may tell us about the dynamo within the Sun. For stars, the Kepler mission has provided truly beautiful datasets that will keep us busy for many years. For the first time, we can make observations of the interiors of a wide range of stars and can do statistical studies of the evolution of our galaxy.

I have good links with the Institute of Physics through its programme to accredit the undergraduate teaching of Physics and Astronomy. I strongly value diversity in the workplace and have engaged with many activities to encourage girls into science and to support women in their academic careers. As a vice president of the RAS I hope to be able further all the aims of the Society and to use the planned centenary celebrations to broaden the scope and appeal of the RAS in the scientific community and with the general public.

Secretary (G)

LYNDSAY FLETCHER, BSc, PhD, FRAS, Professor of Astrophysics at the University of Glasgow. RAS Council (2006-2009), RAS Geophysics Secretary (2011-2016), RAS Harold Jeffreys Lecturer 2011.

Special Interests: Solar flares, solar activity and space weather; Equality & Diversity in STEM.

I have several years of experience working with the RAS, first as Councillor (2006-2009) and latterly as Geophysics Secretary (2011-2016), a role which has involved me in many aspects of the running of the RAS and the committees that help forward its objectives. After 5 years as G Secretary I think I have a good idea of how it all works. RAS secretaries are primarily responsible for creating an attractive and balanced scientific programme of the RAS in its

London home, but I believe that this programme could be broadened to involve other locations and other audiences in the UK and beyond. As it is a 5-year position, as G-Secretary I can also provide continuity and consistency in the work of committees, and I will make sure that this carries on through the recent changes to RAS Byelaws and governance. I am standing for another 5 years because I want to continue working for the good of the RAS and to help it run efficiently and professionally to benefit the communities and the sciences that it represents, as it heads towards and into its third century.

Councillors (A)

PAUL A. DANIELS, BSc (Hons), PhD, FRAS; Director, Qsoft Ltd (1992-present), Committee (2008- present) and President (2012- present) of the Guildford Astronomical Society.

Special Interests: Solar system, orbital dynamics, asteroids and the orbits, structure & evolution of comets. Science education and public outreach.

I have a formal education in astronomy & astrophysics and continue to be engaged with the intellectual challenges of the science but, for over 30 years, my livelihood has been in IT.

If elected I should like to initiate a scheme to encourage and facilitate collaboration between professional and amateur astronomers many of whom use high-quality equipment that is often as good as that available to professional astronomers. Amateurs enjoy their recreational commitment to astronomy and are generally keen to observe, study or research whenever they can and, with the right guidance, can contribute significantly to professional publishable results. At the very least, such involvement fulfils part of a professional astronomer's outreach duty but, in practice, the imparting of relevant science and methodology in active pursuit of a common research project is more enduring than that. In particular, engaging amateur organisations in professional collaboration can potentially expose young astronomers to the world of professional astronomy and increase the number that might consider astronomy as a future career.

Through their outreach programmes, local astronomical societies play a significant part in demonstrating astronomy to the public. IYA2009 was a huge success and I would like to see an annual National Astronomy Week similarly supported by the RAS in collaboration with the media.

I am disturbed by the general decline in the impact of mathematics and science teaching at school. Many children will grow to become 'consumers' of our science, learning about it from popular television programmes, some will become astronomers and an influential few will become politicians controlling the research investment in UK astronomy. Ultimately, a lack of essential basic scientific awareness amongst politicians, journalists and the public will make it harder for astronomers and other 'Big Science' scientists to successfully justify the budgets for their research and even harder in the face of austerity cuts, commercial interests, pseudo-scientific 'deniers' and dogmatic ideology.

I am passionate about teaching astronomy to young people as an exciting and engaging introduction to the STEM subjects and, if elected to the RAS Council, would seek to use my position to promote that teaching and use my academic and commercial experience to bring a fresh, non-establishment, viewpoint to the table.

RICHARD DAVIS, BA, PhD, FRAS, Professor of Astrophysics at the University of Manchester. RAS Council (2011-2014).

Special interests: Fellowships, hardware for space (Planck and Core+) Education for all in the RAS

I was the STFC PI for the construction of the 30 and 44 GHz receivers for the Planck spacecraft: a grant for £2.5M. These 22 receivers were the most sensitive receivers ever constructed at these two frequencies. They were delivered on time and in budget and perform better than specification and indeed continue to perform. Since that time my work has centred on research of the Cosmic Microwave Background, particularly with the ESA Planck spacecraft. I am still the STFC PI for the Low Frequency Instrument on the spacecraft and as such I am a Planck Scientist. My number of refereed papers is 152 and non-refereed papers is 94. My citation index is 3448 and the more significant h-index is 34. There were 6 Planck papers in Astronomy and Astrophysics (A&A) and 8 in The Journal of Instrumentation. On January 12 2011 we submitted 25 Planck Early results papers to A&A of which I am an author to 17. Most of these papers have now been accepted by A&A. There are 40 more papers planned for publication before Jan 2013. I am a member of the Planck Editorial Board and as such have responsibilities to all these papers as a rapporteur, a referee and a board member. This massive outflow of papers will continue for at least the next five years as the spacecraft continues to perform on specification in particular my JBO, University of Manchester receivers are all performing perfectly and all of us will reap the benefits of this wholly successful space mission. I have led a number of public outreach events involving press releases on the Planck project.

Of these Planck Early Results I will select a highlight: New Light on Anomalous Microwave Emission from Spinning Dust Grains. I am the PI for this Anomalous dust project. For several years the nature of the Anomalous emission has been under discussion and this paper has now shown from the Planck data that the emission is due to spinning dust grains. This is an important scientific discovery for galactic science.

My research continues to bring in research council funds for the University. My Interim STFC Post Launch Support grant started in 2007 to April 2009 for £0.41M and the main Post Launch Support Grant runs from 2009 to Oct 2012 for £0.61M making a total in this period of £1.02M. These are Standard grants to myself as PI and bring my total to date to £5.05M over the last 14 years. These grants provide FeC support for three academics and one PDRA. The main activity of this grant now is to study and correct for systematic errors from the spacecraft. I supervise Dr Bob Watson: a PDRA on this grant. As such we are major players on the systematics team of the project

BRAD GIBSON, BSc, MSc, PhD, FRAS, Professor of Astrophysics and Director, E.A. Milne Centre for Astrophysics, University of Hull.

Special Interests: Galactic archaeology, galactic chemical evolution, nucleosynthesis, stellar populations.

The RAS is a powerful voice for the community, one which extends well beyond its professional membership into perhaps our most important target audience, the general

public. During my previous tenure as an RAS Councillor, I served as Chair of the Membership Committee, where my efforts were focussed in better reaching and engaging with the public, through the Friends scheme. As roughly a third of our membership is based overseas, I have also been sensitive to ensure that that sector's voice is heard and represented clearly on Council. The lifeblood of the RAS lies within the next generation of its membership, in particular the student members and the junior postdoctoral membership; the need to engage with both groups has never been as great as it is today, with ever declining grant success leading to fewer postdoctoral and 'traditional' career opportunities. I will be an advocate for those voices at Council; reaching and educating our students and junior colleagues is critical and I will ensure that occurs.

As host and Chair of the 2016 STFC Introductory Summer School and the 2017 RAS National Astronomy Meeting, I felt it important and timely to lend my support to the RAS, through a Councillor role. On Council, I will be able to inform first-hand, developments pertaining to NAM2017, and its link to the UK's City of Culture programme, while developing new schemes aimed at engaging with our student and international membership. I will also be a voice for many of the new research groups within the UK, increasing the reach of the RAS into entirely new geographical areas.

JOSE W. GONSALVES, MSc (Finance, LSE), FCA, FRAS, MRi. Fellow of the Institute of Chartered Accountants in England & Wales and Member of Charity & Voluntary sector Group. CEO Rationalist Association, Independent International Board Member of Audit & Risk Committee of Voluntary Services Overseas (VSO) , Independent Member, Finance & Investment committee of the Association of Anaesthetists Great Britain & Ireland. Formerly Chief Financial Officer and a director of Framlington, a City fund management group. Correspondence Course in Astronomy from Liverpool John Moores University. RAS Fellow for over 8 years. Member of the RAS Finance Committee since 2013. Attempted to introduce robust financial reporting procedures and relevant financial management information to monitor the financial performance of the organisation. Involved in audit tender process for selecting auditors.

Special Interests: Currently researching the influence of Astronomy on Rationalism and Religion. Interested in ongoing scientific discoveries in astronomy.

I have been a passionate advocate of astronomy from a young age, but was unable to develop my interest to qualify as a professional astronomer. If elected, I will use my skills in the finance and charity sectors, specifically with reference to investment management, to help steer the RAS in the constantly changing economic environment. In addition, assist Council in monitoring the financial health and direction of the RAS, through transparent and clear financial reporting with a view to enhancing its asset base for the future. Support the RAS in its aims for diversity and actively encourage interest in Astronomy from less developed countries and minorities. I believe my experience of another world could help the RAS pursue its objectives to be more diverse and more able to encourage interest from "outsiders".

CHRIS PEARSON, BSc, PhD, FRAS. UK Herschel SPIRE ICC Manager, Rutherford Appleton Laboratory. Visiting Lecturer University of Oxford, visiting fellow Open University. Co-winner Daiwa-Adrian Prize and executive board member of Japan Society for

Promotion of Science. STEM ambassador, co-organizer of Herschel Royal Society Summer Exhibition and space consultant BBC Radio Guernsey.

Special Interests: Infrared astrophysics, cosmology and galaxy evolution.

The RAS maintains an extremely important role in nurturing and encouraging young astronomers at the beginning of their careers, by providing the regular meetings. I particularly recall as a PhD student, how important these meetings were, in not only broadening my own knowledge of astronomy as a whole but also providing a platform to meet and interact with more senior astronomers from around the country and abroad.
Moreover, I believe the RAS has a pivotal responsibility to the next generation of younger would be scientists and astronomers in today's schools. I would be honoured to be part of these initiatives, for both our young career astronomers and our next generation of potential scientists as part of the RAS council.

ILYA MANDEL, BS (Stanford), PhD (Caltech), FRAS. Professor and Graduate Admissions Tutor in Astrophysics, School of Physics and Astronomy, University of Birmingham.

Specialist interests: gravitational-wave astrophysics, massive binary evolution, relativistic astrophysics, astrostatistics

The RAS Council has ably represented the interests of its members, helping to navigate a number of challenges such as open access publishing. I would like to contribute to this work in the future. Some of the challenges I see are related to the era of big data, particularly effective sharing of large data sets as well as the software toolboxes for analyzing them, in a way that would benefit the UK community as a whole while preserving the rights of stakeholders. Another goal is making all possible efforts to advance the careers of undergraduate and post-graduate students and postdocs, and to provide them with appropriate guidance and supervision for careers both in and out of astronomy. The continuing vibrancy of astronomical outreach is also particularly important to me. I hope to use my experience, including my international background, to help the Society tackle these and other challenges.

GIOVANNA TINETTI, MSc and PhD in theoretical physics (University of Turin, Italy), Royal Society URF, FRAS. Professor of Astrophysics at University College London. Served on TAC panels Hubble and Spitzer, ESA EPRAT and STFC Exoplanet panels. Co-editor AAS-DPS ICARUS journal. NASA and ESA Research fellow in Caltech/JPL and IAP Paris. Awarded the Institute of Physics Moseley medal in 2011.

Special interests: Since 2007, I coordinate a research team on extrasolar planets at UCL, trying to understand the chemical composition of planets in our Galaxy, how do they form and evolve and why they are so diverse. My research and my team are currently mostly funded by the Royal Society and by the European Research
Council (programme ExoLights).

I am also very interested in space missions and satellites. I am the Principal Investigator of ARIEL, one of the three candidate-missions selected by the European Space Agency (ESA) for its next medium class (M4) science mission competing for launch in 2026 and Science

Lead for the Twinkle UK space mission, designed to investigate the atmospheric composition and temperature of exoplanets.

I arrived in the UK in 2007 as an STFC Aurora fellow. Since then, this country has offered me the extraordinary opportunity of pursuing an academic career and establishing a team in an area of astrophysics, an opportunity I will always be grateful for.

I believe we are living in an interesting time, with many economical and political challenges, and an academic environment that is going through very deep and perhaps irreversible transformations, searching a precarious balance between the noble pursuit of knowledge and education and the aspiration to make a profit following a business model. I believe that more than ever the scientific community, and therefore the RAS, will need to engage with the modern challenges and take an active role in guiding the ongoing transformational process rather than being overwhelmed by it.

If elected, serving on the Council and becoming a trustee of the Society will afford me the opportunity to devote my knowledge, ideas, and international experience to the development and preservation of the high-level scientific standards and noble values fostered by the RAS.

MICHAEL G. WATSON, MA (Oxon.), MSc (Sussex), PhD (Leicester), FRAS, Professor of High Energy Astrophysics, University of Leicester & Head of X-ray and Observational Astronomy (XROA) Research Group; ESA's XMM-Newton Survey Scientist (1996-); Principal Investigator for the international XMM-Newton Survey Science Centre Consortium (1996-2013); ESA Astronomy Working Group (1996-2000); AstroGrid Lead Investigator for Leicester (2001-2009); STFC Astronomy Grants Panel (2010-2012); STFC Computing Advisory Panel (2010-2013); Chair of STFC DiRAC Oversight Committee; LSST:UK Consortium Board (2014-); Coordinator for the UK Team for ESA's Athena Mission (2014-).

Specialist interests: space astronomy, high energy astrophysics, Galactic and extra-galactic X-ray source populations, X-ray surveys, AGN population studies, astronomical computing, large-scale scientific data processing and archives.

I believe the RAS still has a vital role to play in promoting the well-being of astronomy and geophysics for both the professional and amateur communities. Pressure on science funding has increased inexorably over the last 5-10 years to the extent that some important areas of astronomical research have already become marginalised and the UK's status internationally has started to be eroded. The future of UK space astronomy in particular faces some new challenges due to reorganisation of responsibilities nationally with funding lines being largely transferred to the UK Space Agency. I am convinced the RAS must continue to play its part in protecting the health and vitality of astronomy. My background is in high energy astrophysics and space astronomy more generally, but I also have expertise in astronomical computing and large-scale data projects which is continuing with my participation in LSST: UK as a board member. I have wide-ranging experience in working with international space agencies (both ESA and NASA), both as a PI and in an advisory role, coupled with significant involvement in the UK research councils. Given this background I welcome the opportunity to make a strong contribution to the RAS, bringing in particular my 30+ years of experience of space astronomy which remains a key ingredient of current and future astronomy research.

Councillors (G)

SHEILA PEACOCK, BSc, PhD, CPhys MInstP, FGS, FRAS; British Geophysical Association (BGA) Committee 1999-2011, 2014-present; RAS Council 2012-14; Ocean Drilling Program Working Group on Drilling the Seismogenic Zone, 1997-9.

Special interests: I am a geophysicist with a PhD in seismology and twelve years' experience as a university lecturer (1991-2002). At present I work for a government contractor as a seismologist involved in monitoring the Comprehensive Nuclear Test Ban Treaty. I serve the BGA Committee as awards officer, having previously been Meetings Secretary, then Secretary. While on RAS Council and since, I helped prepare submissions to (among others) the Migration Advisory Council (MAC) on shortage occupations, the House of Lords S&T Committee on scientific infrastructure, and to the MAC again, defending the International Seismological Centre against proposed immigration restrictions that would threaten its existence in the UK. My position as owner of the BGA mailing list allows me to solicit wide geophysical opinions on consultations. I was also branch secretary for Birmingham University AUT (now UCU) for four years, which gave me valuable experience in employment law and listening to members and keeping them informed. The RAS is doing more jointly with other professional societies, particularly the Geological Society and the Institute of Physics (to both of which I belong), to press the science agenda, and it is also making its own strong case for the unique value of its subjects, including by commissioning booklets on their "impact". My aim is to encourage this trend.

I used to be a trustee for a charity that owns a number of properties, some venerable. I chair the committee responsible for these; and I handled the registration of the charity with the Charity Commission. I am also secretary of Basingstoke Transition Network, trying to prepare the town for a low-carbon future, and Prospect trade union Health, Safety and Environment rep for my workplace.

Rejoining the Council of the RAS will strengthen me in standing up for UK astronomy and geophysics in the political arena. I believe that this is the most important function of any professional society in the modern era. The need is greater than ever for RAS members to teach politicians that our subjects – astronomy and geophysics - are worth supporting.

JEAN-PIERRE ROZELOT, Astronomer (retired) at Université de la Côte d'Azur, Nice. Engineer graduated from the "Institut National Polytechnique de Grenoble" (F), I received my PhD in Physics from the University of Paris (France), and was a postdoctoral research associate at High Altitude Observatory in Boulder (Co, USA), working in the field of the solar corona. After which, I became full astronomer at the Pic du Midi Observatory (France) where I made observations at the so-called Lyot coronagraph and I continued my faculty appointment during ten years. Then, I was Director (elected) of the Centre for Astronomy and Geophysics in Grasse (CERGA, France) during ten years, before the merging with the former Observatoire de Nice, giving rise to the Observatoire de la Côte d'Azur, for which I was Deputy Director during two years.

Special Interests: The study of the interior of the Sun and its activity cycle using the gravitational moments and relevant application to General Relativity. Historical measurements of the diameter of the Sun and its oblateness. Amateur astronomy and outreach. As a solar physicist, my main interest lies (i) on the study of the solar near sub-

surface layers (now called NSSL), and for which my team put in evidence the leptocline related to the study of the solar interior through the solar gravitational moments, and (ii) the study and measurements of the solar oblateness related to the General Relativity. Two reviewed papers written on the history of this last subject were published in the European Journal of Physics H.

I have been a Fellow of the RAS since 2005 and was elected as a member of the Accademia Gioenia of Natural Sciences of Catania (Italy) in 2007. I am a regular "Visiting Scientist" at the International Space Science Institute (ISSI-ESA) in Bern (CH) and I received several international prices. I was deputy Director for training in Astronomy at the French Agency CNRS from 1996 up to my retirement in September 2012, where I was recognized as emeritus. I am continuing my scientific activity as associate scientist in several international teams, helping also former students to promote their career (in Bangalore, Antalya, US, Iran, and Bulgaria).

As an author or co-author of more than 350 papers, I also worked for the edition of nine books in the field of Astronomy, mainly published by Springer (D) as Lecture Notes in Physics, and one public outreach book devoted to "Astronomical Spectrography for amateurs" (EDP Sciences). If elected, I would use to take this advantage to foster closer links between French and English amateurs through, for instance, international schools to support this community. I should want to serve the RAS the best as possible and as much as a candid external look can do.

CHRISTOPHER SCOTT, BSc (Hons), PhD, FRAS, AGU member, Professor in Space and Atmospheric Physics, Department of Meteorology, University of Reading. Co-I NASA STEREO mission, PI Solar Stormwatch, Topical editor for Annales Geophysicae, Member of the STFC Solar System Advisory Panel.

Special Interests: Research into ionosphere, upper atmosphere, aurora, global electric circuit, space weather and the solar wind modulation of lightning. Public engagement and outreach.

Since graduating from the Department of Physics and Astronomy at the University of Southampton in 1993 I have pursued a career in space science. While at the STFC Rutherford Appleton Laboratory, I worked with the EISCAT radars, studying the arctic aurora, managed the UK ionospheric monitoring project and most recently as Project Scientist for the UK-built Heliospheric Imagers on the NASA STEREO mission, studying the Sun and solar wind. Since 2010 I have been working within the Meteorology Department of the University of Reading where my group and I work on space weather, space climate and the influence of the space environment on terrestrial weather systems (in particular lightning rates).

I am passionate about public engagement and throughout my career I have communicated with a variety of audiences; school children of all ages, science societies and the general public through public lectures (at museums, science societies, science centres), podcasts, interviews for newspapers and magazines and TV appearances. I am also a strong advocate of 'citizen science' in which interested members of the public help to enable scientific research. I am the Principal Investigator for the citizen science project Solar Stormwatch, in which volunteers are asked to carry out analysis on spacecraft data through a variety of activities, including making real-time predictions of Earth-directed solar mass ejections. The project has

attracted over 16,000 active users, analysing around 100,000 images and contributing towards six scientific publications to date.

I believe the RAS has an important role to play in inspiring future generations, nurturing early career scientists and providing professional representation for its fellows. I am keen to use my experience to help.

SIMON THOMAS, BSc (Bath), MSc (Reading), PhD (Reading), Research Associate (Mullard Space Science Laboratory, UCL)

Special Interests: Space Weather, Solar-Terrestrial Physics, Cosmic Ray Modulation, Solar System Science, Outreach. Since the start of the PhD I have been highly involved with the RAS. The specialist meetings once a month are an excellent platform for stimulating discussions and developing lasting contacts. Getting the community together at meetings such as these and at the general meetings are an excellent way for ideas to develop and to learn more about the subject as whole. As I have had first-hand experience of the difficulties of climbing up the academic ladder, early-career scientists would be a focus of mine on the council. The RAS has previously funded me as a young scientist to attend a major conference which really helped me develop as a researcher and I would like to make sure that future generations of PhD students and postdoctoral researchers can get these important benefits or more. I am also very keen to continue the good work of the RAS through outreach and diversity. I would like to promote the work of astronomers and geophysicists to the general public and media and to encourage more children to be interested in the field.

ANTHONY R. YEATES, MMath, PhD, FRAS, Senior Lecturer in Applied Mathematics, Durham University. Previous positions: Harvard-Smithsonian Center for Astrophysics (2008-9), University of Dundee (2009-11).

Special interests: Computational modelling of the Sun's magnetic field and space weather; magnetic reconnection, helicity and plasma relaxation; kinematic models for the solar activity cycle. High-performance computing.

Having joined the RAS during my PhD in 2006, I have come to realise the central role played by the Society in the life of astronomy and geophysics in the UK. I have benefited from attending (and organising) specialist discussion meetings, from RAS small grants, and of course from numerous National Astronomy Meetings. I am keen to give something back in return.

As a relatively young researcher, I feel that I can offer a fresh perspective on the issues faced by the Council, and how the RAS must face up to the future. Being outside London, I am acutely aware of the need to represent the whole of the UK. And, given my background in theoretical modelling, I am particularly keen to preserve the UK's competitiveness in and facilities for high-performance computing. Indeed, this is essential for all areas of astronomy and geophysics.

If elected, a particular concern of mine will be to widen fellowship of the RAS within the research community. This is essential to the future health both of the Society and of the discipline within the UK. In particular, younger researchers need to be encouraged to join in,

and it could be very beneficial to set up networks of early-career scientists, or to hold special RAS meetings aimed at them. The RAS prizes are a possible vehicle to draw in talented young researchers, and the important role of the A&G magazine should not be underestimated.