



*Advancing  
Astronomy and  
Geophysics*

# ROYAL ASTRONOMICAL SOCIETY

Burlington House, Piccadilly  
London W1J 0BQ, UK

T: 020 7734 4582

F: 020 7494 0166

pm@ras.org.uk

www.ras.org.uk

Registered Charity 226545

April 2015

Dear Fellow,

## **RAS COUNCIL: ELECTIONS 2015**

In 2015 there are elections for the following RAS Council positions:

<b>POSITION</b>	<b>Years to serve</b>
President Elect (A/G)	1 year as President Elect and 2 years as President
Vice President (A)	2 years
Vice President (G)	2 years
1 x Councillor (A)	3 years
1 x Councillor (G)	3 years
1 x Councillor (A/G)	3 years
1 x Councillor (A/G)	3 years
1 x Councillor (A/G)	2 years

“A” signifies all areas of astronomy & astrophysics; “G” covers geophysics, solar-terrestrial physics and planetary sciences, respectively.

### **INVITATION TO VOTE:**

You are strongly encouraged to exercise your vote to fill the position of President- Elect and five Councillor vacancies.

Please note that in order to correct an error in length of appointment made during the 2012 elections the Councillor elected with the lowest number of votes will serve for a 2 year term from 2015.

The nominations for both the Vice-President positions (A&G) match the number of vacancies therefore the nominated individuals will be declared elected unopposed.

The biographies of the candidates are attached at Annex A.

The expected constitution of the RAS Council in 2015 is attached at Annex B.

### **PROCEDURE:**

- If we have your current e-mail address you will be sent a link to the secure part of the RAS web site where you can cast your vote electronically.

- If you are unsure if the Membership Secretary has your correct email details, please contact her at [membership@ras.org.uk](mailto:membership@ras.org.uk)
- Additional information on electronic voting is at <http://www.ras.org.uk/voting>
- If you prefer, you may continue to vote by completing and returning the enclosed ballot paper in the attached envelope, adding your name, signature and membership number on its flap.
- Should, mistakenly, you submit votes both by ballot paper and electronically, the electronic vote will take precedence.

**DEADLINES:**

Please note that the deadlines for voting are:

12 noon on 07 May 2015	e-voting closes
12 noon on 08 May 2015	Postal/Paper voting closes (ballot papers may also be handed in at the commencement of the AGM at 1500 the same day)
08 May 2015	AGM - count of votes by scrutineers and declaration of results

Please take this opportunity to vote for your Society's governing body

Yours Sincerely



Ian Crawford  
Secretary

**Biographical Notes of Candidates****President Elect**

**OFER LAHAV (A)** BSc (Tel-Aviv U) , MSc (Ben-Gurion U), PhD (Cambridge U), FRAS, FintP, Perren Professor of Astronomy, University College London (since 2004), formerly Head of UCL Astrophysics (2004-2011), formerly member of staff at the Institute of Astronomy Cambridge U (1990-2003), currently Vice-Dean (Research) of UCL's Faculty of Mathematical and Physical Sciences, holder of a European Research Council Advanced Grant, co-chair of the international Dark Energy Survey Science Committee and chair of DES:UK, co-authored over 200 refereed papers, supervised 18 PhD students, served as RAS Council member (2009-2012), Vice-President (2010-2012; chaired the Awards and International committees), editor of MNRAS (2006-2008), Awarded the RAS 2014 Gerald Whitrow Lecture, and the 2008 RAS Group Award to the 2dFGRS team.

Research interests: cosmological probes of dark matter and dark energy, large galaxy surveys, statistical methods, history of astronomy.

Statement: I am keen to enhance the RAS profile and its connection to the UK Research Councils, and other societies (e.g. RS, IoP, EAS, IAU), as well as to explore funding opportunities through the EU and charity organizations, and to run a fund-raising campaign for RAS@200. The RAS would be strengthened by a closer connection between the Astronomy and Geophysics sections of the RAS, to be achieved in the first instance by initiating meetings with a common interest, e.g. on Big Data. At the same time, within the Council itself, I consider it is important to improve the gender balance and diversity on RAS committees. I am similarly committed to enhancing public outreach and impact on society, for example by initiating a scheme of artists in residence at Departments (as we have done at UCL). If elected, I will take advantage of the geographical proximity of UCL to Burlington House to work closely with the RAS staff and to participate frequently in events.

**JOHN C. ZARNECKI (G)** MA, PhD, FRAS, FInstP, CPhys. Director (part-time), International Space Science Institute, Switzerland & Emeritus Professor of Space Science, The Open University. RAS Council 1995-1998, RAS Vice-President 2009-2011; Institute of Physics Council 2013-2016; PPARC Council 2005-2009 ; Chair, ESA Solar System & Exploration Working Group 2014-2016 ; Chair, UK Space Agency Science Programme Advisory Committee 2012-2014

Special interests: Planetary science especially the study of surfaces, atmospheres, comets, cometary dust & cosmic dust by in-situ instrumentation (e.g. Giotto, Huygens, Rosetta). Space & science policy, education and public outreach.

I have seen the Society evolve significantly to an organization that is welcoming to a wide range of membership and one that has assumed a very proactive role in the formulation of science policy at the strategic & political level in order to best represent the broad interests of its Fellowship, the latter having largely been due to the significant efforts of recent Presidents. This needs to be continued and indeed reinforced in the likely uncertain political & funding environment ahead. A considerable body of the work of our membership depends on large international facilities and/or international subscriptions, often requiring decisions to be made at the highest levels of research councils or government (including Europe and

beyond). We need to continue to stress the importance of these and to make sure that our voice is heard. At the same time, the vigour of our subjects depends on a healthy flow of students and young researchers and on a nurturing environment in the Universities and research institutions. This requires vigilance to ensure that they remain a priority amongst many competing agendas. We must continue to argue for the practical outcomes of our subject in terms of training, inspiration and spin-off but should not be afraid also to stress the value to intellectual life of “blue skies research”.

I value enormously the diversity of our astronomical community, encompassing those whose interests span from the centre of the Earth to the edge of our Universe. I support initiatives which promote the participation in the Society of under-represented groups, as demonstrated by the Committee for Diversity. Matters such as the maintenance and improvement of Burlington House and the protection of the currently healthy income stream from publishing will also need to be maintained as priorities.

The RAS 200: Sky and Earth programme is a recent initiative which I warmly welcome. If elected, I would do what I could to support this programme and applaud the opportunity for the Society to become engaged with communities with which to date we have not engaged.

We must also do the best we can to ensure that the Fellowship outside the London area and indeed the UK is catered for. The Society has limited resources and cannot do all that it wishes. Accordingly, I would continue to seek ways in which we can work with others with whom we have overlapping interests in order to maximise the impact of our resources.

#### **Vice President (A)**

**DONALD KURTZ (A)** B.A., M.A., PhD (Texas), FRAS. Professor of Astrophysics, Jeremiah Horrocks Institute, University of Central Lancashire (2001 - date). Formerly, Professor and Life Fellow, University of Cape Town, South Africa. RAS Council (2012-2014). Kepler Mission Asteroseismic Science Consortium Steering Committee. Past President IAU Commission 27 on Variable Stars. Past ESO OPC panel chair. Multiple "postes rouges" (visiting scientist) Observatoire Midi-Pyrénées, Toulouse, France. Visiting Professor, Aryabhata Research Institute of Observational Sciences (ARIES), Naini Tal, India. Multiple Japan Society for the Promotion of Science Senior Fellowships, Japan. Dual UK and USA citizenship; South African permanent resident.

Special interests: My research interests are in stellar astrophysics with special emphasis in asteroseismology. I am one of three co-authors of the fundamental textbook in this new field. I am primarily an observational astronomer with ~2000 nights of telescope time. Presently I observe occasionally to obtain high-resolution spectra with the VLT and Subaru 8-m telescopes, but my main interest is in the revolutionary 4-year photometric data set for 190,000 stars from the Kepler Mission. I have a broad interest all of astronomy, physics and other sciences, and use this wide range to inform the typically 30 public outreach events I present each year to schools, astronomy clubs and other societies, astronomy and science festivals, adventure travel (African game reserves, white water river running), cruise ships, radio and television.

I served for three years on RAS council, and was the council member of the publishing committee that, under the leadership of the treasurer Prof. Mike Cruise, changed the RAS publisher to the Oxford University Press with significant benefit to the society. I believe that astronomy, geophysics, and the fellows of the RAS are well served by its council, officers and panels, and by its professional full-time staff at Burlington House. The management of

the society's assets for the benefit of its international fellowship, which encompasses both professional and amateur scientists, the conservation of the society's heritage, and the guidance of the society into the new, and unclear future of open access publishing, require the dedicated guidance of council. With my research and public outreach background and experience, and with my extensive international connections, I would like to continue to serve the RAS for two more years as one of the Vice-Presidents.

### **Vice President (G)**

**CHRISTINE PEIRCE (G)** BSc (Hons), PhD, FRAS, FGS, FHEA. NERC Marine Facilities Advisory Board, NERC Peer review College (1999-2003; 2004-2007; 2013-present), NERC Geophysical Equipment Facility Steering Committee.

Special interests: Accretionary processes of mid-ocean ridges, the flexure of the lithosphere under loading, plate erosion due to subduction, and the development of transform continental margins, working primarily in the Atlantic and Pacific oceans. Design and development of seabed instrumentation for Earth imaging applications.

After completing a BSc in Geophysics in Cardiff and a PhD in the Marine Group at Cambridge, I have been at Durham University for 25 years where I am Professor of Marine Geophysics. During this time I have been the User Group Head for Geophysics in the UK, and Secretary of the British Geophysical Association. I am currently a member of the NERC's Peer Review College and the Marine Facility Advisory Board. I have been a Fellow of both the Geological Society and the Royal Astronomical Society since 2010.

My research is underpinned by seismic imaging of the Earth's interior, for which I have designed and developed seabed instrumentation, co-directing the National Ocean-Bottom Instrumentation Facility. I also work closely with the National Marine Facility updating and enhancing the national marine geophysical equipment base. I was recently awarded the Coke Medal of the Geological Society for my community service and research activities.

Throughout my career I have developed and taught undergraduate programmes in geophysics and aim to inspire the next generation by embedding forefront and current research in the courses I teach. I am committed to providing opportunities for undergraduate and postgraduate students to be involved in data acquisition activities at sea and the analysis of newly acquired data.

If elected, I would use to advantage my Fellowship of both the Geological Society and the Royal Astronomical Society to foster closer links between the two societies. I am also committed to the support of young and aspiring geophysicists and would work to encourage an influx of new and younger members to the Royal Astronomical Society. I am committed to integrity and equal opportunities in professional life and would work hard as VP (G) to support the aims and goals of the Society and its members, whilst supporting, encouraging and stimulating the activities and participation of fellows with geophysical interests.

## **Councillors**

**JOANNA BARSTOW (A)** MSci(Hons), MA(Cantab), DPhil(Oxon), FRAS. Postdoctoral researcher at the University of Oxford. AMInstP, member of ScienceGrrl (London and Oxford), STEM Ambassador

Special interests: Extrasolar planets, planetary atmospheres, radiative transfer, outreach and public engagement

I am a postdoctoral researcher specialising in radiative transfer and spectral modelling of extrasolar planet atmospheres. I moved into the field after completing a doctoral thesis on the clouds of Venus in 2011. During my doctoral studies I joined the VIRTIS instrument team on the ESA Venus Express mission, and since then I have been involved in the Exoplanet Characterisation Observatory mission proposal to ESA as a working group lead.

Since arriving at Oxford to begin my DPhil studies in 2008, I have been heavily involved in public outreach. As a graduate student I was a co-presenter for the Accelerate! Particle physics show, which toured to schools around the country. When I started my postdoctoral position in 2011, I joined the Oxford Astrophysics outreach committee in planning the first ‘Stargazing Oxford’ public open day, and I have played a key role in all subsequent events, which attract as many as 1200 visitors. I took over as the event coordinator and Astrophysics outreach officer from March 2013 until September 2014, for which I won the inaugural Oxford Sparks Public Engagement Award in May 2014. I have been a member of the Oxford Physics Access and Outreach committee since October 2013, and as a STEM Ambassador often visit schools to deliver talks and workshops. I frequently use social media for wider promotion of my science interests, including curating the Astrotweeps Twitter account for a week and writing for the Oxford AstroBlog.

If I am elected to Council, my extensive public engagement experience will enable me to actively support the RAS 200 ‘Sky and Earth’ programme and other public engagement activities. I will also bring the experience of an early career researcher to the table. My involvement with ScienceGrrl will enable me to play a part in furthering the diversity goals of the RAS, in particular by increasing engagement with early-school-age girls.

**ANDY BIGGIN (G)** BSc (Hons), PhD, FRAS. Lecturer in geophysics, Dept. Earth, Ocean, and Ecological Sciences, University of Liverpool.

Special Interests: Palaeo-geomagnetism, Earth evolution, core-mantle interaction, archaeomagnetism, Archaean Palaeomagnetism, rock magnetism.

I graduated in geophysics with environmental science from the University of Liverpool in 1997 and obtained a PhD in Palaeomagnetism from Kingston University in 2001. Following postdocs at UNAM (Mexico), the University of Montpellier, and Utrecht University, I returned to the UK in 2009 to commence a 5 year NERC Advanced Fellowship at the University of Liverpool. I am currently tenured as a lecturer and head of the geomagnetism laboratory at Liverpool where my research focuses on using ancient records of geomagnetic field behaviour to understand the geodynamo process and its forcing by mantle convection and core evolution. I have been an editor for the RAS publication “Geophysical Journal International” since 2010 and for the Nature publishing group journal “Scientific Data” since 2014. I manage the community-wide global palaeomagnetic field intensity database PINT and the public outreach website [www.geomagnetism.org](http://www.geomagnetism.org).

I would like to provide a voice on the council for the solid earth geophysics community and also have several special interests which I would like to pursue. These include improving the prospects of early career researchers and engaging with the public in order to garner interest in the deep Earth and its evolution through time.

**MICHAEL F. BODE (A)** BSc (Leeds), PhD (Keele), FRAS, CPhys, FInstP, Professor of Astrophysics and Director, Astrophysics Research Institute, Liverpool John Moores University. Previous positions held include PDRA (Keele), Post-Doctoral Staff Member (Los Alamos National Lab), SERC Advanced Fellow (Manchester), Lecturer/Senior Lecturer/Professor (Central Lancashire) and I have been Assistant Provost for Research and held a PPARC/STFC Senior Fellowship at LJMU.

RAS Involvement: Fellow since 1980; Editor RAS Calendar 1988; Member of Council 1990-1995; Vice President 1991-1993; Secretary 1993-1995; Advisory Panel on Stellar and Galactic Physics (Chair) 1991-1993; Assessor to SERC Space Science Programmes Board 1991-1992; Assessor to SERC Astronomy and Astrophysics Committee 1992-1994; Sir Norman Lockyer Fellowship Committee (Chair) 1992-1995; UK Standing Conference of Astronomy Professors (Chair) 1997-2003; NAM 1996 LOC (Chair), NAM 2011 and 2015 SOCs; Honorary Auditor 2006-2008; Membership Committee 2006-2012; Public Lecturer 2014.

Special Interests: Multi-frequency observations and modelling of novae and related objects; circumstellar and interstellar dust; automated and robotic observing; astronomy education and public engagement.

I have been committed to a close relationship with the RAS over most of my professional career and it is a privilege to have been nominated as a candidate for Councillor of the Society to help drive the Society forward as we look to celebrating “RAS 200”.

During the period that I have been a Fellow, the Society has developed significantly in many ways, not least ‘inwardly’ in the range of benefits it now offers its diverse membership across both astronomy and geophysics and ‘outwardly’ in the effectiveness of its lobbying for the future health of both astronomy and geophysics. In the latter regard, I have become very familiar with research council issues through past membership, or in many cases chairmanship, of a large number of research council committees and panels, including the Astronomy Grants Panel and the STFC Science Board. In addition, I have been able to become acquainted and interact with the workings of government through the Royal Society’s MP-Scientist Pairing Scheme and, e.g. in 2011, being an expert witness to the House of Commons Science and Technology Committee inquiry into astronomy and particle physics.

If elected, I will continue to enhance the Society’s activity in these areas and capitalise on the extremely high profile much of the work we do has among the general public. I will in addition seek to further the Society’s links internationally, not least through my current role as a Councillor of the European Astronomical Society and my experience in leading the development of the ASTRONET Infrastructure Roadmap on behalf of the major astronomy funding organisations in Europe.

Finally, I believe that the RAS can capitalise further on the diversity of its membership to play an even greater role in fostering public engagement, through both its amateur and

professional members. I have a great deal of experience to offer, having established for example the National Schools' Observatory around the Liverpool Telescope project and through my recent chairmanship of the STFC Advisory Panel on Public Engagement.

**LEIGH N. FLETCHER (G)** MSci, MA (Cantab), DPhil (Oxf), FRAS. Royal Society Research Fellow in Planetary Physics at Oxford's Department of Physics. Special Supernumerary Fellow, University College Oxford.

Special Interests: exploration of planetary atmospheres using visiting spacecraft and ground- and space-based observatories; remote sensing from the UV to the sub-mm; origins, climates and environmental conditions within giant planet systems; future outer solar system missions; public engagement and outreach.

I currently hold a Royal Society research fellowship at the University of Oxford, with a decade of experience in the exploration of giant planet atmospheres via remote sensing. I earned a Natural Science degree from Cambridge (2004), a DPhil in Planetary Physics from Oxford (2007), and have since worked as a NASA fellow at the Jet Propulsion Laboratory and as an Oxford research fellow. I am actively involved in the characterisation of Saturn's seasonally-evolving atmosphere as a member of the Cassini infrared spectrometer team, and have experience using world-class ground-based (IRTF, VLT, Subaru and Gemini) and space-based (Spitzer, Herschel) facilities to explore the atmospheres of all four giant planets. I am particularly excited by the prospects of future missions to the outer solar system, serving as one of two ESA Study Support Scientists for the first L-class mission (JUICE, the Jupiter Icy Moons Explorer) and taking a lead role in mission proposals and instrument proposals for future ESA and NASA projects.

Planetary science, both in our solar system and beyond, is a diverse field spanning myriad different disciplines, from planetary system origins to chemistry, fluid dynamics, plasma physics, cloud microphysics, geophysics, mineralogy and potentially astrobiology. These communities don't always interact as well as they should, but in the UK I believe that the RAS should remain the focal point for these academic connections. If elected to RAS council, I would hope to promote greater coordination between UK institutions, research councils and industry, particularly with regard to large-scale proposals for future missions and technology to explore planetary environments. Planetary science provides a wonderfully engaging pathway for public education and outreach, and I am a passionate science communicator via social media (@LeighFletcher), blogging and presentations to schools, astronomy clubs, science festivals and cruise ships.

As well as looking outwards, I would aim for greater support for early career researchers who are members of the RAS. With such limited availability of funding, particularly in the wilderness between PhD completion and the ability to win advanced fellowships, I hope that a position on the RAS council would allow me to voice the career development concerns of graduate students and postdocs.

**DAVID W. HUGHES (A)** Emeritus Professor of Astronomy at the University of Sheffield where I taught astronomy and physics for 42 years. I have been an RAS Fellow since 1968 and in that time sat on Council for 15 years between 1981 and 2013, was the editor of Quarterly Journal for six years and an editor of Monthly Notices for ten. In research I specialise in comets, asteroids, meteors, meteorites and cosmic dust, and their origin, evolution and impact with Earth. I also research the origin of the solar system, and the



history of astronomy and astrophysics. I would like to support the society's strong promotion of modern research and encourage both our sponsorship of the educational benefits of our subject and the full appreciation and stewardship of its historical and heritage foundation.

**CAITRIONA JACKMAN (G)** BSc, PhD, FRAS, Lecturer/STFC Ernest Rutherford Fellow, School of Physics and Astronomy, University of Southampton

Special Interests: Planetary and astrophysical magnetospheres, Solar system science, physics and astronomy outreach, women in physics

The RAS is a wonderful society, with an excellent platform, through its extensive membership, to promote astronomy and geophysics widely. If elected to Council, I would use my position to serve the community to the best of my ability. My particular interests lie in exploring options for increased promotion and expansion of the society's fellowship schemes and thesis prizes.

A large gap was left when STFC discontinued its postdoctoral fellowship scheme, leaving early career researchers with a big leap to make between a first postdoctoral position and a potential advanced fellowship. The RAS has in part stepped in to fill this gap through the RAS Research Fellowships, the Norman Lockyer Fellowship, and the links to the Daphne Jackson Fellowship. I personally benefitted from this scheme as I was awarded one of the RAS Research Fellowships after my first postdoc. My application to sit on Council is in part my way to formally show my gratitude (via service) for this generous award. I would like to ensure that the fellowships get the national/international recognition that they deserve, as well as exploring options for expanding the funding base for these schemes. If even a single extra fellowship place per year could be funded, this could change the career path for a promising individual.

I would also like to promote the RAS thesis prizes to a wider audience, to ensure the awards have the prestige they deserve, enabling them to represent a springboard for early career researchers to go on to achieve great things.

**SOHAN JHEETA (G)** MSc, PhD, Independent Researcher and Chairman: Network of Researchers on Horizontal Gene Transfer and the Last Universal Cellular Ancestor ([www.nor-hgt-luca.com](http://www.nor-hgt-luca.com) and [www.sohanjheeta.com](http://www.sohanjheeta.com)).

My motivation for applying for the position of RAS councillor, category G is that, as a member of the RAS Council, I will make a positive contribution to the society's proceedings. This assertion is largely based on my previous experience of making astronomical sciences accessible to ethnic communities, and establishing meaningful and lasting connections therein. As a councillor I will be able to further promote the RAS to such groups through my series of public lectures and talks both nationally and internationally. I am absolutely certain that my broad range of experience both with scientific and ethnic communities, can be brought to bear for the greater benefit of the RAS as a whole.

I am a Fellow of the RAS as well as holding the following posts:

Branch Committee Member of the Institute of the Physics (MInstP); Branch Committee; Member of the Royal Society of Chemistry (MRSC); Honourable Member of the International Advisory Board of the Oriental Journal of Chemistry; Member of the Society of Biology (MSB); Member of the Royal Astronomical Society (FRAS); Member of the Royal

Astronomical Society's Hot Chemistry Group; Member of the International Society for the Study of the Origin of Life (ISSOL); Member of the European Astrobiology Network Association (EANA); Member of the Astrobiology Society of Britain (ASB); STEM Ambassador

**SUGATA KAVIRAJ (A)** MSci (Physics), MSc (Applied Mathematics), PhD (Astrophysics). Senior Lecturer, University of Hertfordshire and Senior Research Fellow, Worcester College Oxford.

POSTS: Imperial College Junior Research Fellow (2009-12); 1851 Royal Commission Research Fellow (2008-10); Leverhulme Early-Career Fellow (2006-08); Junior Research Fellow at Worcester College Oxford (2006-2008). AWARDS: RAS Winton Capital Award (2011)

Special interests: Galaxy formation, co-evolution of galaxies and their black holes, globular clusters, active galaxies, galaxy mergers, public engagement, outreach and citizen science.

Given the increasing pressure on science funding, and the need to demonstrate societal and economic impact, the RAS has an essential role to play in securing the UK's science leadership, by engaging energetically with the public, policy makers and funding bodies alike. It is important to attract more early-career researchers to the Society, and maintain (and, if possible, expand) the support for these scientists, through schemes like the RAS fellowships. To maximize engagement with its fellows, many of whom live far from the south east; it is worth exploring if the RAS could broaden its activities outside London. If elected, I will work hard to help the Society achieve these goals.

**DUNCAN MACKAY (G)** BSc (Hons), PhD, FRAS, MInstP, Reader in Applied Mathematics, University of St Andrews

Special Interests: Solar Physics, Space Weather, Computational MHD, Solar Prominences, Coronal Mass Ejections, Stellar Physics, Public Outreach.

I believe that it is extremely important that all areas of science covered by the RAS are unified and have a common goal. In the past I have helped promote UK Solar Physics as its secretary, but I would now like to promote the whole area of Geophysics and Astronomy through playing an active role in the RAS. If elected I would like to: (i) ensure the RAS effectively reaches its goals and engages with all members, (ii) promote public outreach and the impact of astronomy in schools particularly through social media, (iii) support the development of young scientists so they have a clear career path and (iv) promote the value of the RAS and its science both nationally and internationally.

**ILYA MANDEL (A)** PhD (Caltech), Senior Lecturer and Graduate Admissions Tutor in Astrophysics (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.

**ANDY POLLOCK (A)** MA, PhD, FRAS, ex-ESA, Visiting Professor University of Sheffield

In one way or another until the end of 2014, in both research and business, I worked in space astronomy software, calibration and archives at many wavelengths for the European Space Agency. My research in single and binary hot stars in the hinterland between high-energy astrophysics and plasma physics seeks a unified view of collision less shocks throughout the Universe. In work on statistics and archives, I served on the science advisory committee of EURO VO, the European Virtual Observatory, latterly as chair, to help maximise the scientific utility of archives to the benefit of the widest possible community of researchers and to emphasise and recognise the role of data science as a vital independent complement to hardware excellence. Recent negative perceptions of the VO need to be overcome with the RAS acting as an independent focus for the promotion and review of archive services in both astronomy and space science.

**SARA RUSSELL (G)** BA, PhD, FRAS, Fellow of the Meteoritical Society; Head of Mineral and Planetary Sciences, Natural History Museum; Chair of the RAS Diversity Committee

Special interests: meteoritics, cosmochemistry, lunar science, small bodies, outreach.

I believe that the Royal Astronomical Society has an important role to play in the advancement of astronomy and geophysics, and in the support of professional and amateur astronomers. The RAS monthly meetings are very inspiring for me, and have been since I was a student. I wish to make sure that the RAS remains an active and useful forum for the free exchange of scientific ideas. I am particularly interested in encouraging children towards an interest in science, and in supporting early career scientists, particularly those who face additional challenges. If elected to Council I would like to promote and support the work of the RAS especially in education, outreach and diversity.

**SATISH KUMAR SARAVANAN (A)** M.Sc, FRAS., since July 2013: PhD student, Lorentz Institute, Leiden University and guest researcher at National Institute for Subatomic Physics (Nikhef), Amsterdam, Netherlands. 2013 - 2015: Employed, Lorentz Institute, Leiden University and PhD student council member, DRSTP, NL, 2010 - 2013: Erasmus Mundus Scholarship and research fellow at Free University of Berlin, 2009: Summer Research Fellow, Indian Academy of Sciences and life member, IAGRG, India.

Special Interests: Gravitational Waves source modelling, Coalescence of binaries (black hole - neutron star), spin dynamics in curved space-time, geodesic deviation method and extreme mass ratio systems. Perturbation and re-summation theories.

As I am researching in the domain of gravitational waves, I have made it a priority to visit schools and universities around my home town to lecture on gravitational wave astronomy. Only very few universities in the southern state of Tamilnadu, India, has courses in these subjects. So, I ensure to interact with the students to provide them exposure in topics related to astronomy. I continue to be in touch with some students and I look forward to help them realize a career in this domain.

Every year in the first week of October, Nikhef organises the open-day programme, as a part of the Nikhef theory group, I interact with common people to explain the ongoing researches from our group, especially my research domain gravitational wave astronomy.

It remains as my vision to guide and to take up collaborative research professionally with student interns in bachelors and masters courses through RAS funding. It's indeed a commendable job by RAS in supporting its members to involve in such activities. In the past, I have done joint-supervision of summer interns from prestigious institutions like Cambridge University, Columbia University and MIT through DAAD RISE scholarship (Germany). I would like to be part of the council to be able to accomplish the above said mission and to contribute my knowledge and hard work as much as possible to the RAS.

**STEPHEN SERJEANT (A)** BSc, DPhil, FRAS, FHEA, FInstP, CPhys. Head of Astronomy and Reader in Cosmology, The Open University. Co-lead of eMerlin gravitational lensing legacy survey and AGN working group of Herschel ATLAS key project; several other management/leadership roles in JCMT surveys and Euclid. Co-winner of Daiwa Adrian prize. Lead science consultant for BBC Bang Goes The Theory; consultant for BBC Stargazing Live. Author of Observational Cosmology (CUP) and co-author of two other books.

Special interests: infrared and submillimetre extragalactic surveys, strong gravitational lensing, active galaxies, starburst galaxies, public engagement, higher education.

The pressures on astronomy have never been greater. Flat cash settlements in past years have steadily eroded our science base. The UK is slipping in international rankings. I would like to play a role helping the RAS maintain its position as a powerful advocate of the scientific and economic cases supporting the astronomy community as we approach the next spending review.

I am a passionate advocate of extending opportunities to education and I am proud to work for the Open University. More than one in four UK undergraduates are part-time, yet distance education students are sometimes neglected when discussing higher education, and they face distinctive problems in the current fees environment. I would like to see the RAS more actively welcome and engage with all distance education astronomy and geophysics students (not just those at the OU) as well as the committed amateur and citizen scientist communities.

Large consortium survey science is now common, and many people (myself included) have now spent most of their careers in large teams. The mentoring of career-young staff is all the more important in these environments. I would like to see the RAS support the creation of new mentoring networks for early-career researchers.

Bean counting: I have written or co-written over 230 papers with an H-index of 53. My Erdos number is five less than Erwin Schrodinger's. There's a lesson in there somewhere but for some reason I don't feel it's in my best interests to point it out.

**CHARLES R. J. SIMPSON** (A) BSc (Hons) PGDip QTS FRAS MSBiol  
Specialist Science Intervention Teacher

Special Interests: History of astronomy and cosmology, grassroots astronomy, Apollo missions, astrophotography, schools astronomy, education and outreach.

After leaving university with an honours degree in Biological imaging from the University of Derby I worked in many school science departments as a technician, latterly retraining as a teacher (with physics specialism) achieving QTS in 2011. I now work as a specialist science intervention teacher

As a Galileo Teacher, I'm actively engaged in promoting Space Science, astronomy and the use of robotic telescopes within education as I believe that science is a fundamentally important subject and astronomy provides an ideal vehicle to engage young people and promote STEM subjects.

I have run Stargazing Live events for three years now and run regular astronomy workshops for school age and adult learners. I have worked as an advisor and project mentor for last year's NRC run by UKSEDS and I am also the Chairman of the UKRA Safety and Technical committee.

I have recently worked as a core team member on a recent BIS project group carrying out a feasibility study on a Space Science A-level for the Dept. of Education where I wrote the sample textbook section and accompanying lesson plans and activities.

If elected, I will endeavour to serve the society by promoting astronomy to a wider audience, especially young people, who I believe to be a key audience. With inspiring and supportive outreach activities and effective use of various social media platforms, the society can increase its influence and exposure to the next generation of UK astronomers and scientists.

**PATRICIA TOMKINS** (A) BSc FRAS MIOD MD Photonic Science Ltd

Managing Director of Photonic Science Ltd, a company that designs and builds scientific imaging systems which range from the Short wave IR to visible through to UV , x-ray and Neutron imaging I started working at the SERC at Herstmonceux, building cameras for photon counting imaging systems for astronomy. Became a member of the RAS and also joined the House Committee, where I worked closely with the Executive Secretary Tony Steff-Langston to promote the RAS.

My special interests are planetary nebula and multi spectral imaging where the overlapping of different data sets bring out the complexity of the physical events, such as mass ejection and interacting magnetic fields as the system is evolving to reveal the science behind these stellar objects.

My work is in multi spectral imaging systems, ranging from systems for deep space to Laue diffraction and 3D imaging of objects using x-ray and visual overlapping images. I am very interested in how we can visualise science and communicate it to the wider interest groups ranging across industry, research and young people coming into science and astronomy. As such I have helped young PhD students by supporting them as an industrial supervisor, and currently support a PhD student at MSSL I have also supported EU students doing specific projects for European research projects.

Recently I have put forward support via the RAS for students who have been given grants. In a more proactive mode I would like to be able to support and help the RAS during the run up to 200th Anniversary: RAS 200 Sky and Earth as I can bring in external expertise of someone who is regularly running scientific projects, which are developed between academia and industry. The co-ordination and development of some of our projects have been with ESA and NASA, and testing of equipment in Zero G exercises prior to launch. Other complex projects with long term system support such as the Cyclopes project at the ILL in Grenoble where the system is a complex inward looking panoramic neutron imaging system using 16 cameras with 16 million pixels and a 360 degree field of view but gating on for microseconds to see diffraction as events unfold in real time live.

My interest is to bring in my expertise at running development projects and be able to offer this experience to the RAS. As an MD and experienced project co-ordinator for many successful EU projects, I can understand the problems of funding for students, and also communicating and projecting the RAS image to the wider scientific community and a more worldly audience.

**STEPHEN WILKINS (A)** MSci, PhD, FRAS. Lecturer in Astrophysics, Astronomy Centre, University of Sussex (2013-). Previously: post-doctoral research associate, University of Oxford (2009-2013); PhD student, University of Cambridge (2006-2009). Undergraduate student in Physics and Astronomy (MSci), University of Durham (2002-2006).

Special interests: Observational and theoretical galaxy formation and evolution, specifically focussing on the high-redshift Universe and galaxies with extreme star formation activity. Public engagement, particularly aimed at primary school level and interactive web resources. As the professional body for astronomers and geophysicists in the UK the RAS has a critical role in both engaging the public with cutting edge research and supporting researchers and students. This latter role is accomplished through advocacy, the provision of undergraduate internships and post-doctoral fellowships, support for scientific meetings, amongst others. As a councillor I would enthusiastically support all of these commitments while also focussing on a number of specific issues (such as the concerns of researchers on short-term temporary contracts, especially with families).

I am also keenly involved in public engagement. Public engagement activity is a key responsibility for all publicly funded science but also provides an opportunity to encourage greater participation in the sciences. This is critical to ultimately creating a scientific community which better reflects the demographic profile of the United Kingdom and fully exploits the talent that exists in the wider community. My specific interests lie in engaging primary school level; these students are often overlooked in the provision of outreach activities despite the fact that these ages are when opinions on science (and scientists) are likely formed.

**SILVIA ZANE (A)** PhD, Reader at the Mullard Space Science Laboratory, University College London. Formerly Samuel and Violette Gladstone fellow at Oxford University and STFC Advanced Fellow at MSSL/UCL. Member of the SIGRAV, RAS and IAU. Team Member for the Nasa Swift mission (since 2000), Associated Scientist for the future Athena mission (since 2008), Member of the science team for the ESA M4 candidate LOFT and PI of the LOFT Large Area Detector, Member of the Science Team for the NASA SMEX mission IXPE and the ESA M4 candidate XIPE.

Special Interests: High Energy Astrophysics, black holes and neutron stars, accretion, radiative transfer, gamma ray bursts.

I am firmly convinced that the RAS can play a crucial role in astronomy and astrophysics in the UK and worldwide. The RAS is a vital point of reference for members of the scientific community and amateur astronomers, and is supporting essential activities in all the most important areas in the field, from outreach to divulgation and education. The RAS has always had an important role in influencing the government and research councils on grants and funding policies. In an era in which the discipline is facing difficult financial times, I believe it is important that RAS members stand out and make an active contribution to policy making. I have been an RAS member since 2005, served on the RAS Membership Committee since 2007, and have been the RAS point of contact at MSSL/UCL since 2014. I am now standing for the RAS council with the hope to help to support and enhance the role of this prestigious organization.

**ANTON ZIOLKOWSKI (G) MA MSc (Econ) PhD FRAS FRSE** Professor of Petroleum Geoscience, University of Edinburgh.

Recipient of Conrad Schlumberger Award of the European Association of Exploration Geophysicists, 1982; elected Member of Hollandse Maatschappij der Wetenschappen (The Royal Holland Society of Sciences and Humanities), 1991; Fall Distinguished Lecturer of the Society of Exploration Geophysicists, 1994; elected Fellow of the Royal Society of Edinburgh, 1995; elected Member of Academia Europaea, 2000.

I have been Professor of Petroleum Geoscience at Edinburgh since 1992. I was Professor of Applied Geophysics at Delft University of Technology 1982-92. My first job was in the Seismic Discrimination Group of Lincoln Laboratory, MIT, 1971-73. I have also worked in industry. At the National Coal Board 1976-80 I led the development of high resolution seismic data acquisition and processing for coal exploration and mine planning. As a consultant to the British National Oil Corporation 1980-82, I co-invented a method to use near-field pressure measurements to determine the far-field seismic source signal generated by an array of seismic air guns, a method used extensively today.

In 2004 I became co-founder and Technical Director of MTEM Limited, which was the largest-ever spinout from a Scottish university. It offered onshore and offshore electromagnetic surveys to oil companies for the detection of hydrocarbons. In June 2007 MTEM Limited was bought by Petroleum Geo-Services (PGS) and I worked for PGS as Chief Scientist, Geosciences and Engineering, until 2010.

I am an applied geophysicist. My principal current interests are in (1) distinguishing underground nuclear explosions from earthquakes using seismic data, and (2) using controlled source electromagnetic exploration methods to search for subsurface resistive bodies, including shale oil and gas.

I would like to see the science of geophysics and its applications more widely understood and I would be willing to serve the Royal Astronomical Society to promote this understanding. A particular goal I would work for, perhaps in cooperation with fellow societies, is a system to provide evaluation and accreditation of degrees in geophysics.

## ELECTION OF OFFICERS AND COUNCIL – 2015

**With effect from the Annual General Meeting 2015, the RAS Council is expected to be constituted as follows:**

<u>Office</u>	<u>Name</u>	<u>Years to serve</u>	<u>Category</u>
President	Martin BARSTOW	1	A
President-elect	TO BE ELECTED	1	A/G
Vice Presidents	Mike EDMUNDS	1	A
	James WILD	1	G
	Donald KURTZ	2	A
	Christine PEIRCE	2	G
Treasurer	Mike CRUISE	1	A
Secretaries	Ian CRAWFORD	2	G
	Lyndsay FLETCHER	1	G
	Mandy BAILEY	3	A
Councillors	Paul MURDIN	1	A
	Simon MITTON	1	A
	John BROWN	1	G
	Sarah MATTHEWS	1	G
	Jane MACARTHUR	2	G
	Stacey HABERGHAM	2	A
	Martin BUREAU	2	A
	TO BE ELECTED	3	A
	TO BE ELECTED	3	G
	TO BE ELECTED	3	A or G
TO BE ELECTED	3	A or G	
TO BE ELECTED	2	A or G	