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Office Bearers : 2003 - 2006

Editorial

President's Report

ISRP-10

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EDITORIAL

In this special issue of the IRPS Bulletin, we highlight the forthcoming 10th symposium of the International Radiation Physics Society (17-22 September 2006) and associated workshop on the use of Monte Carlo techniques for design and analysis of radiation detectors (15-17 September 2006). This will be held at the University of Coimbra, Portugal and many preparations are underway to insure a cordial and productive meeting.

Included in this issue of the Bulletin are listings of the invited symposium lecturers and their topics; a listing of the contributed posters may be found at:

http://www.irps.net/posters and invited lectures.pdf.

Also included is the schedule of the workshop and symposium and a couple of maps we hope can provide some overview and orientation.

Finally, there are instructions for submitting ISRP-related papers for publication of the proceedings.

This promises to be the best-attended ISRP with international leaders in the field providing an impressive range of technical content. We look forward with anticipation to meeting those who are able to attend, and we hope that the next issue of the Bulletin will provide a good overview for those who could not attend this time.

Larry Hudson

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PRESIDENT'S REPORT

It is time for another IRPS election. These elections have been held every three years, ever since the Society was founded in Ferrara in 1985.

It is clear that candidates for offices in IRPS need to have energy and commitment, interests in IRPS and useful ideas for the Society. But candidates also clearly need to have the ability and willingness to participate in the affairs of an international organization (which is not large enough to offer funding to assist with that participation).

We welcome the slate of candidates which the Nomination Committee was able to obtain this year, and their interests, abilities and commitment to work for the IRPS. We thank them for their willingness to serve. (There would of course also have been the ability to nominate further candidates by petition, as did happen last time.)

As the Society becomes larger the pool of able active people who are trying to participate, and are willing to participate, should grow, and multiple candidates for some of the offices may become more common. (However one does not want to allow a failure to win an election to discourage participation in the affairs of the Society.) It is interesting to realize that, even in an era of enhanced communication, there is a need for a participatory organization to have actual physical meetings, particularly to conduct more than one-on-one discussion. This presents a problem, especially for an international organization.

The IRPS has tried to address these needs and problems by holding twice yearly Council meetings in geographically dispersed areas of the world, increasing the opportunities for members to participate in some share of meetings and come into regular contact with other members.

However this does also mean that most members will only come to a minority of meetings, except for the rather more general attendance in connection with the triennial ISRP which the Society sponsors. For the Council to be able to conduct business this situation requires that the Council have a rather small quorum. This in turn implies a need for trust, and an assumption of widespread consultation. In fact most decisions of the Council are made by consensus, and with awareness of the views of members not present.

The Society has also always welcomed inclusive participation in its activities. Members of the Society have been welcome to observe and participate in Council meetings (although of course not taking part in any formal vote). Continuity in the affairs of the Society is provided by staggered six year terms on Council, and historically by a Secretary for IRPS who (unlike the President) has had longer tenure through several elections.

But what is always needed is to identify additional and new people, with interests, useful ideas, and abilities to participate in the affairs of the Society.

As you proceed now to cast your ballot in this election, I urge you to also identify other candidates for the future, and bring them to our attention.

Richard Pratt

I S R P - 10

I R P S Elections

10th International Symposium on Radiation Physics (ISRP-10)

17th - 22nd September, 2006

and

Workshop on Use of Monte Carlo Techniques for Design and Analysis of Radiation Detectors

15th - 17th September 2006

Coimbra, Portugal

GENERAL INFORMATION

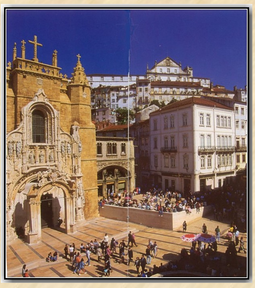
The 10th International Symposium on Radiation Physics (ISRP-10) and the Workshop will be held at the University of Coimbra, Portugal, 17-22 September and 15 - 17 September, 2006, respectively.

This event is organized jointly by the International Radiation Physics Society (IRPS) and the Physics Department of Coimbra University. The meeting is devoted to current trends in radiation physics research. The symposium in Coimbra is the latest in a series of triennial symposia which began in Calcutta in 1974 and continued in Penang (1982), Ferrara (1985), São Paulo (1988), Dubrovnik (1991), Rabat (1994), Jaipur (1997), Prague (2000) and Cape Town (2003)

Coimbra University is one of the oldest in Europe, its foundation dating back to 1290.

The University of Coimbra

Apart from the University, there are many interesting monuments dating from the Roman times onwards.



Coimbra is approximately 200 km north of Lisbon and 100 km south of Porto. Lisbon and Porto have international airports. Coimbra is connected to both cities by fast trains, bus and highway.

Information on the Symposium and Workshop can be gained from our Conference Information page, and also from the websites :

Symposium : http://www.pollux.fis.uc.pt/isrp10/

Workshop : http://www.pollux.fis.uc.pt/isrp10/workshop

International Radiation Physics Society

Elections

These will be held at ISRP-10

Click here for profiles of members standing for election.

Click here for ballot form.

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RADIATION PHYSICS CONFERENCES and WORKSHOP INFORMATION

APiP

15th Topical Conference on Atomic Processes in Plasmas

Gaithersburg, U.S.A.

March 19th - 22nd, 2007

This meeting is hosted by NIST. Topics covered by the conference will be selected from a range of fields including :

- High Energy Density Physics
- Magnetic Fusion Plasmas
- Astrophysical Plasmas
- Industrial Plasmas
- Laser-Produced Plasmas
- Fourth Generation Light Sources
- Small-scale Plasmas (table top short pulse lasers, electron beam ion traps, etc.)
- Low Temperature Plasmas
- Fundamental Data
- Modelling
- Plasma-Solid Interactions

Web site : http://physics.nist.gov

Further Information : John Gillaspy Email : apip@nist.gov

MTAA12

12th Modern Trends of Activation Analysis

Tokyo, Japan

16 - 21 September, 2007

The conference venue is the campus of
Tokyo Metropolitan University (TMU)
which is located 40 km to the west of the downtown Tokyo.

Although Activation Analysis is a main theme for the conference,
we will also focus on several related subjects such as
ICP-MS, AMS, PIXE and SR-XRF
as competing techniques, so that major analytical
techniques having high sensitivity can be characteristically
compared.

Please visit our web site for more details http://www.mtaa12.com.

For enquiries please email mtaa12@center.tmu.ac.jp

We look forward to receiving your abstracts and seeing you at the conference.

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MEMBERS STANDING FOR ELECTION TO IRPS COUNCIL, 2006

Profile of Member Standing for President

Dudley C. Creagh

Professor and Director of Cultural Heritage Research, University of Canberra, Australia

Qualifications :

BSc (1 Hons)
Dip Ed (Qld)
MSc (UNE)
MSc (Brist)
PhD (NSW)
FInstP FAIP
CPhys CEng

Professional Experience other than my University Involvement :

- Chartered Physicist and Consulting Engineer.
- Consultant on scientific conservation matters to the National collecting agencies (National Archives of Australia, Australian War Memorial, National Museum of Australia, National Film and Sound Archive, National Gallery of Australia, etc).
- Consultant to Australian government agencies on border protection matters.
- Consultant to the Australian Synchrotron Project.

Research areas :

- The scientific conservation of objects of cultural heritage significance, including Australian indigenous paintings and objects, important medals, aeroplanes, motor vehicles and the like.
- The design of advanced equipment for use in scientific experiments(ranging from x ray and infrared beamlines at synchrotron radiation sources to laboratory instruments such as x-ray interferometers and reflectometers).
- The development of protocols for the testing of a wide range of equipment used in border protection (including Raman systems for detecting street drugs, NQR systems for detecting explosives in baggage, neutron/photon systems for examining air cargo containers, and high energy x ray systems for examining shipping containers)
- The study of x-ray scattering by atoms (anomalous dispersion and absorption)

Previous Experience in National and International Scientific Activities :

Positions held in National and International Scientific Committees are as follows:

- Member, National Scientific Advisory Committee, Australian Synchrotron Project (2002-present)
- Member, Australian Synchrotron Research Program (1997-present)
- Member, Australian National Beamline Facility (1993-1997)
- Member, National Committee for Crystallography of the Australian Academy of Science (1993-1997)
- Chairman, Commission on Crystallographic Apparatus, International Union of Crystallography, 1982-1993

Involvement in IRPS Affairs :

My involvement commenced in 1987 with a project for the International Union of Crystallography, initiated by the IRPS, on the measurement of x ray attenuation. I have since held the positions of :

- Councillor (1990-2000)
- Editor of the IRPS Bulletin (1993-2000) (currently Associate Editor: the IRPS bulletin is assembled in my office, and my Research Associate, Shirley McKeown manages the IRPS website)
- Co-chairman of the Scientific Program (with Professor Malcolm Cooper) for the ISRP 9 meeting and workshop in Cape Town (2003)
- Vice-president (Australasia) (2000-present)

Statement : The IRPS is an international society unusual in the diversity of facets of science which it embraces. It was conceived of as a society which would make access to knowledge in every aspect of radiation physics available to scientists of all nationalities. It is an inclusive society in which members from all nations are encouraged to be participants. And it attempts to provide financial assistance to scientists from emerging nations to attend its activities and meetings.

My aim is to continue the existing work of the IRPS, and, where possible, improve the mechanisms by which knowledge of radiation physics and its uses can be disseminated to scientists and students in emerging nations.

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Profile of Member Standing for Secretary

David A. Bradley

Physics Department
University of Surrey, U.K.

Having served in the same position for the last three years, I am delighted to again be standing for the position of Secretary of the International Radiation Physics Society.

For me IRPS has very special meaning, not least because I have enjoyed very close association with the Society since its inception, being one of the three people (assisting Richard Pratt and John Hubbell) who drafted the Constitution of the Society, and have been intimately involved both with the early life of IRPS-News (now the IRPS Bulletin) and the organisation of quite a few of the Society Symposia and its various Proceedings, from ISRP-2 until the impending ISRP-10.

The ethos of the Society includes the central ideas that not only should we be promoting the safe use of radiations but also that the membership should be truly international, the varying economic realities not forming insurmountable barriers to any interested scientist wishing to join this family.

The challenges involved have been confronted head on and in so doing we have taken the series of symposia to Asia, North and Southern Africa, South America, Central and Western Europe, all in an effort to bring the meeting 'close' to the Society membership. It has been an immense undertaking, and one that has been a truly enriching experience, even as we struggle to maintain the ideals of the founding 'fathers'.

I find it particularly encouraging that we are being seen to maintain the strong scientific and communications/organisational capability of the Council, importantly regaining some of the youth that we first began with, while retaining a good degree of experience and the wisdom that goes with it.

Clearly, for me, the future of the Society is in safe hands and in whatever role the membership sees fit for this candidate, I would be proud to participate in maintaining the momentum of the Society.

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Profile of Member Standing for Treasurer

Malcolm J. Cooper

Physics Department
University of Warwick, U.K.

I have been associated with IRPS for well over a decade and was the co-organiser of ISRP-5 (Dubrovnik, 1991) and ISRP-9 (Cape Town, 2003).

During this time I have served the Society first as a Vice-President for Western Europe and more recently as its President (2000-3).

I have been able to attend most of its Council meetings and hopefully helped to guide its development.

My own research is certainly Radiation Physics - x-ray scattering studies of electron charge and spin density through both Compton scattering and diffraction – areas which have mushroomed with the proliferation of potent synchrotron radiation facilities.

The aims of the IRPS have always been truly laudable but now its symposia and associated workshops (a development which I helped to nurture) are, I believe, achieving more international prominence. The on-going challenge is to increase the membership and to secure a firmer financial base, so that we can really support Radiation Physics worldwide.

I would be happy to continue to serve IRPS as its Treasurer.

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Profile of Member Standing for Vice President – Eastern Europe

Ladislav Musilek

Faculty of Nuclear Sciences and Physical Engineering,
Czech Technical University in Prague, Czech Republic

University Education :

1963 – 68 :
Czech Technical University in Prague, Faculty of Technical and Nuclear Physics (renamed later to Nuclear Sciences and Physical Engineering), Prague, Czech Republic. (Specialisation: Dosimetry and Application of Ionising Radiation)

Scientific and Pedagogical Degrees :

1977 PhD in experimental physics (CTU Prague)
1983 Associate professor of nuclear and subnuclear physics (CTU Prague)
1996 Professor of experimental physics (CTU Prague)

Appointments :

1968-71 : Research assistant at the Tesla Research Institute of Nuclear Instruments, Přemyšlení near Prague.

1971 – now : CTU Prague, Faculty of Nuclear Sciences and Physical Engineering, Department of Dosimetry and Application of Ionising Radiation
1971 : Research worker
1975 : Lecturer
1990-94.2 : Vice-dean of the Faculty
1 Feb 94 - 31 Dec 2000 : Dean of the Faculty
15 Feb 2000 to now : Vice-rector of CTU Prague for science and research

Statement : My reasons for membership of Council are :

a) Education and professional record.

b) Need of promoting nuclear and radiation sciences in the mostly anti-nuclear world.

c) Belief that the radiation physics community should be organized and should sometime meet and that I can help with this goal.

d) IRPS and ISRPs are good platforms for international links, collaboration and exchange of knowledge.

Radiation physics is not only my job, but also my hobby

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Profile of Member Standing for Vice President - Africa and Middle East

Dan T. L. Jones

Medical Radiation Group,
iThemba LABS. South Africa

Dan T L Jones, MSc, PhD [Nuclear Physics], MSc (Med) [Medical Physics], CPhys, FInstP, was born in Cape Town, South Africa and received his academic degrees from the University of Cape Town.

After stints in Nuclear Physics research at the University of Wisconsin, Madison WI, USA and the former South African Atomic Energy Board, he entered the field of Medical Physics at Cape Town's Groote Schuur Hospital.

Since 1978 he has led the fast neutron and proton radiation therapy programs at iThemba LABS (**L**aboratory for **A**ccelerator **B**ased **S**ciences) [formerly National Accelerator Centre], Somerset West (Cape Town), as Head of the Medical Radiation Group.

He has published more than 100 papers and given over 300 conference presentations. His special interests are nuclear techniques in medicine, radiation therapy and dosimetry. He is a member of the International Commission on Radiation Units and Measurements (ICRU) and has served, and continues to serve, on numerous international committees and advisory bodies concerned with aspects of medical radiation. He is an Expertise Editor of Radiation Physics and Chemistry and was organiser of the 9th International Symposium on Radiation Physics (ISRP-9) in Cape Town in 2003.

He has served two terms as Vice President for Africa and the Middle East of the IRPS and wishes to continue in this capacity in order promote the study of Radiation Physics and foster the ideals of the IRPS in the region, and in particular in developing countries in general. He is particularly interested in encouraging young Africans to pursue careers in the field and sees the IRPS as a vehicle for this.

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Profile of Member Standing for Vice President - Australasia

Christopher T. Chantler

School of Physics,
University of Melbourne, Australia

Assoc. Prof. C.T. Chantler has made seminal developments in the computation of X-ray atomic form-factor theory, and his theory is the current NIST reference database on the subject. This database is accessed 10000 to 20000 times per month (since its inception) by X-ray scientists, academics, commercial groups and others. It has addressed serious flaws of earlier computations used for several decades. The tabulation has been confirmed by several of the best data sets, compared to other models. Numerous reviews have been made of the latest development of this work.

He has 83 refereed papers published or in press in major journals, including regular Phys. Rev. A and Phys. Rev. Letts papers in the fields of the X-ray interaction of matter, absorption and scattering, XAFS and XANES, and tests of QED, especially in fundamental developments of experimental, analytical and theoretical techniques. Several of his publications have been cited 20-118 times since 1995. The work in medical radiography has led to a patent and subsequent commercialization. Chantler has over 195 conference presentations and publications.

Chris Chantler has collaborated with most major researchers in the field of experimental highly-charged atomic investigations of quantum electrodynamics and has led several groups studying precision accelerator-based and EBIT-based tests of QED. He was a Visiting Fellow in the Quantum Metrology Division at NIST, USA, from 1992-94, Scientific Program Chair of the International Conference on X-ray and Inner-shell Processes 2005; and is guest editor of the refereed Proceedings in Radiation Physics & Chemistry; Chair of ISRP 2009; and on the international advisory committee for other major conference series including the X-ray and Inner-shell Processes series.

Honours have included: a Lindemann Fellow of the E.S.U. of the Commonwealth (1991-92), a St Anne's College Drapers' Company Junior Research Fellow (1989-91), and Shell Australia Postgraduate Scholar for Science & Engineering (1985-88). He has been a Member of the Australian Optical Society [AOS] Council since 1996; the Associate Editor, Australian Optical Society News since 1995; a Member of the Optical Society of America and the American Institute of Physics since 1993; and a Member of the Australian Institute of Physics since 1992.

He has developed new experimental techniques, some one hundred times more accurate than prior methods in the X-ray regime, for the determination of attenuation and absorption coefficients and the imaginary component of the atomic form factor. These experimental results lie at the core of a new understanding of the interaction of light with matter, especially in the practical sense of developing new analytical tools for XAFS. Recent work by his group has led to improvements in the understanding of theory (as measured by the reduced χ^2 fitting of experimental data) of a factor of 100. His experimental work recently on molybdenum is some 100 - 250 times more accurate than all previous literature in experiment or theory and will hopefully establish a new benchmark for future work in this and related fields.

His research interests include fundamental measurements of quantum electrodynamics, especially using x-rays; synchrotron and EBIT experiments; and the study of the interaction of x-rays with matter via form-factor theory and experiment.

Statement : The International Radiation Physics Society is an important communication and outreach opportunity and sponsors a broad-based and major conference series as well as specific workshops and more local meetings. I have attended the International Symposia regularly and consider them to be some of the most useful and collegial conferences on the calendar. This led me to lead the (successful) bid for Australia to hold ISRP 2009 in Melbourne. I look forward to serving and growing the community in a variety of ways.

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Profile of Member Standing for Vice President - South and Central America

Anselmo S. Paschoa

LARAMG,
State University of Rio de Janeiro, Brazil

Anselmo S. Paschoa was born in Rio de Janeiro, Brazil. He holds a Ph.D. from New York University. He is a Senior Consultant for research at the Laboratory of Radioecology and Global Changes (LARAMG) of the State University of Rio de Janeiro (UERJ).

He was Professor of Radiation Physics at Pontifical Catholic University of Rio de Janeiro (PUC-Rio) until July 2005.

He is member of several international program committees on Radiation Physics and Environmental Sciences.

Professor Paschoa is currently Chairman of the Local Organizing Committee and member of the International Scientific Committee for the 8th International Symposium on the Natural Radiation Environment (NRER-VIII) which will be in Rio de Janeiro, Brazil, 6-13 October 2007.

Professor Paschoa was Director for Radiation Protection, Nuclear Safety and Safeguards at the Brazilian Nuclear Energy Commission (CNEN) from May 1990 to August 1992, and was a member of the U.S. National Academy of Sciences Committee on the Evaluation of Guidelines for Exposure to Naturally-Occurring Radioactive Materials.

Over the years he has been Visiting Professor at the University of Utah, Guest Scientist at Brookhaven National Laboratory, and Visiting Scientist at Memorial Sloan-Kettering Cancer Center. He was member of the International Working Group on Reducing the Threat from the Loss of Control of Hazards and Potentially Hazardous Materials of the Institute for International Studies, Stanford University.

Throughout his career he has published more than 130 scientific articles and papers and attended over 120 scientific meetings throughout the world. In due time, he will publish a book of poems selected from the few hundreds that he has written throughout his adult life.

Professor Paschoa is currently Vice President of the International Radiation Physics Society for Central and South Americas.

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Profile of Member Standing for Vice President - South East Asia

Suprakash C. Roy

Physics Department
Bose Institute, India

Professor Roy has been a Professor of Physics at Bose Institute, Calcutta, India, since 1986, after receiving his PhD degree from Calcutta University and gaining postdoctoral experience at the University of Pittsburgh and Yale University, U.S.A.

His major research interests are in photon-atom scattering, radiation damage in solids and liquids, radiation detectors and medical physics.

He has more than 100 publications to his credit and is a regular visitor to the University of Pittsburgh, USA in connection with the co-operative research on photon-atom scattering with Professor Richard H. Pratt.

Professor Roy was awarded the JSPS Invitation Fellow fo the year 2000 by the Japan Society for Promotion of Science. He has been appointed Visiting Associate at the Fa.M.A.F, National University of Cordoba, Argentina under the TWAS-UNESCO Associateship Scheme at the Centres of Excellence in the South by the Third World Academy of Sciences in 2001 for three years.

He has been associated with the International Radiation Physics Society (IRPS) from the time when it was not formally established, and was Membership Secretary of the IRPS and Associate Editor of the IRPS News for about 15 years after its foundation.

He is currently the Vice-President (South-East Asia) of the International Radiation Physics Society.

For further details, one may visit the website:
http://www.boseinst.ernet.in

Statement: I would like to be Vice President for South East Asia in order to foster and nurture the growth of radiation physics in the South-East Asian Region and in India in particular, which I have been doing for years.

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Profile of Member Standing for Vice President - Western Europe

Jorge E. Fernandez

Energetics, Nuclear Engineering and Environmental Control Department, University of Bologna, Italy

After obtaining his M.Sc. in Physics (1977) and his Ph.D. in Physics from the University of Cordoba in Argentina (1985), Professor Fernandez was a Researcher in atomic and nuclear spectroscopy at institutes in Buenos Aires and Cordoba.

From 1994 on, he has been affiliated with the University of Bologna, Italy. He is Professor at the Energetics, Nuclear Engineering and Environmental Control Department of this University, a Researcher of the Italian Institute of Nuclear Physics (INFN), and a consultant to several companies and institutes in Italy and abroad. In the past he was affiliated with the former Italian National Institute for Physics of Matter (INFM).

His interest is mainly in the fundamental physics of the interaction of x-rays with matter, including polarisation effects and their implications for applications. In particular:

- Transport models (deterministic and Monte Carlo) for polarised and unpolarised photons, and for charged and neutral particles.
- Coupled transport problems involving photons and charged particles.
- Problems of multiple scattering.
- Applications in X-ray and gamma spectroscopy (EDXRS, XANES, electron microprobe, computed tomography), medical physics, environmental physics, industrial diagnostics, and cultural heritage (non-destructive methods).
- Applications of LIDAR techniques.

He is the author of over 80 articles, 2 books, 1 patent and several computer codes (SHAPE, MSXRF, MCSHAPE) related to XRS.

He organised the European EDXRS Conference in 1998, was the guest editor of the two issues of X-Ray Spectrometry that contained the proceedings of this Conference, and he continues as a Member of the International Advisory Committee for the European Conferences on X-Ray Spectrometry.

He organised the 5th International Topical Meeting on Industrial Radiation and Radioisotope Measurement Applications (IRRMA-V) in 2002 and was one of the guest editors of the special issue of Nuclear Instruments and Methods B213 containing the proceedings of that Conference.

He is Co-Chair of the Scientific Committee of the 10th International Symposium on Radiation Physics (ISRP-10) 18-22 September 2006, Coimbra (Portugal) and Co-Chair of the satellite Workshop on the Use of Monte Carlo Techniques for Design and Analysis of Radiation Detectors 15-17 September, 2006, Coimbra, Portugal

He was member of the Advisory Board of X-Ray Spectrometry from 2000-2003.

He serves the International Radiation Physics Society as Executive Councillor (elected in 2003).

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Profile of Member Standing for Vice President - North East Asia

Zhengming Luo

Institute of Nuclear Science and Technology,
Sichuan University, P.R. China

Professor Zhengming Luo graduated from Tsinghua University in Beijing, Faculty of Engineering Physics, Experimental Nuclear Physics in 1963.

He then worked at China Institute of Atomic Energy (1963-1964), China Institute of Radiation Protection (1964-1971, and 1981-1987), Southwestern Institute of Physics (1971-1981) and Sichuan University (1987-present).

He became a Professor at Sichuan University in Chengdu in the People's Republic of China in 1987. Now he is the Director of the Key Lab for Radiation Physics and Technology of the Education Ministry of China and also Director of the Center for Radiation Physics, Sichuan University.

He has served as an IRPS Vice President for the past ten years. He has been an editor of the IRPS recognized journal Radiation Physics and Chemistry. He has also edited the Chinese Journal of Radiation Research and Radiation Processing. He spent many years as a Visiting Professor at the Karolinska Institute. (1989-1997). He has also a long-term collaboration with IAEA (1991-present)

Prof. Luo's awards include a fellowship from the Alexander Von Humboldt Foundation which he used to spend two years at the University of Munich. He has also received several awards of Scientific and Technical Progress from State, Education Ministry and China Nuclear Industry Corporation. Research by Prof. Luo has focused on:

- theory and algorithms for photon and charged particle transport, including bipartition model for charged particle transport and 3 universal codes for electron, ion and photon transport;
- cavity theory based on virtual source concept and perturbation theory of radiation fields;
- measurement of inner-shell ionization cross sections by electron impact based on thin-target -thick-substrate technique;
- the particle-surface interaction for fusion technique;
- dose algorithms of electrons, photons and protons in radiotherapy, developing China's first IMRT Radiation Treatment Planning System.
- the study of inverse problems in mathematical physics.

From 1976 through 2005, he was the author or co-author of 160 papers.

Statement : As Vice President for North East Asia, I would like to make efforts to promote and strengthen the understanding, exchange and cooperation between Chinese radiation physicists and the international radiation physics community.

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Profile of Member Standing for Vice President - North America

William Dunn

Mechanical and Nuclear Engineering Department,
Kansas State University, U.S.A.

Dr. Bill Dunn has enjoyed a career of thirty years in research on radiation physics and engineering, after studying in the early 1970s under Robin Gardner at North Carolina State University where he received both M.S. and Ph.D. degrees in Nuclear Engineering.

He spent five years at Carolina Power and Light Company, where, among other things, he conducted both radioactive and inert tracer flow-rate experiments at the H.B. Robinson nuclear power-plant. He then moved into radiation research, first at North Carolina State University and next at Research Triangle Institute.

He co-founded Quantum Research Services, Inc., in 1988 as a contract research firm specializing in radiation applications, and he served as its president until joining the faculty of the Department of Mechanical and Nuclear Engineering at Kansas State University in 2002

Bill's research interests include radiation detection and dosimetry, particle transport, radiation measurement applications, and Monte Carlo simulation.

Bill has been involved in planning the series of Industrial Radiation and Radioisotope Measurement Applications (IRRMA) conferences that began in 1988.

He has been working for the last several years to realize a loose but supportive alignment between IRPS and IRRMA and is Chairing the Committee to host the *Workshop on Use of Monte Carlo Techniques for Design and Analysis of Radiation Detectors*, which will be held just prior to the upcoming ISRP-10, in Coimbra, Portugal.

Statement : I am delighted to be a candidate for Vice President, North America (VPNA), of IRPS because I embrace the mission that our Society serves. It seems to me that IRPS is the only society that not only places primary emphasis on radiation physics, as opposed to applications, but also truly encourages international participation. I was fortunate to learn about IRPS in its early years and, after joining, I attended the third Symposium (held in Ferrara, Italy) in 1985. I believe it was there that I met John Hubbell, the current VPNA and one who has served the Society with distinction from its founding. An engineer by training but a physicist by heart, I am an enthusiastic candidate to serve the Society. If elected, I will do my utmost to help the Society realize its early vision of providing a forum for scientists and engineers from all parts of the world to meet, to interact, and to teach and learn the wonderful subject of radiation physics.

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Profile of Member Standing for Executive Councillor - Full Term

Odair Dias Gonçalves

National Nuclear Energy Commission,
Rio de Janeiro. Brazil

Odair Dias Gonçalves, born 25 June 1952 is a physicist with a PhD Degree in Nuclear Physics, obtained at the Instituto de Física of the Federal University of Rio de Janeiro (UFRJ), Brazil in 1987.

Since then he has been cooperating with scientists from many parts of the world, such as Germany, Portugal, England and USA (to where Richard Pratt was the first one to invite him). Most of his collaborators are now close friends and IRPS members like Mic Farqhuarson, Isabel Lopes, Richard Pratt, David Bradley, Paul Bergstrom and Anselmo Paschoa.

Odair is the author and co-author of about 50 papers and 3 scientific books. He has been working at the Federal University of Rio de Janeiro (UFRJ) since 1975. Over a period of twenty-eight years of work, he built his career as a teacher, researcher, university professor and academic adviser. He acquired experience in various areas, such as Nuclear Physics, Nuclear Instrumentation, Nuclear Energy, Radiation Protection, Medical Physics and Radiation Physics. Lately, he was head of the Gamma Rays Laboratory at the Physics Institute, a facility devoted to the study of interactions of KeV and MeV photons with matter.

In 1993 he was appointed as President of the National Nuclear Energy Commission (Comissão Nacional de Energia Nuclear – CNEN), the Brazilian nuclear regulatory organ, with 3000 employees and comprising five research institutes and offices all over the country.

He was always interested in the social aspects and consequences of science, including financing and policies, having taken part in many activities:

- Member of the "Experts Group" designated to evaluate the National Nuclear Energy Commission (CNEN) Activities: 2002
- Member of the Sponsorship Commission of the Deutscher Akademischer Austauschdienst (DAAD): 1986 – present
- Consultant to the *National Council for Scientific and Technological Development* (CNPq): 1986-present
- Member of the "Experts Group" of *The Brazilian Physics Society* (SBF) designated to evaluate the National Nuclear Brazilian Policy: 1989 - 1991
- Regional Secretary of *The Brazilian Physical Society* (SBF): 1988 - 1989

His administrative tasks as head of The Brazilian Nuclear Energy Commission brought new obligations and valuable experience to his life, most notably:

- Head of the Administrative Council of the companies: Indústrias Nucleares Brasileiras and of the Nuclebrás Equipamentos Pesados
- Advisor and second for the Brazilian representative at the Governors Board of the International Agency of Atomic Energy in Vienna Austria
- Brazilian Representative in the Nuclear Suppliers Group
- Brazilian Representative at the ABACC, Agência Brasil Argentina de Contabilidade e Controle

Statement : I have attended the ISRPs since São Paulo. The society and the International Symposia, through the contact with distinguished scientists, were of significant relevance to my career. It will be an honor to be part of the International Radiation Physics Society Office.

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Profile of Member Standing for Executive Councillor – Full Term

Ziyu Wu

Beijing Synchrotron Facility, Chinese Academy of Sciences, PR China

Ziyu Wu gained his PhD in Physics in 1988.

- 1988-1989 : Post-doc, International Centre for Theoretical Physics and International School for Advanced Studies, Trieste, Italy.
- 1990-1994 : Researcher, Theoretical Group Laboratori Nazionali di Frascati dell'INFN, Frascati, Italy.
- 1995-1997 : Visiting researcher, Institut des CNRS, Materiaux de Nantes, Laboratoire de Chimie des Solides, Nantes, France.
- 1997-2000 : Senior researcher, Commissariat l'Energie Atomique, LPS, CE Saclay, France.

He has been a full professor of Physics at the IHEP since 2000 and is Research Director of the Beijing Synchrotron Radiation Facility of the Institute of High Energy Physics.

He has published more than 150 scientific publications in international journals promoting new research areas in China: the investigations of the interaction between biological systems and nanostructures with synchrotron radiation spectroscopies; the investigations of the structure-function relationship of metalloproteins with synchrotron radiation spectroscopies.

He is a vice chairman of the Chinese Synchrotron Radiation Committee, chairman of the Applied Research subcommittee of the IHEP and a member ofthe Executive Committee (EC) of the International XAFS Society (IXS).

In 2001 he was awarded in China with The State Outstanding Youth Fund.

In 2002 he was elected as a member of the Scientific Committee of the X-ray and Inner-shell Processes Conference.

His Academic career includes the position of Associated Scientist of the Laboratori Nazionali di Frascati of the Istituto Nazionale di Fisica Nucleare (INFN) in Italy since 2000.

As senior scientist, he is now the coordinator of the *Key Important Project* of the National Natural Science Foundation of China and of the *Knowledge Innovation Program* of the Chinese Academy of Sciences.

Professor Wu is a specialist in X-ray absorption fine structure spectroscopy (XAFS) and photoelectron spectroscopy (PES) and he is involved both in experiments and in the development of new software.

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Profile of Member Standing for Executive Councillor – Full Term

Fiona E. McNeill

Medical Physics and Applied Radiation Sciences Unit, McMaster University, Canada

My main area of radiation physics research over the last twenty years has been the development and application of systems to measure trace toxic metals in vivo.

The two main techniques that I have investigated have been x-ray fluorescence analysis and neutron activation analysis. My recent graduate students have investigated the possibility of measuring arsenic in skin and cadmium in bone using x-ray fluorescence analysis and manganese in bone using neutron activation analysis.

As we are using radiation techniques to probe the human body, careful radiation dosimetry is essential. One of my recent graduate students therefore carefully characterized the neutron field from the McMaster University KN accelerator.

This dosimetry work has led into other applications, and I am now collaborating with radiation biologists at McMaster, looking at the biological effects of neutrons and low energy x-rays on in vitro cell systems.

My main area of teaching has been radiation physics at the senior undergraduate and post-graduate level.

I enjoy teaching physics and hope that I can communicate my passion and fascination with radiation physics to students. As the numbers of students enrolled in physics programmes are falling around the world, I believe that encouraging students into the field of radiation physics and educating them to a high standard, is one of the most important things that we can do.

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Profile of Member Standing for Executive Councillor – Full Term

Marcelo Rubio

CEPROCOR, Argentina

Marcelo Rubio is a physicist at the Centro de Excelencia en Productos y Procesos de Córdoba (CEPROCOR) in the Province of Córdoba, Argentina.

He has worked in the Radiation Laboratory of CEPROCOR since 1995.

He also has been a Professor at the Facultad de Matemática, Astronomía y Física (FAMAF) of the University of Córdoba since 1978. During the period 1988-1992 he was Vice-Dean of the Faculty.

After obtaining his M.Sc. in Physics (1978) and his Ph.D. in Physics from the University of Córdoba in Argentina (1985), Professor Rubio became a researcher in atomic and nuclear spectroscopy, with international appointments in Brazil and Italy, and is responsible for bringing a number of research projects from Argentina to the Frascati and Campinas LNLS Synchrotron.

He held postdoctoral positions at the University of Rome "La Sapienza" in Medical Physics, serving as President of the Argentinean Society of Medical Physics in 1991/93. His research progressed from traditional fundamental parameters applied to XRF to diagnostic radiology to characterization of biopolymers by SRXRF and x-ray microtomography, the focus of his present activities.

Dr. Rubio is author or co-author of more than 36 scientific publications in international journals, and 53 scientific papers as proceedings of international conferences, Latin-American prospective studies or virtual articles. He is author or co-author of 6 book-chapters on XRF and scientific-opinion documents.

In the field of scientific policy activities, Dr. Rubio was State Secretary of Science and Technology of the Province of Córdoba (1995-1999) and chief of the Scientific Advisory Councillor of the National Government (2000/2001).

Dr. Rubio was one of the founders of CEPROCOR and manager of the μSat VICTOR project that launched successfully in 1996 the first microsatellite of Argentina.

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Profile of Member Standing for Executive Councillor – 3 Years

Francesc Salvat

I.E.C.,
University of Barcelona, Spain

Francesc Salvat gained his M.S. degree in Physics from the University of Barcelona, Spain, in 1977; subsequently, he obtained his PhD in Atomic Physics in 1983. Most of his teaching and research career has been with the University of Barcelona, where he is a Professor of Atomic Physics.

He has been Visiting Professor at the University of Toledo, Ohio (USA), and at the Universidad Nacional de Cordoba, Argentina, and Visiting Scientist at the University of Stockholm, Sweden, and at KEK, Japan.

He has served as corporate board member of the European Microbeam Analysis Society, and in multiple scientific and organizing committees of international conferences. He keeps consulting contracts with several renowned companies.

Dr. Salvat's research interests include collision theory, Monte Carlo simulation of radiation transport and its applications to radiotherapy, detector characterization, electron probe microanalysis, and x-ray generators. He is the leader of the group that develops and maintains the general-purpose Monte Carlo code system PENELOPE for the simulation of electron-photon transport.

Recently, his work has been oriented to the development of numerical algorithms for the calculation of cross sections for electron interactions in gases and solids, and the production of reference databases.

He has published more than 90 scientific papers, and contributed about 100 communications to international conferences.

He has been supervisor of 10 PhD students.

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Profile of Member Standing for Executive Councillor – 3 Years

Isabel Lopes

Department of Physics
University of Coimbra, Portugal

Isabel Lopes has worked in the field of radiation physics for more than twenty years. In the 80's, she studied under Armando Policarpo at Coimbra University, Portugal, Werner Schmidt at Hahn-Meitner Institut of Berlin, Germany, and Tadayoshi Doke at Waseda University of Tokyo, Japan. She was an invited researcher of the Hahn-Meitner Institut and she was awarded a fellowship from the Japan Society for Promotion of Science (JSPS).

Since she gained her Ph.D. in Radiation Physics from the University of Coimbra in 1990, she has worked in several national and international research projects on the use of liquefied rare gases for radiation detectors.

Her main research interests lie in the development of liquid-rare-gas radiation detectors from the point of view of both the physics processes involved in the radiation detection and their applications to the search for rare events, to medical imaging with radionuclides, and to nuclear and high energy physics experiments. She is also interested in the charge transport and discharge processes in dielectric liquids.

Her current main research program is centred on the development of liquid and two-phase detectors for the search of non-baryonic dark matter in the framework of the UK Dark Matter Collaboration (UKDMC).

Her list of publications is available at http://www-lip.fis.uc.pt/~isabel/publications.htm

She is currently Associate Professor of the Physics Department of Coimbra University and researcher of the Laboratory of Instrumentation and Experimental Particle Physics (LIP).

Among other international duties, she currently serves as Chair of the Technical Committee on Dielectric Liquids of the IEEE Dielectric and Electrical Insulation Society (IEEE-DEIS).

Statement : There are two main features of IRPS that strongly motivate me to serve the Society. First, it provides an international forum of researchers engaged in a large variety of different topics, both fundamental and applied, under the broad umbrella of Radiation Physics. Personally, I find this diverse and interdisciplinary character very stimulating and important.

Second, it truly promotes international links, collaborations and exchange of knowledge.

I am very keen to contribute to maintain and reinforce these roles of IRPS. In addition, I would like to work towards enhancing the Society's appeal to young researchers.

Election Ballot Form

For all posts, except those of executive councillors, vote for one by marking the appropriate box. For executive councillors, you may vote for up to four candidates who are running for the full six-year term and up to two candidates for three-year slots that have arisen due to vacancies. For all positions you may write in names of other members of the Society and cast your ballot for them.

President (vote for one)

Dudley C. Creagh (Australia) ☐

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Secretary (vote for one)

David A. Bradley (UK) ☐

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Treasurer (vote for one)

Malcolm J. Cooper (UK) ☐

_____ ☐

Vice Presidents:

Western Europe (vote for one)

Jorge E. Fernandez (Italy) ☐

_____ ☐

Eastern Europe (vote for one)

Ladislav Musílek (Czech Rep.) ☐

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F.S.U. (vote for one)

Andrei V. Korol (Russia) ☐

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North America (vote for one)

William L. Dunn (USA) ☐

_____ ☐

South & Central America (vote for one)

Anselmo S. Paschoa (Brazil) ☐

_____ ☐

South East Asia (vote for one)

Suprakash C. Roy (India) ☐

_____ ☐

North East Asia (vote for one)

Luo Zhengming (P.R. China) ☐

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Africa & Middle East (vote for one)

Dan T.L. Jones (South Africa) ☐

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Australasia (vote for one)

Chris Chantler (Australia) ☐

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Executive Councillors:

Six years term (vote for four)

Odair D. Gonçalves (Brazil) ☐

Fiona E. McNeill (Canada) ☐

Marcelo Rubio (Argentina) ☐

Ziyu Wu (P.R. China) ☐

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Three years term (vote for two)

Isabel Lopes (Portugal) ☐

Francesc Salvat (Spain) ☐

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Use this ballot to vote. The double envelope system is recommended for its return, to preserve the secrecy of your ballot. Place the ballot in a small unsigned envelope. Enclose the envelope in a larger envelope, signing and printing your name and showing your return address (this is needed to establish the validity of your ballot) and mail it to:

David Bradley, IRPS Secretary
Centre for Nuclear and Radiation Physics, Department of Physics, University of Surrey,
Guildford, Surrey GU2 7XH, UK

Your ballot must be received at the address given above by **1 September, 2006,** in order for it to be sure to be counted. The ballots will be counted, and the result announced at ISRP-10 in Coimbra, Portugal, 17–22 September, 2006