

AUSTRALASIAN RADIATION PROTECTION SOCIETY

EXPANDING THE SCOPE OF RADIATION PROTECTION

SEA WORLD RESORT
CONFERENCE CENTRE
GOLD COAST QUEENSLAND
29 OCTOBER – 2 NOVEMBER 2023



ARPS23

PROGRAM

SUNDAY 29 OCTOBER 2023		
1300 – 1700	Exhibitor Bump In	SWRCC Veranda
1300 – 1700	Registration Desk Opens	SWRCC Veranda
1600 - 1800	ARPS Executive Meeting	Conference Room 2
1900 – 2100	Welcome Reception	SWRCC Veranda

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MONDAY 30 OCTOBER 2023


0800 – 1700	Registration Desk Opens	SWRCC Veranda
0800 – 1700	Speaker Room Opens	C&E Boardroom
0800 – 1550	Exhibition Opens <i>Enjoy barista made coffee with thanks to</i>	SWRCC Veranda
		
0900 - 1025	Plenary Session 1 <i>Chair: Drew Watson</i>	Conference Room 1
0900 – 0903	Convenor Welcome Drew Watson	
0903 - 0915	Welcome to Country Uncle John	
0915 – 0925	Convenor Opening Comments Drew Watson	
0925 – 0935	Opening Address Speaker TBC	
0935 – 1025	Keynote Address Jade Ritchie Coming together for Country	
1025 – 1055	Morning Refreshments & Trade Exhibition <i>With thanks to our Morning Refreshments sponsor</i>	SWRCC Veranda
		



1100 - 1240	Concurrent Session 1 Theme: Mining & Nuclear Technology Room: Conference Room 1 <i>Chair: Dr Riaz Akber</i>	Concurrent Session 1.1 Theme: Protection in Healthcare, Part 1 Room: Conference Room 3
1100 – 1120	Jim Hondros, JRHC The ICRP Review and Impacts for Uranium Mining and NORM	Dr Samer Bakr, Cyclowest Findings of the Cyclowest Radiation Survey for the GE PETtrace Cyclotron at the Bayswater Site
1120 – 1140	Lauren Steen, Radiation Services WA Exploring for Rare Earths in Australia – Striking a Balance	Patrick Niemiec, South East Sydney Local Health District Estimating Effective Dose Rate From External Exposure To Radioactive Waste Discharged From A Busy Nuclear Medicine Service
1140 – 1200	Peter Nolan, Australian Safeguards and Non-Proliferation Office What happens at Nuclear Safeguards Inspections in Australia conducted by the International Atomic Energy Agency	Stephen Taylor, AdvanCell Australian First: Lead-212 Labelled Radioligand Being Trialled as a new Prostate Cancer Therapy
1200 – 1220	Blake Orr, ARPANSA Update to the Reference Accident for Visiting Nuclear-Powered Vessels	Cameron Jeffries, South Australia Medical Imaging Holistic Radiation Protection
1220 – 1240	William Shackel, Nuclear for Australia A 17-year-old’s views on the Nuclear Energy Debate	Prof John D Mathews, University of Melbourne Modelling cancer risks following low-dose radiation from CT scans
1240 –1340	<i>Lunch & Trade Exhibition & Posters Viewing</i> <i>With thanks to our Lunch sponsor</i> 	
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1345 - 1515	Concurrent Session 2 Theme: Radiation Protection Culture and Education Room: Conference Room 1 <i>Chair: Bridget McCarron</i>  	Concurrent Session 2.1 Theme: Environment & Dosimetry Room: Conference Room 3  
1345 – 1400	Annelize Van Rooyen, Tellus Holdings A healthy Radiation Protection Culture starts at home	Dominique Scott, Radiation and Nuclear Sciences Unit Uptake of NORM in Queensland native food species
1400 – 1415	TBC	Blake Orr, ARPANSA Radiological dose from seafood: Australian estimates within the context of a new global assessment
1415 – 1430	Daniel Bellifemine, EPA South Australia Preparation and implementation of Australia's most recent radiation safety legislation	Peter Medley, Forensic and Scientific Services Groundwater influence on uptake of radium, polonium-210 and lead-210 in freshwater mussels (<i>Velesunio Ambiguus</i>)
1430 – 1445	Henriëtte Rossouw, Maniacs Learn Through Play Training the next generation of radiation professionals: The Importance of Play-Based STEAM Education for the Future	Dr Arne Biesiekierski, ARPANSA Updating the Australian Drinking Water Guidelines: Changes made and lessons learned in updating the radiological guidance
1445 – 1500	Dr Mamun Haque, ARPS Radiation Protection Educator in a Multilingual and Multidisciplinary Environment – Veni Vidi Vici – A Personal Experience	Trent Elms, ARPANSA Dosimetry Service Provider Submissions to the Australian National Radiation Dose Register
1500 – 1515	Brent Rogers, South East Sydney Local Health District ARPAB Certification to Present	Dr Cameron Lawrence, ARPANSA Australian National Radiation Dose Register - Future Directions


1515 – 1545	<p><i>Afternoon Refreshments & Trade Exhibition</i></p> <p><i>With thanks to our Afternoon Refreshments sponsor</i></p> 	SWRCC Veranda
1550 - 1720	<p>Panel Discussion: Setting the Scene for Nuclear</p> <p>Room: Conference Room 1</p> <p>Mediator: Simon Critchley</p> <p>Panel Members:</p> <p>Dr Peter Bryant, EDF Energy</p> <p>Dr Marcus Grzechnik, ARPANSA</p> <p>Joanne Lackenby, Frazer-Nash Consultancy</p> <p>Henriëtte Rossouw, Maniacs Learn Through Play</p> <p>William Shackel, Nuclear for Australia</p> <p>Jasmin Diab, Global Nuclear Security Partners Australia</p> <p>Dr Joanne Lackenby, Frazer-Nash Consultancy</p>	
1900 - 2200	<p>Conference Dinner</p> <p><i>proudly sponsored by</i></p> 	The Boatshed

TUESDAY 31 OCTOBER 2023

0730 – 1700	Registration Desk Opens	SWRCC Veranda
0730 – 0845	<p>Breakfast Workshop (Registration required)</p> <p>U.S NRC RAMP - Overview and demonstration of computer codes for radiation assessments</p> <p>Presenters: Katherine Gouin, James De Corrado, Blake Orr & Callum Watson</p> <p>The United States Nuclear Regulatory Commission (NRC) maintains and develops a series of computer codes used for radiation assessments through their Radiation Computer Code Analysis and Maintenance program (RAMP). In 2019 ARPANSA signed a formal agreement to join RAMP and has since expanded its use of the RAMP codes. Federal and State government agencies are also granted access to the RAMP codes under the ARPANSA agreement.</p> <p>This workshop will provide an overview of the RAMP codes, walk through the content available on the RAMP website and demonstrate some worked examples using the codes, namely:</p> <ul style="list-style-type: none">- VARSKIN+: Primarily used for undertaking skin dose assessments, recent upgrades to the software now allow assessments of eye, wound and neutron doses to be estimated.- Visual Sample Plan: This tool supports development of defensible sampling plans for radiation assessments.	Conference Room 3
0830 - 1600	Speaker Room Opens	C&E Boardroom
0845 – 1550	<p>Exhibition Opens</p> <p><i>Enjoy barista made coffee with thanks to</i></p> <div></div>	SWRCC Veranda

0900 – 1040	Plenary Session 2 <i>Chair: Jim Hondros</i>		Conference Room 1
0900 – 0905	Welcome to Day 2 Jim Hondros (ARPS President)		
0905 – 0950	Boyce Worthley Oration Dr Riaz Akber Radiation detection for radiation protection		
0950 – 1040	Keynote Address Assoc Prof Susanna Guatelli Human missions to Mars: a space radiation odyssey <div><small>Australian Government Australian Radiation Protection and Nuclear Safety Agency</small> </div>		
1040 – 1110	<i>Morning Refreshments & Trade Exhibition</i>		SWRCC Veranda
1115 -1235	Concurrent Session 3 Theme: Managing Waste Room: Conference Room 1 <i>Chair: Bruce Wallace</i>	Concurrent Session 3.1 Theme: Radiation Protection Modelling Room: Conference Room 3	
1115 – 1135	Bryn L. Jones, entX Limited New Uses for “Old” Radioisotopes	Dr David Bolst, University of Wollongong Shielding of defence personnel in gamma radiation environments using anthropomorphic phantoms in Geant4	
1135 – 1155	Stuart Parr, ARPS Intractable Waste Disposal Facility, Mount Walton East	Tim Doughney, University of Adelaide Modelling detector response functions to NORM and source radiation for arbitrary detector geometries	
1155 – 1215	Bill Miller, Australian Radioactive Waste Agency Safe disposal of radioactive wastes arising from research, and the production and use of radiopharmaceuticals in Australia	Daniel De Oliveira Damas, Department of Defence Background Compensated Neutron Spectrum Unfolding with a NNS and the Shadow-Cone Technique	

1215 – 1235	Patrick Day, ANSTO ANSTO Synroc Waste Treatment Plant for Molybdenum-99 Nuclear Medicine Production	Dr David Bolst, University of Wollongong Using an iterative shielding approach for the first carbon ion therapy facility in the US by means of Geant4
1235-1255	Glenn Riley, Department of Health Disposal of Radioactive Material	Dr Anson Chau, University of South Australia A scoping review of the use of simulation in radiation protection education and training in healthcare professions
1255 – 1355	Lunch, Trade Exhibition & Posters Viewing	
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1400 - 1605	Concurrent Session 4 Theme: Non-Ionising Radiation Room: Conference Room 1 <i>Chair: Philip Allanson</i>	SPERA Workshop: Radiation Safety in Laboratories Room: Conference Room 3 <i>Presenter: Dr Stephen Long, ARPANSA</i>
1400 - 1415	Assoc Prof Dariusz Leszczynski, University of Helsinki The lack of international and national health policies to protect persons with self-declared electromagnetic hypersensitivity	<p>This workshop provides an overview of radiation protection in the laboratory setting, with practical advice and specific reference to Australian Standard 2243, part 4:</p> <ol style="list-style-type: none">1) Basics of Radiation Protection – Dose and Risk, ICRP and IAEA Basic Safety Standards2) AS/NZS 2243.4 – A Practical Standard for Radiation Safety in Laboratories3) Personal Radiation Monitoring – Assessing External and Internal Dose4) Area Monitoring and PPE – Good Laboratory Practice <div></div>
1415 – 1430	Victor Leach, Oceania Radiofrequency Scientific Advisory Association Wireless technology is another environmental stressor. Are there engineering solutions that can reduce exposure (ALARA)?	
1430 – 1445	Assoc Prof Ken Karipidis, ARPANSA A Review of the Research into the Effects of Radiofrequency Electromagnetic Fields on Animals and Plants in the Environment	
1445 – 1500	Dr Chhavi Raj Bhatt, ARPANSA Personal radiofrequency–electromagnetic exposures in regional Victoria, Australia	
1500 – 1515	Steven Weller, Oceania Radiofrequency Scientific Advisory Association 5G Safety – State of the art from scientific reviews and their findings	
1515 -1535	Q & A Session (presenters as panel)	
1535 – 1605	<i>Afternoon Refreshments & Trade Exhibition</i>	
		SWRCC Veranda

1610 - 1725	Concurrent Session 5 Theme: Protection in Healthcare, Part 2 Room: Conference Room 1	Concurrent Session 5.1 Theme: Existing Exposure Situations – from Here to Beyond Room: Conference Room 3 <i>Chair: Dr Riaz Akber</i>	
1610 – 1625	Cameron Jeffries, South Australia Medical Imaging Experiences with the Draft ARPANSA X-ray Apparatus testing standard	Frank Harris, Rio Tinto A community based environmental radioactivity study	
1625 – 1640	Brandon Preap, Hunter New England Imaging Unplanned Radiation Exposure Following Extravasation: At What Stage of a Contrast-Enhanced CT Procedure will the Cumulative Effective Dose be Greater than 1 mSv?	Drew Watson, Dept of Health Forensic and Scientific Services Mapping Radium in Creek Bed Sediment from Introduced Groundwater	
1640– 1655	Nehal Ahmed & Dr Shaun Rose-Nel, Radiation Protection Unit Dental Cone Beam CT: Regulators Conundrum	Dr James Eagle, Institute of Environmental Science and Research Radon Concentration in Workplaces across New Zealand	
1655 – 1710	Dr Martin Butson, NSW Environment Protection Authority Radiation in the Bereavement Industry	Marc Salmon, Easterly Point Environmental P/L Translation of dose criteria to ASC NEPM land use criteria	
1710 – 1725	John Bus, ANSTO Communicating Potential Skin Dose from Radioactive Contamination at ANM	Dr Bhaskar Mukherjee, University of Sydney ROBI a Robust Integrating Proton Fluence Counter based on COTS GaAs-LED: results of a recent near equatorial LEO Space Mission	
1730 – 1830	ARPS AGM		Conference Room 1

WEDNESDAY 1 NOVEMBER 2023

0715 – 0845	Breakfast Workshop (Registration required) Working Through Example Problems on ARPAB CRSA Exam Presenters: Brent Rogers & Cameron Jeffries <p>During this workshop, the presenters will work through a number of sample problems that a candidate might expect to see on the ARPAB Consulting Radiation Safety Advisor (CRSA) exam. As many of the examples will include mathematical problems, participants are asked to please bring their scientific calculators. Participation is strongly recommended for anyone considering accreditation. Participants are also encouraged to attend Brent Rogers' presentation during the plenary sessions which will include discussion on the accreditation process.</p>	Conference Room 3
0800 – 1630	Registration Desk Opens	SWRCC Veranda
0830 – 1600	Speaker Room Opens	C&E Boardroom
0830 – 1530	Exhibition Opens <i>Enjoy barista made coffee with thanks to</i> <div data-bbox="1279 812 1581 1037" data-label="Image"> </div>	SWRCC Veranda
0900 - 1005	Plenary Session 3	Conference Room 1
0900 – 0905	Opening Comments	
0905 – 0955	Keynote Address Dr Peter Bryant Clear as Mud: The Radiation Protection Challenges of New Nuclear Build <div data-bbox="1263 1227 1621 1315" data-label="Image"> </div>	

0955 – 1015	Daniel Bellifemine, EPA South Australia Why Sustainable Development Is The Most Important Issue Facing Radiation Protection	
1015 – 1045	<i>Morning Refreshments & Trade Exhibition</i>	SWRCC Veranda
1050 - 1230	Plenary Session 4 Theme: Source Recovery & Largescale Mapping Room: Conference Room 1	
1050 – 1105	Simon Booth, Radiation Services WA Missing Radioactive Source Incident in Western Australia: Response; Investigation; and Contributing Factors	
1105 – 1120	Dr Marcus Grzechnik, ARPANSA Something ‘hot’ is missing in the outback – how can the Commonwealth help?	
1120 – 1135	Frank Harris, Rio Tinto What caused a radioactive source to be lost in the WA Outback	
1135 – 1150	Callum Watson, ARPANSA Wide Area Gamma Radiation Mapping: Is Australia Ready in an Emergency?	
1150 – 1205	Matthew Wiggins, Radiation and Nuclear Sciences Baseline Mapping of Ambient Gamma Radiation Dose Rates in Queensland	
1205 – 1230	Q & A Session (presenters as panel)	
1230 – 1330	<i>Lunch & Trade Exhibition</i>	SWRCC Veranda

1335 - 1450	Concurrent Session 6 Theme: Hazards & Emergency Response Room: Conference Room 1	Concurrent Session 6.1 Theme: Instrumentation Room: Conference Room 3	
1335 – 1350	Sarah Mullins, QLD Health Emergency Response and Radiation Hazards	Ismael Khan, Safe Radiation Thoughts about charcoal canisters without charcoal for radon activity flux measurements	
1350 – 1405	David Kruss, EPA South Australia South Australia's Emergency Response Capability	Leisel Green, ARPANSA Monitoring for accidental radiological releases in marine waters; an extension of the caesium extraction unit to cobalt-60 and strontium-90	
1405 – 1420	Dr Marcus Grzechnik, ARPANSA Australia’s Participation in the NEA’s INEX-6 Recovery Exercise	Dr Michal Fejgl, National Radiation Protection Institute Development of the new tools for monitoring of ambient dose equivalent and rainwater contamination	
1420 – 1435	James De Corrado, ARPANSA Radiological Hazard Assessment of the ARPANSA Yallambie Site	Michelle Thomas, ARPANSA In-situ gamma spectrometry of the Koongarra source, Northern Territory	
1435 – 1450	Lachlan Whittle, ARPANSA Australian Radiation Incident Register (ARIR) – Exploring new ways of working	Pierre Bouchereau de Pury, Radiation and Nuclear Science The right tool for the right job	
1450 – 1520	Afternoon Refreshments & Trade Exhibition		SWRCC Veranda

1525 - 1700	Plenary Session 5 Theme: Past, Present and Future	Conference Room 1
1525 – 1545	Darren Billingsley, DBH Radiation Pty Ltd The Triceratops that Roared	
1545 – 1605	Erin McWilliams, ARPANSA Updated Guidance on the Application of Exclusion, Exemption and Clearance of Radioactive Material in Australia Based on International Best Practice	
1605 – 1625	Paula Veevers & Jim Hondros, ARPS ARPS and Its Future Role	
1625 – 1700	Awards Presentation Closing Remarks and Conference Close	

THURSDAY 2 NOVEMBER 2023		
0845 – 1300	Technical Tour - Centre for Advanced Imaging (Registration required)	University of Queensland

The ARPS 2023 Conference reserves the right to amend or alter any advertised details relating to dates, program and speakers if necessary and without notice, as a result of circumstances beyond their control. All attempts will be made to keep any changes to an absolute minimum.

Poster Presentations**Monday 30 October 1240 –1340****Tuesday 31 October 1235 – 1335**

Poster Number	Presenter	AFFILIATION	POSTER TITLE
1	Jason Charlwood	University of Adelaide	Quantification of artificially sorbed radionuclides as a proxy for geo-sequestration in geological disposal
2	Pushpendra Chauhan	Radiation and Nuclear Science	When is 99.99% radiochemical pure Gd-153 source okay to dispose?
3	Jefferson Chen	ARPANSA	Proficiency Testing – Monitoring Capability and Quality
4	Andrew Chicco	Westmead Hospital	Radiation Safety Issues in a Centralised ROLLIS Administration Program
5	Joonbum Choi	Korea Institute of Nuclear Safety	Performance Test of Radiation Measuring Instruments for Application to Various Radiation Fields of Radiation Generating Devices
6	Dr Tom Cresswell	ANSTO	Assessing potential environmental impacts of NORMs from offshore oil and gas infrastructure decommissioning
7	Hannan Dempsey Rachel Williams Lachlan Whittle	ARPANSA	The ARPANSA Graduate Program
8	Dr Jennifer Diffey	Hunter New England Imaging	Evaluation of Radiation Dose Reduction to Cardiologists by Tableside Shielding Devices
9	Caitlin Etheridge Waylon King	ANSTO	The Nuclear Safety Technician Program

10	Liesel Green	ARPANSA	A decade of radiocaesium monitoring using the Caesium Extraction Unit- a review
11	Assoc Prof Dariusz Leszczynski	University of Helsinki	Scientific inadequacy of the to-date executed research on electromagnetic hypersensitivity
12	Assoc Prof Dariusz Leszczynski	University of Helsinki	Wireless radiation and health: The evidence is not settled yet
13	Dr Erin Mckay	South East Sydney Local Health District	Pixelized Estimation of Tertiary Scatter Intensity for Shielding Assessment
14	Erin McWilliams	ARPANSA	Classification of Radioactive Waste in Australia
15	Erin McWilliams	ARPANSA	The Safety Case for a Radioactive Waste Disposal Facility
16	Rik Nezich	Sir Charles Gairdner Hospital	Recommendations for auditing of dental intraoral bitewing X-ray doses against Local Diagnostic Reference Levels in Western Australia
17	Aithan Roufos	University of Adelaide	Ultraviolet-C Detectors for Ionising Radiation Surveys
18	Zoe Thomas	Monash University	Injuries and adverse effects from cosmetic treatments that use non-ionising radiation
19	Bradley Van Luenen	Queensland Department of Health	Future Radiation Professionals: views of students and current workers on the radiation protection skills shortage
20	Drew Watson	Dept of Health Forensic and Scientific Services	Wipe Tests of Portable Density Moisture Gauges

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