

2018 Elected Vice-President-Elect

George 'Don' Jones

Place of Birth:

Worcester, England

Current Position:

Professor of Cancer Radiation Research, Deputy Director and Radiobiology & DNA Damage Group Lead

Department/Institution:

Leicester Cancer Research Center
University of Leicester, Leicester UK

Educational Background:

- PhD Radiation Chemistry: University of Leicester UK
- MSc (by research) Carbohydrate Chemistry: University of Birmingham UK
- BSc Honors Chemistry with Biochemistry: University of Leicester UK

Professional Experience:

- Professor of Cancer Radiation Research (April/2016 to date); Reader (2007-April/2016); Senior Lecturer (2002-2007); Lecturer (2000-2002) Dept. Cancer Studies (now Leicester Cancer Research Centre), University of Leicester UK
- Research Fellow (1995-2000) Centre for Mechanisms of Human Toxicity, University of Leicester UK
- Postdoctoral Research Scientist (1994-1995) Radiobiology Program, Cross Cancer Institute, Edmonton, Alberta, Canada (Mentor: Michael Weinfeld); (1991-1994) Div. Radiation Biology, Dept. Radiology, UCSD, La Jolla, CA, USA (Mentor: John Ward); (1987-1991) Div. Molecular Processes, MRC Radiobiology Unit, Chilton UK (Mentor: Peter O'Neill)

Fellowships & Honors:

- Honorary Member of the Royal College of Radiologists, awarded by the Royal College of Radiologists for 'Notable contributions made to Clinical Oncology in the United Kingdom' (2012)
- Fellow of the Higher Education Academy, awarded



by the Higher Education Academy (2016)

Professional Activity & Appointment:

Current

- Secretary & Treasurer¹, ARR representative & Trustee², LH Gray Memorial Trust (2017 to date & 2008 to date)
- Committee Member, Association for Radiation Research, (2017 to date)
- Council Member, International Association for Radiation Research (IARR), serving two consecutive terms of office (Chemistry representative 2011-2015 & ERRS representative 2015 to date)
- Network Lead, Biomarker Network, NCRI Clinical and Translational Radiotherapy Research Working Group (CTRad) (2013 to date)

Previous

- Vice-President, President & Past-President, European Radiation Research Society (2011-2012, 2013-2014 & 2015-2016)
- Vice-President & President, Association for Radiation Research (ARR) (2006-2008 & 2008-2010)
- Finance Committee Lead & Nominations Committee Member, IARR (2015)
- Committee Member, NCRI CTRad, Basic Science Committee (Workstream 1), serving three successive terms of office (2009-2011, 2012-

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2014, 2015-2017)

- Treasurer & Membership Secretary, ARR (2005-2010);
- Editorial Board Member, for *Mutagenesis* (2006-2016) and *Clinical Oncology* (2006-2012) and twice Guest Editor of *Clinical Oncology* Special Editions 'Advances in Clinical Radiobiology' Part 1 (2013) and Part 2 (2014)
- Examiner, Royal College of Radiologists, Faculty of Clinical Oncology, for the First Examination of the Fellowship in Clinical Oncology (2005-2011)

Current Interests:

My research interests may be summarised as the 'Mechanisms, measurement and consequences of radiogenic, oxidative and drug-induced damage to DNA'.

For radiation and many chemotherapeutic drugs, genomic DNA is the primary cellular target for the biological effects of these agents; indeed, it is the DNA damage induced that is considered responsible for killing cancer cells. Therefore, to better understand and improve treatment efficacy, the purpose of my group's research is to explore mechanisms to enhance and/or sustain DNA damage in cancer cells, and to develop protocols for the measurement of damage biomarkers for the assessment of resulting cellular consequences. Importantly, we consider that measuring DNA damage formation and repair, which takes into account many of the governing chemical, molecular and genetic factors that influence a cell's response to radiation and drug-induced damage, offers the best chance of predicting and enhancing a patient's response to treatment. Emphasis is placed on studying clinically relevant doses (avoiding the uncertainty of extrapolation from higher doses) and on translational research themes with anticipated patient benefit.

Vision Statement:

The Radiation Research Society is strengthened through effective mentoring of junior members.

I have been a full member of the Radiation Research Society (Discipline- Chemistry) since 1992, attending

my first meeting the same year (the 40th Annual Meeting in Salt Lake City, Utah) whilst a post-doc in the lab of John Ward at UCSD. Since then I have witnessed the society grow into the leading international radiation research organization that it is today. To me, one of the most impressive undertakings of the Society has been its actions to foster and develop junior members and early career researchers via the innovative SIT and, more recently, the ECI programmes. Indeed, I witnessed first-hand the excellent work of the SIT programme when I was invited to speak at the SIT Workshop in New Orleans (2013). I was particularly impressed by the high level of enthusiasm and engagement between the junior and senior participants and the vibrant nature of the round-table conversations. I firmly believe that younger members should have an identity and voice in the Society and that, in turn, the Society continues to offer mentoring and direction. If elected VP-Elect, I would certainly look to both support and further develop the important work of the SIT and ECI programmes and I would also work to guarantee that young members are included as speakers and session chairs at future annual meetings. Collectively, these actions should serve to help ensure the future sustainability of a vibrant radiation research discipline and encourage young scientists to consider radiation research for their future career.

The Society needs to foster meaningful interaction between disciplines.

The Radiation Research Society sits on the solid foundations of our expertise in the disciplines of physics, chemistry, biology and radiation medicine; and we should continue to highlight our world-leading research in each these areas. However, in order to be an effective and productive Society, there must be true and meaningful interaction between the disciplines. Therefore, if elected VP-Elect, I would certainly work to highlight and promote our expertise in the individual disciplines, but would also look to 'reach out' across the disciplines to further enhance our multidisciplinary research and ethos. It has been proven that a multidisciplinary approach to science, incorporating new thinking and technology brings both added value to research and makes it more attractive to funders.

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To enable this, I propose that at our annual meetings, alongside established sessions in physics, chemistry, biology and medical research, that we have specific sessions and topics that are more multidisciplinary in nature, such as: bed-to-bedside biomarker development and validation, RT research for hard to treat cancers (incorporating new RT protocols and technologies) and methods to quantify and mitigate unintended exposure to ionizing radiation.

My experience supports my vision.

To achieve my vision I bring a wealth of prior organizational experience to the RRS office of VP-Elect. I have served as President of both the European Radiation Research Society (2013-2014) and the UK's Association for Radiation Research (2008-2010). I have been a member on the Organising Committees of numerous ERRS and ARR annual meetings and have been active on the Organising Committee of recent RRS meetings, organising sessions at our recent meetings in Hawaii (Maui, 2010 & Big Island, 2016) and Cancun (2017). I also lead the National Cancer Research Institute (NCRI) Clinical and Translational Radiotherapy Research Working Group (CTRad) Biomarker Network in the UK, the aim of which is to help both scientists and clinicians develop strong biomarker-based translational components within future radiotherapy trials.

If elected to the RRS office of VP-Elect, armed with my broad experience, I am confident of achieving my vision of better supporting the younger members and more widely promoting radiation research across the traditional discipline boundaries. In addition, having served as Presidents of both the European Radiation Research Society and the UK's Association for Radiation Research, it would be my honour and a privilege to serve the RRS office of VP-Elect, and the ensuing offices of Vice President, President and Past-President.

2018 Elected Councilor-at-Large

Evagelia Laiakis

Place of Birth:

Athens, Greece

Current Position:

Assistant Professor

Department/Institution:

Department of Oncology, Department of Biochemistry and Molecular and Cellular Biology, Georgetown University

Educational Background:

- PhD Human Genetics: University of Maryland Baltimore

Professional Experience:

- 2014-present: Assistant Professor at Georgetown University
- 2012-2014: Research Instructor at Georgetown University
- 2007-2012: Post-doctoral fellow at Georgetown University

Professional Activity & Appointments:

- 2017: RRS ECI award to annual Radiation Research Society meeting
- 2015: Recipient of the John Eisenberg Career Development Award, Georgetown Women in Medicine, women in leadership development program through AAMC
- 2015: ICRR travel award to 15th ICRR meeting (Kyoto, Japan)
- 2015: RRS award to attend the annual NCRP meeting
- 2005, 2006, 2008, 2012: SIT travel awards to RRS
- 2006: Best student poster award and travel award, Environmental Mutagen Society meeting (Vancouver, Canada)
- 2005: DOE travel student travel award, Gordon Research Conference

Society Memberships & Offices:

- 2005-present: Radiation Research Society member
- 2012: Metabolomics Society member



- 2013-present: American Association for Cancer Research (AACR) member
- 2015-present: Radiation Research Society Membership Committee
- 2016-present: Member of Program Area Committee 1 (PAC1): Basic Criteria, Epidemiology, Radiobiology, and Risk. National Council on Radiation Protection and Measurements (NCRP)
- 2017-present: Member-at-Large, Georgetown Women in Medicine

Current Interests:

My current interests include incorporation of metabolomics and lipidomics in the radiation research field for accurate quantitation of small molecules and assessment of early and delayed metabolic dysregulation. I have developed multiple untargeted and targeted methodologies for rapid biodosimetry and assessment of radiosensitivity in various experimental models (from rodents to humans) with the ultimate goal of developing a rapid assay that could be deployed during a radiological emergency.

One of my key interests is radiation-induced inflammatory responses and lipid mediators, such as prostaglandins, leukotrienes, and thromboxanes, that can produce a cascade of systemic events and contribute to disease. This is a continuation of my initial introduction to the field of radiation research in the area of radiation-induced genomic instability

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Evagelia Laiakis, Continued

and pro-inflammatory events, particularly through cytokines.

Finally, I am particularly interested in the effects of different radiation qualities in metabolism, tissue toxicity, and changes in immune responses, from space radiation to internal emitters and neutrons.

Vision Statement:

Radiation metabolomics is a unique field in that it incorporates elements from biology, chemistry, physics, medicine, and computational biology. This is reminiscent of the multidisciplinary nature of our Society, therefore maintenance and development of collaborations between different investigators will be one of my priorities. The recent inaugural workshop on metabolism with participation from the American Association for Cancer Research also highlighted the possibilities of working together with other societies and advancing our scientific breakthroughs. As a member of both societies, I will aim to increase such opportunities and exchange of scientific opportunities between RRS and the AACR Radiation Science and Medicine Working group.

Finally, as having progressed from an SIT to Full Member over the years, I understand the need for strong mentorship and sponsorship for a successful career. I, therefore, pledge to create opportunities for SIT's and ECI's for future growth and to retain talent in the radiation field. With the recent approval of the Low Dose Research Act (H.R. 4675) through the House, it is now even more imperative to have the current and new generation of radiation researchers advocate for the importance and future of our field.

2018 Elected Councilor-at-Large

Chiara La Tessa

Place of Birth:

Naples, Italy

Current Position:

Tenure Track- Associate Professor

Department/Institution:

Physics/University of Trento, Italy

Educational Background:

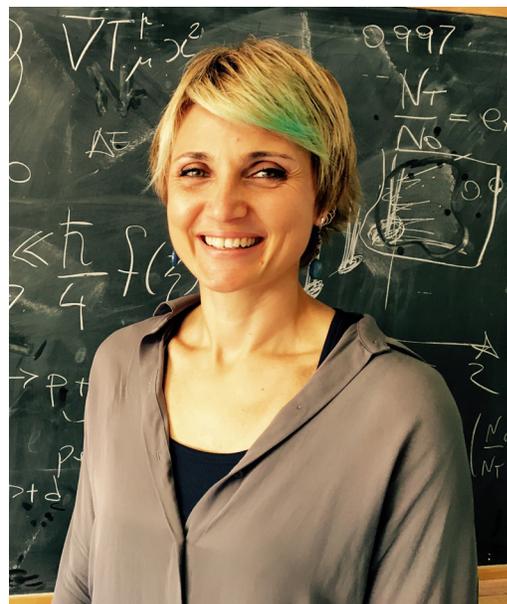
- PhD- Chalmers University of Technology, Goteborg, Sweden
- Master (with Honour) of Science in Physics- University "Federico II", Naples, Italy

Professional Experience:

- 2016- present: Tenure track, University of Trento, Povo (TN), Italy
- 2013-2016: Staff scientist, Brookhaven National Laboratory (NASA Space Radiation Laboratory NSRL), Upton, NY
- 2011-2013: Tenured (Group Leader), GSI Helmholtzzentrum fur Schwerionenforschung GMBH (Biophysics Department), Darmstadt, Germany
- 2009-2011: Postdoctoral fellow, GSI Helmholtzzentrum fur Schwerionenforschung GMBH (Biophysics Department), Darmstadt, Germany
- 2007-2009: Postdoctoral fellow, University "Tor Vergata" (Physics Department), Rome, Italy

Professional Activity & Appointments:

- Member of the PhD program committee at the Department of Physics of the University of Trento (Italy).
- Member of the European Space Agency (ESA) topical team "Space Radiation Research".
- Member of the Steering Committee for the European call in Hadron Physics INFRAIA-01-2018-
- 2019: "Integrating Activities for Advanced Communities"
- Member of the INFN 2015 and 2016 committee awarding the funding for six projects presented



- by young researchers.
- Program committee member for the 2017 and 2018 Radiation Research Society Meeting.
- Group leader for physics of the Early Career Investigators (ECI), Radiation Research Society.
- Local committee member for the Italian Physics Society (SIF) Annual National Congress.
- Member of the INFN 2016 committee awarding twelve postdoctoral fellowships to foreign researchers.
- Appointed invited lecturer at the XXIX National School of Nuclear and Subnuclear Physics "Francesco Romano" (Otranto, Italy) (2017).
- Teacher of the course "Radiation biophysics" for physicists at University of Trento (2017).
- Lecturer in the course "Fisica II" for biologists at University of Trento held by Prof. Paolo Bettotti (2017).
- Lecturer in the course "Strahlenbiophysik" for biologists at TU Darmstadt held by Professor Marco Durante (2009-2012).
- Cosupervisor of 3 Master students and 3 PhD students.
- Tutor of the participants at the Annual Summer School Program organized by GSI (Darmstadt, Germany) (2009-2012).
- Appointed invited lecturer at the NASA Summer School at BNL (NY, USA) (2013 to 2017).
- Appointed invited lecturer at the Radiation Course for the Columbia University (NY, USA) Science

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Honors Program held by Dr. Manuela Buonanno (2015 and 2016).

- Appointed invited lecturer at the VII International Course “Detectors and Electronics for High Energy Physics, Astrophysics, Space and Medical Physics” at Legnaro National Laboratories (Legnaro, Italy) (2017).
- PMB, reviewer
- Medical Physics, reviewer
- Radiation Research Journal, reviewer
- Advances in Space Research, reviewer

Fellowships & Honors:

- 1st prize at the Young Scientist Oral Presentation Award at the Heavy Ion in Therapy and Space Symposium, Cologne, Germany 2009
- Zeldovich medal for COSPAR Scientific Commission F, 39th COSPAR Scientific Assembly, Mysore, India 2012
- June 2015 CSWP woman physicist of the month

Current Interests:

Although physics was my first great passion, very early on I became interested in expanding its applications into other disciplines. A combination of pure luck (meeting the right people at the right time) and personal curiosity led me to the amazing discovery that the same nuclear physics concepts that rule the interaction of radiation with matter, represent also a fundamental ingredient for treating cancer and for exploring space.

Since then, my research has been focused on two topics: radiotherapy with charged particles and space radioprotection. Both fields require the joint effort of physicists, biologists, medical doctors, chemists and engineers to make advances; which for me has represented a unique opportunity to expand my view of science, and to make contributions outside the physics world.

Whether we consider a therapy beam traveling through a patient’s body toward a tumor, or a Galactic cosmic ray hitting a spacecraft, the physics that rules nuclear interaction is the same and thus can be studied with similar approaches. As these interactions

change the composition and spatial distribution of the initial radiation field, they must be investigated to predict the dose and to assess the potential biological effects and health risks. Being an experimentalist, I have tackled this problem mainly by performing measurements, but also using theoretical tools such as Monte Carlo codes. My main contribution has been to provide a characterization of the radiation field generated in the scenario of interest (the patient body, the space vessel, etc.), by measuring the species, energies and trajectories of all particles produced. This information can be translated into delivered dose (directly by measurement or indirectly by calculation) and finally into the related biological effects (also directly measured or estimated with models). Data provided from these experiments represent an essential tool for benchmarking existing theoretical models. Among the many challenges in modern radiotherapy, I have been pursuing the following:

- finding alternative ions to protons and Carbon (e.g. Helium for Pediatric patients or Oxygen for treating radioresistant tumors);
- extending the use of radiotherapy with ions to additional clinical cases, even non-cancer diseases;
- providing specific data to verify and benchmark treatment planning systems and Monte Carlo codes;
- developing novel techniques for real-time monitoring of delivered treatment.

The very same radiation that represents a cure for cancer, poses one of the main limitations to exploring space. Currently, the best solution for decreasing the astronauts exposure to radiation is using passive shielding. Nuclear physics aspects can help assess the best candidate materials and optimize performance depending on the mission (orbiting stations, spacecrafts for deep-space travel or permanent human bases on other planets). My involvement in this activity is a central part of my research and has benefited from collaborations with both ESA and NASA established during my past employments at GSI (Darmstadt, Germany) and NSRL (Upton NY, US). Most of my experimental activities are carried out at the proton therapy center in Trento, which is equipped with two gantries and one experimental

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room dedicated only to research activities. This environment is extremely fruitful because it allows an exchange of information with medical physicists and radiotherapists. In 2017, the center was included among the core facilities of the ESA-IBER program. Furthermore, I benefit from the close collaboration between the Physics department and the Centre for Integrative Biology (CIBIO) in Trento.

Vision Statement:

Seeing science as a big puzzle with each piece as a discipline, I have always sought and established collaborations not only among other physicists, but also with experts of other fields. The composition of every department or laboratory in which I have worked has been very diverse and allowed me to explore new applications of nuclear physics.

Since I started my appointment at the University of Trento, one of my main goals has been to establish my own group. As one of the coordinators of the experimental room in the proton therapy center, I have been in close contact with medical physicists and medical doctors, sharing research projects as well as education programs of undergraduate and graduate students. The link with the clinical environment has been extremely fruitful because it has given me inputs on where to focus my research.

Similarly, becoming a member of the Radiation Research Society has offered me the opportunity to be part of a unique multidisciplinary environment where I have found all the expertise I need.

Almost from the beginning though, I noticed that the participation of physicists has been very limited. I think that this trend is essentially related to historical reasons unrelated to scientific boundaries. To change this attitude, I decided to be more active within RRS. I joined the ECI group as one of the physics leaders and have been in the RRS program organizing committee for the past 2 years. My strategy has focused on two aspects: attracting more physicists into the RRS and promoting the application of physics into the

other disciplines. To pursue these goals, I have been interacting with the people of my community, whom I discovered were often unaware of the RRS activities. Additionally, as a member of the organizing committee I have proposed multidisciplinary session topics, also of interest for physicists.

My outreach activities have not been dedicated only to physicists, but in general to increase the number of members interested in radiation research. I believe that there are many fields which could benefit from entering our community, and at the same time enriching it with new knowledge. I would like to create an environment where scientists of a given field can interact with representatives of the other disciplines, breaking boundaries related to tradition rather than to scientific reasons.

My commitment will be also dedicated to improve the attendance of student as well as young researchers. In this direction, I have proposed to increase the interactions between younger scientists and senior members (for example through mentoring activities as session organization or co-chairing), which could represent a source of inspiration for both groups.

2018 Elected Councilor-at-Large

Henning Willers

Place of Birth:

Wurzburg, Germany

Current Position:

Associate Professor

Department/Institution:

Radiation Oncology, Harvard Medical School, Boston, MA

Educational Background:

- MD: University of Hamburg Medical School, Germany 1994

Professional Experience:

- 2005-06: Instructor in Radiation Oncology, Harvard Medical School (HMS), Boston, MA
- 2005-16: Attending Physician, Radiation Oncology, Boston Medical Center, Boston, MA
- 2007-13: Assistant Professor of Radiation Oncology, HMS, Boston, MA
- 2005-Present Co-Director, Laboratory of Cellular & Molecular Radiation Oncology, MGH Cancer Center, Charlestown, MA
- 2007-Present: Member, Lung Cancer Program Governance Committee, Dana-Farber/Harvard Cancer Center, Boston, MA
- 2009-Present: Head, Pulmonary SBRT Program in the Dept. of Radiation Oncology, MGH, Boston, MA
- 2011-15: Member, American College of Radiology (ACR) Appropriateness Criteria® (AC) Expert Panel, Radiation Oncology, Lung Cancer
- 2014-17: Member, Task Group-256 Relative Biological Effectiveness of Proton Radiation, American Association of Physicists in Medicine (AAPM)
- 2016-Present: Director, Thoracic Radiation Oncology Program, Dept. of Radiation Oncology, MGH, Boston, MA

Professional Activity & Appointments:

- 1994-Present: European Society for Therapeutic Radiology and Oncology (ESTRO)
- 1998-Present: Radiation Research Society (RRS)



- 2001- Present: American Society for Therapeutic Radiology and Oncology (ASTRO)
- 2008-Present: International Association for the Study of Lung Cancer (IASLC)
- 2008-15: American College of Radiology (ACR)
- 2014-Present: American Association for Cancer Research (AACR)
- Editorial Board, Radiotherapy & Oncology
- Ad-hoc reviewer: Cancer Research, Clinical Cancer Research, *Radiation Research*, International Journal of Radiation Oncology Biology Physics, Cancer

Radiation Research Society Service/Contributions:

- 2009 Member, Abstract Review Committee
- 2009 Moderator, DNA Repair and Human Disease, Annual Meeting
- 2011-12 Member, RRS Nomination Committee
- 2012-14 Member, RRS Finance Committee
- 2014-17 Chair, RRS Finance Committee
- 2016 Invited Speaker, Annual Meeting
- 2017 Invited Symposium Chair and Speaker, Annual Meeting
- 2017 SIT Luncheon Mentor
- 2017-18 Member, Program Committee for 2018 Meeting

Honors & Awards:

- 2011 Basic Science Abstract Award, Cancer and Radiation Biology, ASTRO
- 2012 Research Scholar, American Cancer

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Henning Willers, Continued

- 2013 Society Outstanding Reviewer Award, International Journal of Radiation Oncology Biology Physics
- 2017 Honoree, The OneHundred, MGH Cancer Center

Current Interests:

Dr. Willers is a clinician-scientist with a primary interest in thoracic radiation oncology and radiation biology. His research has been shaped by early education in 'classical' radiation biology (mentor, Hans-Peter Beck-Bornholdt), his subsequent training in mechanisms of DNA repair and recombination (mentor, Simon Powell), and more recently exposure to translational and interdisciplinary investigations in lung cancer.

As a result, Dr. Willers' lab has developed a major focus on targeting EGFR- and KRAS-dependent pathways to sensitize lung cancers to radiation and other DNA-damaging therapeutics. To this end, the group has recently established co-mutations in KRAS and TP53 as a marker of radiation resistance, and they have identified potential therapeutic targets in the affected cancers. The group is also working towards biomarker-directed PARP inhibitor therapy in lung cancers.

Lastly, the lab is interested in defining the mechanisms that contribute to a variable RBE of proton radiation in human cancers and discover associated biomarkers. Taken together, Dr. Willers hope to translate laboratory findings into patients with lung and other cancers and further the development of biologically optimized, precision radiation therapy.

Vision Statement:

As Councilor-At-Large, my goal will be to help preserve the many strengths and almost "extended family"-like character of our small Society. I would like to ensure that we continue to have a strong standing as rapidly emerging technologies and medical knowledge are transforming several fields including cancer therapy. Important opportunities exist to combine longstanding knowledge in radiation biology with new insights in

genomics, metabolomics, immune responses, and other areas. We will do well to carefully open our Society to scientists with overlapping interests from other disciplines and try to retain and promote as many of our talented SITs as possible.

Born in Wurzburg where WC Rontgen discovered X-rays, I must have been destined to enter the field of radiation sciences! Now a member of RRS for 20 years, I fondly remember my first US and international meetings, especially ICRR 1999 which brought me back to Wurzburg. I was inspired by interacting with scientists from multiple disciplines, countries, and cultures. I feel fortunate to have become friends with many Society members and to have been mentored by outstanding scientists such as Simon Powell and Kathy Held.

Our Annual Meetings have always been a special place where attendees can learn in depth and consistently about numerous aspects of radiation research, and where leaders in the field are easily approachable. Poster sessions have been a highlight to me allowing networking and lively discussions. I feel fortunate to have contributed to the Society in different capacities, including as Chair of the Finance Committee. I am looking forward to continue to serve in whatever capacity may be needed.