



SPERA Newsletter March 2020

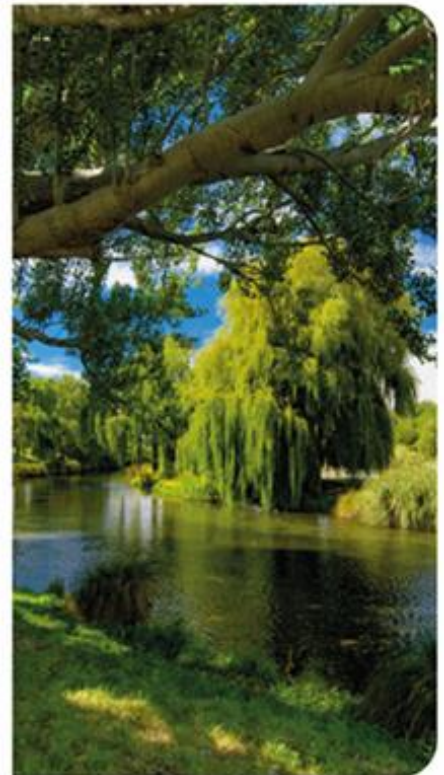


SPERA 2020

**Connecting
People,
Developing
Solutions for a
Changing
Environment**

CHCH NZ | 30 NOV TO 3 DEC

SOUTH PACIFIC ENVIRONMENTAL RADIOACTIVITY ASSOCIATION



[More details and Save the Date below](#)

Save the Date

Tēnā koutou,

On behalf of the SPERA 2020 Organising Committee we are excited to be producing the programme and speaker line-up for this year's biennial conference and we take great pleasure inviting you to the 2020 conference to be held at the fabulous Haere-roa Conference & Event Venue in Christchurch, New Zealand.

Keynote speakers confirmed as follows;

- Instruments and Method Development
Prof Dr Nick Beresford, UK Centre for Ecology & Hydrology, United Kingdom
- Contamination monitoring and emergency preparedness
Prof Dr Atsushi Nakao, Kyoto Prefectural University, Japan
- Radioecology
Dr Peter Swarzenski, International Atomic Energy Agency (IAEA), Monaco
- Radiotracers in Environmental Processes
Dr Suzanne Hollins, Australian Nuclear Science and Technology Organisation (ANSTO), Australia

Registration will open 17 March.

Call for Abstracts is now Open | All abstracts and papers (optional) are to be submitted online via 'E Organiser'. Click here to create an author account and upload your abstract. [Abstracts close 26 June.](#)

Sponsorship | We have excellent sponsorship opportunities for organisations to support the conference and benefit from the wide exposure and goodwill that such involvement brings. Our prospectus will be available shortly, in the meantime should you have any questions please don't hesitate to make contact.

Nāku noa, nā

Michael Lechermann

Conference Convenor | SPERA 2020 Organising Committee

www.spera2020.nz

Contact: Alton Craig The Conference Team Limited | 5/337 Harewood Road, PO Box 20051, Christchurch

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ANSTO Environment Theme: (Tim Payne; tep@ansto.gov.au)

Dr Tim Payne of ANSTO's Environmental Research Theme attended the 10th International Conference on Isotopes in Kuala Lumpur in early February. Tim is on the International Steering Committee of this conference and was the chair of the Environmental Research sessions. Tim presented a plenary lecture on "*Applications of Isotope Techniques in Collaborative Environmental Science*" with 7 co-authors from ANSTO's Environment Theme. Whilst at the 10th ICI conference, Tim accepted a World Council on Isotopes (WCI) President's award (on behalf of ANSTO) for the OPAL reactor. The WCI is an international organisation which promotes safe and environmentally sound use of isotope technologies for global wellbeing. The WCI President's Award recognizes "outstanding contributions to the promotion of isotope technologies and the use of isotopes to benefit mankind". The citation for the award noted that "the modern OPAL reactor produces a significant proportion of the world supply of medical isotopes. In addition, its neutron beam facilities are used to undertake cutting edge research in a wide range of scientific fields". The next conference in the series (ICI-11) will be held in Saskatoon, Canada (likely dates are June 19-23, 2022). As usual, the scope will include papers on Isotopes in the Environment, environmental applications of isotope-related science and technology, and the utilization of stable isotopes. See <http://wci-ici.org/>



Dr Tim Payne accepted the WCI President's Award for OPAL at the 10-ICI conference

ANSTO - Little Forest Research Project: tep@ansto.gov.au

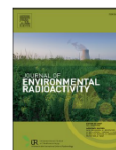
The following paper was published in Journal of Environmental Radioactivity in early 2020: "*Radionuclide migration pathways at a legacy radioactive trench disposal site*". The study site is a former radioactive waste disposal site in the vicinity of Lucas Heights in southern Sydney, which was in operation during the 1960s. The JER paper synthesised numerous large datasets comprising radionuclide depth profiles, surface soil distributions and groundwater data obtained over a period of several years. The paper showed how these distributions reflected the available information on disposals at the site. The paper has authors from across the Environment Theme, ANSTO platforms and UNSW.



Contents lists available at ScienceDirect

Journal of Environmental Radioactivity

journal homepage: <http://www.elsevier.com/locate/jenvrad>



Radionuclide distributions and migration pathways at a legacy trench disposal site

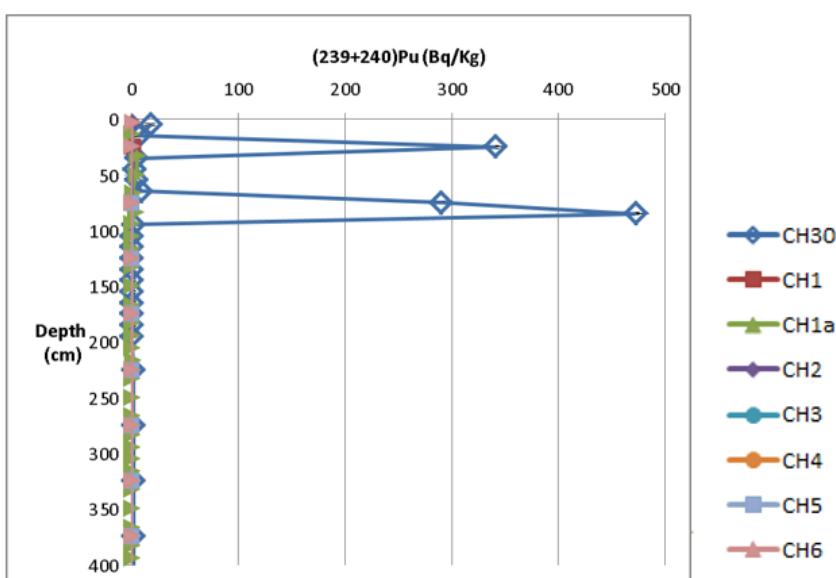


Timothy E. Payne^{a,*}, Jennifer J. Harrison^a, Dioni I. Cendon^a, M. Josick Comarmond^a, Stuart Hankin^a, Catherine E. Hughes^a, Mathew P. Johansen^a, Andrew Kinsela^{a,b}, Lida Mokhber Shahin^a, Adella Silitonga^a, Sangeeth Thiruvoth^a, Kerry L. Wilsher^a

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^b School of Civil and Environmental Engineering, University of New South Wales, Sydney, NSW, 2052, Australia

Paper on radionuclide distributions at the LFLS published in the Journal of Environmental Radioactivity



Depth profile of plutonium in various coreholes near the disposal trenches at LFLS, showing two subsurface peaks in CH30 within the trenched area.

National Centre for Radiation Science/ESR (Michael Lechermann; Michael.Lechermann@esr.cri.nz)

News:

- Issues:
 - Tritium: In our weekly QC that we have been running for many years now, we see a constant decline in either efficiency or activity. Possible explanations from our view are either dust on the detector or diffusion of Tritium into vial glass and cap. It seems to be a common issue. Does anyone know the reason for it?
 - Lynx MCAs: We had a couple of MCAs that showed bad performance, resulting in larger than normal resolution. One had an issue with the gain, it showed discrete jumps in gain, resulting in two or more peaks that would merge into one, rather than one peak. The other Lynx just showed bad resolution without any apparent reason. We have sent both for repair, but the faults weren't recognized by Mirion. We are currently in the process of testing the Lynxs again and documenting our findings more thoroughly. Would be interested if others have similar problems?

- Canberra SaGe Well detector: The preamps of some of the early SaGe Well detectors (iPA – intelligent PreAmp) have flaws in their design, namely too little isolation around the HV supply and HV filter. This has a degrading effect on other components and will over time lead to odd peak shapes and bad resolution. It took us half a year to pinpoint this problem, but it has been acknowledged by Mirion and we are getting a replacement. There is a fix for detectors that only show first signs of degradation, which is adding Teflon around the HV filter as insulation. Happy to help should you experience a similar issue.
- New projects that would be of interest to the SPERA community including any fieldwork or exciting lab work:
 - We are hoping to soon get funding to do a comprehensive Radon survey in NZ.