

## Day 2 – Tuesday 9<sup>th</sup> September

### Session 4

09:10	<b>Grigory Rogachev:</b> Clustering in atomic nuclei and its role in nucleosynthesis processes	<b>Chair:</b> <b>Sandrine Courtin</b>  Helpers: Caroline da Costa Seabra, Tom Perissinotto
09:40	<b>Takashi Nakatsukasa:</b> Structure of light clusters in nuclei	
10:00	<b>Marco Mazzocco:</b> Reaction dynamics studies at near-barrier energies and the upgrade of the RIB Facility EXOTIC at INFN-LNL	
10:20	<b>Lachlan McKie:</b> Towards improving spatial and energy resolution in gaseous detectors with negative ion drift	
10:40	<b>Group Photo - Auditorium</b>	
10:45	<b>MORNING TEA</b>	

### Session 5

11:00	<b>Magdalena Gorska:</b> Probing nuclear structure with DESPEC at GSI/FAIR	<b>Chair: Tim Gray</b>  Helpers: Abhijith Gopakumar, Sophie Hayles
11:30	<b>Filip Kondev:</b> Beta decay spectroscopy of neutron-rich nuclei in the A=100 and 160 regions and the validity of the Nilsson model*	
11:50	<b>Wolfram Korten:</b> Recent results on the nuclear two-photon decay	
12:10	<b>Pete Jones:</b> Portable African Neutron-Gamma Laboratory for innovative nuclear science	
12:30	Sponsor presentation - Scitek	
12:35	<b>LUNCH</b>	

### Session 6

13:30	<b>David Hinde:</b> Shell-driven fission across the nuclear chart	<b>Chair: Manuel Caamano</b>  Helpers: Rikako Kono, Vaishnavi Muddam
13:50	<b>Cedric Simenel:</b> Extraction of fission mode properties from fragment mass distributions	
14:10	<b>Prasad E Nair:</b> Exploring nuclear dissipation in fission via pre-scission neutron multiplicity measurements	
14:30	<b>Punit Dubey:</b> To investigate the impact of shell closure on N/Z of $^{206-216}\text{Rn}^*$ using neutron multiplicity as a probe	
14:50	<b>Lu Guo:</b> Fusion and quasifission dynamics in SHE	
15:10	<b>AFTERNOON TEA</b>	

### Session 7

15:40	<b>Timothy Barrows:</b> From stars to rocks: Contributions of the 14UD heavy ion accelerators to the Earth sciences	<b>Chair: Karin Hain</b>  Helpers: Daniel Lee, Zoe Crowley-Burrows
16:00	<b>Simon Mullins:</b> Elucidating the flood history and age-depth profile of the Okavango Delta with accelerator mass spectrometry	
16:20	<b>Robert Renz Marcelo Gregorio:</b> Molecular sieve vacuum swing adsorption purification for gaseous dark matter detectors	
16:40	<b>Keith Fifield:</b> Gas ionisation detectors: they're smarter than you think	
18:00	<b>Early Career Researchers (ECR) event – Kingpin Canberra</b>	

## Day 3 – Wednesday 10th September

Session 8		
09:10	<b>Manuel Caamano:</b> Recent steps and perspectives on quasi-fission studies with the VAMOS variable-mode spectrometer at GANIL (France)	<b>Chair: Lu Guo</b>  Helpers: Jack Woodside, Sharon Goh
09:40	<b>Emanuele Vardaci:</b> Multinucleon transfer studies with a kinematic TOF method	
10:00	<b>Roderick Clark:</b> Spectroscopy of transfermium nuclei	
10:20	<b>Jacob Buete:</b> Direct observation of sequential fission in superheavy element synthesis reactions	
10:40	MORNING TEA	
Session 9		
11:00	<b>Laura Manenti:</b> Mapping Sydney's environmental radioactivity	<b>Chair:</b> <b>Michaela B Froehlich</b>  Helpers: Aditya Singh Tejas, Tony Tran
11:30	<b>Karin Hain:</b> Production and characterisation of an isotopic spike for the analysis of environmental <sup>237</sup> Np by (A)MS	
12:00	<b>Madison Williams-Hoffman:</b> Distinct Pu and U isotopic fingerprint in the marine environment	
12:20	<b>Michael Hotchkis:</b> Application of high-sensitivity actinides AMS to nuclear safeguards	
12:40	<b>Jingyi Shi:</b> Heavy-ion irradiation for rapid evaluation of in-pile nuclear fuel behavior	
13:00	LUNCH	
14:00	Excursions	

## Day 4 – Thursday 11th September

Session 10		
09:10	<b>Kazuyuki Sekizawa:</b> Time-dependent microscopic approaches for low-energy heavy-ion reactions: recent progress	<b>Chair:</b> <b>Emanuele Vardaci</b>  Helpers: Aditya Babu, Maggie Webber
09:40	<b>Giulia Colucci:</b> Dissipation on the quasielastic barrier distributions of $^{20}\text{Ne}+^{92,94,95}\text{Mo}$ : the role of transfer channels	
10:00	<b>Niels Landsman:</b> The past, present, and future of multinucleon transfer research using in-flight separator RITU	
10:20	<b>Varinderjit Kaur:</b> Contribution of nuclear potential in isobaric pair fragmentation	
10:40	MORNING TEA	
Session 11		
11:00	<b>Alex Gade:</b> In-beam gamma-ray spectroscopy with fast beams of rare isotopes	<b>Chair: Filip Kondev</b>  Helpers: Victoria Bashu, Luke Johnstone
11:30	<b>John Smith:</b> Probing the high Z limit of octupole correlations in the light-actinide region	
11:50	<b>Dhananjaya Sahoo:</b> Evolution of nuclear structure in light Ac isotopes	
12:10	<b>Takuhiko Asozu:</b> Practical beam separation techniques for ions with similar A/q ratios at JAEA Tokai Tandem Accelerator	
12:30	LUNCH	

## Session 12

13:30	<b>Markus Schiffer:</b> Cologne AMS in transition: new tools for old nuclides	<b>Chair: Keith Fifield</b>  Helpers: Caroline da Costa Seabra, Tom Perissinotto
14:00	<b>Yunchong Fu:</b> Status report of the 3MV AMS facility at the Xi'an AMS Center	
14:20	<b>Greg Lane:</b> Overview of activities at the Department of Nuclear Physics and Accelerator Applications	
14:40	<b>Akashrup Banerjee:</b> FRENA: A New low-energy tandem accelerator for nuclear astrophysics in India	

## AFTERNOON TEA

## Session 13

15:30	<b>Sandrine Courtin:</b> The $^{12}\text{C}+^{12}\text{C}$ fusion reaction at astrophysical energies	<b>Chair:</b> <b>Marco La Cognata</b> Helpers: Abhijith Gopakumar, Sophie Hayles
16:00	<b>Guy Lekenby:</b> Surrogate reactions in the Experimental Storage Ring	
16:30	<b>Leandro Gasques:</b> Probing reaction dynamics in $^{12,13}\text{C}+^{119}\text{Sn}$ collisions	

## Conference Dinner – The Shine Dome

## Day 5 – Friday 12<sup>th</sup> September

## Session 14

09:30	<b>Tim Gray:</b> Exploring nuclear structure near $^{100}\text{Sn}$ with neutron knockout reactions	<b>Chair:</b> <b>Wolfram Korten</b>  Helpers: Rikako Kono, Daniel Lee
10:00	<b>Andrew Ratkiewicz:</b> Surrogate experiments in normal and inverse kinematics	
10:20	<b>Oleg Tarasov:</b> Fragmentation of $^{82}\text{Se}$ : discovering new isotopes and exploring their production	
10:40	<b>Roberto Linares:</b> Nucleon-nucleon correlations in transfer reactions induced by heavy ions	

## MORNING TEA

## Session 15

11:30	Student prize talk 1	<b>Chair:</b> <b>Stefan Pavetich</b> Helpers: Sharon Goh, Zoe Crowley-Burrows
11:50	Student prize talk 2	
12:10	Student prize talk 3	
12:30	Closing remarks	

## LUNCH

### Time indicators

Invited talk: 30 minutes  
 (25 min + 5 Q&A)  
 Contributed talk: 20 minutes  
 (17 min + 3 Q&A)  
 Pitch you Poster presentations: 5 min

### Online Speaker Information & Program



## Wi Fi

**Log in: HIAS2025 Password: HIAS2025**

# HIAS 2025 Program

## Day 1 – Monday 8<sup>th</sup> September

9:30	Arrival and morning tea – foyer, level 3, building 160 Mills Road	
10:30	Welcome to Country and opening addresses	<b>Chair: Kaitlin Cook</b> Helper: Misty Lakelin
Session 1		
10:30	<b>Dominik Koll:</b> Radionuclides in ferromanganese crusts - applications for astrophysics, environmental science and dating	<b>Chair:</b> <b>Mahananda Dasgupta</b>  Helpers: Aditya Babu, Maggie Webber
11:00	<b>Benjamin Kay:</b> Single-neutron excitations outside of $^{132}\text{Sn}$	
11:30	<b>Marco La Cognata:</b> The $^{27}\text{Al}(p, \alpha)^{24}\text{Mg}$ and $^{27}\text{Al}(p, \gamma)^{28}\text{Si}$ reactions at astrophysical energies: first time observation of the 84 keV resonance	
11:50	<b>Michaela B Froehlich:</b> Quantifying lead-210: An impurity in particle detectors for dark matter studies	
12:10	<b>Raghda Abdel Khaleq:</b> Impact of shell model interactions on nuclear responses to WiMP elastic scattering	
12:30	Sponsor presentation – Heavy Ion Accelerators	
12:35	LUNCH	
Session 2		
13:30	Pitch your poster presentations	<b>Chair: AJ Mitchell</b> Helper: Sandra Saji
15:00	AFTERNOON TEA	
Session 3		
15:30	<b>Eva Bezak:</b> The new age of theranostic medicine – opportunities and challenges	<b>Chair:</b> <b>Laura Manenti</b>  Helpers: Victoria Bashu, Luke Johnstone
16:00	<b>Taiki Tanaka:</b> Next-generation medical radio isotope production with inverse kinematics fusion reactions: on-line nuclear medicine treatment without chemical separation	
16:20	<b>Adam Steinberg:</b> Enabling the future of charged particle therapy at the Melbourne Pelletron	
16:40	<b>Patrick Regan:</b> The importance of nuclear standards. Nuclear metrology for research, applications and impact	
17:00	<b>Welcome BBQ &amp; Poster session</b> (Nuclear Physics, building 57 Garran Road)	
17:45	HIAF tour – HIAF building	