


2025 APSRC				
2nd to 4th December 2025				
2-Dec	7.45am	Registration opens		
	8.35 - 9.00	Welcome to the 2025 APSRC by Prof. Adrian Panow, UQ Acknowledgement of Country by the 2025 APSRC Conference Chair Paul Shaw, UQ "Didgeridoo Performance" by Uncle Billy Cummings (Turrbal People) CSIRO Tribute to Yong Li by Greg Wilson, CSIRO Location: GHD Auditorium		
TUES	9.00 – 10.30	DAY 1 Plenary Session Location: GHD Auditorium Chair: Renate Egan, ACAP, UNSW		
	9.00am	Dr. James Hazelton, Endeavour Energy Presentation: "The distribution network's evolving role in supporting PV uptake and the wider energy transition: Electrification, Storage and Flexibility"		
	9.30am	Dr. Maria Herrando, Instituto Tecnológico de Aragón, SPAIN Presentation: "Solar Hybrid Photovoltaic-Thermal (PV-T) Systems for Power, Heating & Cooling: Technology, Markets, and Future Prospects"		
	10.00am	Assoc. Prof. Heping Shen, ANU Presentation: "Towards Cost-Effective Perovskite/Silicon Tandem Solar Cells"		
	10.30 – 11.00	Morning Tea Located in Level 3 Foyer		
	11.00 – 12.20	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S = Nominated for a Stream Award		
		PV Devices Perovskite Solar Cells I Chairs: Guoliang Wang, Sydney Uni & Ji Cao, UQ Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Inverters and batteries Chairs: Iain MacGill, UNSW & Oliver Lindsay, UQ Location: 301B	CST & Process Heat and Chemistry High temperature thermal storage Chairs: Daniel Potter, CSIRO & James Smyth, UQ Location: 316A
	11.00 - 11.20	Yi-Bing Cheng Foshan Xianhu Laboratory "Recent Advances and Strategic Outlook for the Development of Perovskite Photovoltaics in China"	Baran Yildiz , UNSW - "An overview of network measures and standards to control inverter-based consumer energy resources in Australia"	Ye Wang , ANU - "Performance of High-temperature Thermal Energy Storage in Hot Blast Stoves: A Case Study for An Alumina Calcination Process"
	11.20 - 11.40	Ershad Parvazian Swansea University "Roll-to-Roll Perovskite Solar Cells and Modules: Capabilities, Challenges and Future Directions"	Mehdi Aghaeimeybodi , CSIRO - "Techno-economic analysis of battery energy storage systems in solar parks"	(*G) Nara Choi , ANU - "Material Testing of Hot Blast Stoves checker bricks for High-Temperature (>1000°C) Thermal Energy Storage"
	11.40 - 12.00	Syed Nazmus Sakib Macquarie University "Stability Studies of Microwave-Processed Perovskite Solar Cells"	Wajha Tasnim Urmi , RMIT - "Thermal Characterisation and Modelling of Lithium Phosphate Batteries for Optimised Performance and Safety"	Joshua Chidiebere Mba , HU - "Development of Cu-Si-Al microencapsulated phase change material (MEPCM) for effective high temperature latent heat storage and solar thermal applications"
	12.00 - 12.20	(*G*S) Can Zheng , UQ "5-Chloro-2-Hydroxypyridine Derivatives with Push-Pull Electron Structure Enable Durable and Efficient Perovskite Solar Cells"	Lauren Ashby , UNSW - "Evaluating the Value of Solar Battery Storage"	Tomokazu Nakamura , HU - "Performance analysis of a packed-bed latent heat storage unit with Al alloy based PCM pellets"
	12.20 – 1.20	Lunch Located in Level 3 Foyer		
	1.20 – 3.00	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S = Nominated for a Stream Award		
		PV Devices Cells And Modules Degradation I Chair: James Bullock, Uni Melb & Meera Sudeesh, UQ Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Large-scale Solar Chairs: Marnie Shaw, ANU & Euca Brooks, UQ Location: 301B	Solar Buildings & Solar Heating and Cooling Heating and Cooling Chair: Baran Yildiz, UNSW Location: 316A
	1.20 - 1.40	(*G) Xinyuan Wu UNSW "Evaluating Stability and Degradation Mechanisms of EVA-Encapsulated Glass-Backsheet TOPCon Modules under Accelerated Damp-Heat Conditions"	Hamed Habibi , Murdoch Uni. - "A Comprehensive Robotic Framework for Inspection and Fault Detection of Single-Axis Tracking PV Farms"	INVITED SPEAKER Dean Clift Rheem Australia - "MEPS Testing for Heat Pumps"
	1.40 - 2.00	Haoran Wang UNSW "A Novel Damp Heat-Induced Failure Mechanism in PV Modules (with Case Study in TOPCon)"	(*G*S) Zeinab Haydous , UNSW - "Adaptive Tilt Control for PV Thermal Management: A Proof of Concept"	
	2.00 - 2.20	Anjie Li UNSW "Assessment of LAF and Non-LAF TOPCon Solar Cells under Soldering Flux-Induced Damp-Heat Degradation"	(*G*S) Debby Ramadhani , UNSW - "Dynamic Sky View Factor Computation for Enhanced PV Temperature Prediction in a Terrain-Shaded Site"	Dora Shan He ANU "Evaluating the impacts of centralised and distributed heating and cooling solutions on electrifying a university campus"
	2.20 - 2.40	Alison Ciesla UNSW "Commercial PV modules in Australia: Comparing measured performance and nameplate ratings"	Will Simpson , UQ - "Investigation of Airflow Development in a PV Farm"	(*G) Amr Omar UNSW "The Energy-Water Nexus of Evaporative Cooling in New South Wales"
	2.40 - 3.00	Anh Huy Tuan Le UNSW "Accelerating regeneration of LeTID-affected silicon solar cells under field-related conditions"	Ali Shakiba , UNSW - "Improving Accuracy in PV Performance Loss Rate Estimation via Environmental Clustering"	(*G) Alex Lehmann , UNSW "Roof-top concentrating solar thermal options for industrial heat"
	3.00 – 3.30	Afternoon Tea Located in Level 3 Foyer		
	3.30 – 5.10	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S = Nominated for a Stream Award		
		PV Devices Cells And Modules Degradation II Chairs: Kean Chern Fong, ANU & Meera Sudeesh, UQ Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Overviews Chair: Rob Passey, UNSW Location: 301B	CST & Process Heat and Chemistry Thermal storage Chair: Daniel Potter, CSIRO Location: 316A
	3.30 - 3.50	(*G) Chandany Sen UNSW "Hidden Chemistry of Encapsulants: Unlocking Damp-Heat Degradation in TOPCon Modules"	Dale Cartwright , APA - "The challenges of deployment of solar farms in Western Australia's Pilbara region"	Tuan Nguyen , Melbourne University - "Effects of fin designs on the performance of concrete thermal energy storage"
	3.50 - 4.10	Muhammad Umair Khan UNSW "Hydrogen and Fixed Charge: Understanding Ultraviolet-Induced Degradation in Modern TOPCon Solar Cells"	Andrew Blakers FTSE, ANU - "Global renewable energy pathfinding"	(*G) Santosh Mishra , Melbourne University - "Influence of floor-foundation friction on tank failure in molten salt thermal energy storage systems"
	4.10 - 4.30	Ho Yuet Rachel Yeung UNSW "Lab to Field: Predicting Ultraviolet-Induced Degradation in TOPCon PV modules"	Rama Sharma , UNSW - "Balancing performance, cost and sustainability through integrated decision optimisation for utility-scale PV systems"	Lihui Tu , Melbourne University - "Utilising Recycled Concrete Aggregate in Packed Bed Thermal Energy Storage: A Feasibility and Performance Study"
	4.30 - 4.50	(*G*S) Jiaxin Yang UNSW "The Root Cause of UV Instabilities in Silicon-Solar Cells"	Andrew Blakers FTSE, ANU - "An Integrated System Plan for Cambodia, Laos, Thailand and Vietnam"	
	4.50 - 5.10	Aeron Johns UNSW "Investigating the spectra-dependency of UV-induced degradation and recovery in p-type c-Si structures"		
	5:10 - 6:30	POSTER SESSION Location: Level 3 Room 301		
	6:00 - 6:30	APVI AGM (Rm 316, Level 3) 		
	6.30 - 8.00	Networking Drinks Located in the Outdoor Area - the Amphitheatre		

3-Dec WED	6:30am	APSRC Fun Run! (see APSRC website for details)			
	8.00am	Registration opens			
	8:55 – 10.30	DAY 2 Plenary Session Location: GHD Auditorium Chair: Roger Dargaville, Monash			
	8:55 - 9:00am	Rebecca Yang: Announcement of 'Solar + Network'			
	9.00am	Dr. Kimberley Swords FTSE, Riffle Advisory Presentation: "Things you wish you knew (but were afraid to ask)... perspectives on the energy transition from legacy generators, approvers, project developers and landholders"			
	9.30am	Liana Downey GAICD, Director, SLR Consulting Presentation: "Developing the Australian Solar Thermal Strategy: Context, Insights, and Enablers"			
	10.00am	Prof. Steve Albrecht, Helmholtz-Zentrum Berlin, Germany Presentation: "Toward Efficient and Stable Perovskite Tandem Solar Cells"			
	10.30 – 11.00	Morning Tea Located in Level 3 Foyer			
	11.00 – 12.30	Industry Workshops			
		PV Manufacturing I Chairs: Nathan Chang & Jessica Yajie Jiang, UNSW Location: GHD Auditorium (Rm 200)	High Comfort, Low Carbon Lighting Chair: Ken Guthrie, SET Location: 301B	PV Recycling/Circular Economy Chair: Rabin Basnet, ANU Location: 316A	PV Forecasting and Firm Power Management Chair: Abhnil Prasad, UNSW Location: Rm 316
		Presentations: Michelle Vaqueiro Contreras, UNSW, ACAP "The Case for Australian-made Polysilicon" (20 min) Zi Ouyang, JA Solar "From 24% to 30%: Pathways and prospects for continuous breakthroughs in commercial photovoltaic technology" (20 min) Paul Moonie, Halocell Energy Ltd "Bridging the Valley of Death: commercialising perovskite PVs in a high-cost manufacturing market" (20 min) Shubham Duttagupta, BT Imaging "Australian Manufacturing of Characterisation Equipment - Connecting the PV Value Chain from Lab to Gigafactory to Field" (20 min) (Spare time: 10 min)	Veronica Garcia Hansen, QUT- School of Architecture and built environment. Task 70 Oystein Tronstad, The Critical Care research group/ ICU of the Future project. Quentin Jackson, Principal in Sustainability, Aurecon- Alex Pinto, Signify/ Urban Aluminium	11.00 – 11.20 Alberto Troccoli, WEMC "How Climate Projections Are Powering Solar Investments" 11.20 – 11.40 Joaquin Ferrer, Repath GmbH "The Certainty of Uncertainty: Modelling Climate Risk and Performance for PV Portfolios in Australia and New Zealand" 11.40 – 12.00 Anthony Cornelius, "Hail Risk and Resilience for Solar Farms" 12.00 - 12.20 A/Prof. Michael Cholette, QUT "When does soiling matter? Lessons from Concentrating Solar Power"	
	12.30 – 1.30	Lunch Located in Level 3 Foyer			
	1.30 – 3.00	Industry Workshops			
		PV Manufacturing II Chairs: Nathan Chang & Jessica Yajie Jiang, UNSW Location: GHD Auditorium (Rm 200)	Photovoltaic Thermal (PVT) Chair: Robert Taylor, UNSW Location: 301B	Renewable Heat - Manufacturing, Mining and Fuels Chair: Dominic Zaal Location: 316A	
		Presentations: Louise Hurlf, Stellar PV "Bringing Solar Manufacturing Back to Australia - Ingots and Wafers" (20 min) Tim Couchman, ARENA (5 min) Panel discussion: Including all speakers from both sessions (60 mins)	1. Maria Herrando, ITA "Overview of the status of PVT applications and technology internationally" 2. Doug Smith, Coolsheet "Coolsheet PVT + commercial heat pumps" 3. Erik Parsons, Corellan "The Ultimate Efficiency Boost: Combining Solar PVT and Liquid Desiccant Cooling for Peak Performance" 4. Glen Ryan, Sunovate "More Than Just Hot Air" 5. Ken Guthrie, SET "Adoption of ISO 9806 as an Australian Standard for testing of PVT"	1. Johannes Kostka, Fichtner, "CSP Value Proposition for Australia" 2. Amy Philbrook, ARUP, "Green Metals" 3. Dougal Adamson, FPR Energy, "Heat and Power for Mining" 4. Bruce Leslie, Vast Solar, "Grid Connect Power" 5. Yen Chean Soo Too, CSIRO Energy "Thermal Storage" 6. Wes Stein, CSIRO Energy "Advanced Power Systems"	
	3.00 – 3.30	Afternoon Tea Located in Level 3 Foyer			
	3.30 – 4:50	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S - Nominated for a Stream Award			
		PV Devices Characterisation I Chairs: Di Yan, Melb. Uni & Khanzadi Omama Khan, UQ Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Social Chair: Mike Roberts, UNSW Location: 301B	Solar Buildings & Solar Heating and Cooling Water Heating Chair: Dean Clift, Rheem Australia Location: 316A	
		3.30 - 3.50 (*G*S) Zhiwen Zheng, UNSW " Outdoor photoluminescence imaging under concentrated sunlight"	Benjamin Hofmann, ANU - "Common Energy Practises and the Prevalence of Load Shifting in the South Coast"	INVITED SPEAKER Robert Taylor UNSW "IEA SHC Task 69: A PV Hot Water Technology Brief"	
		3.50 - 4.10 (*G) Arthur Julien UNSW "PL and EL image analysis via statistical modelling to study perovskite solar cell homogeneity"	Nick Gorman, UNSW - "Understanding electricity demand: household load profile aggregation dynamics, and trends in regional demand profiles"		
		4.10 - 4.30 (*G*S) Tanushree JB Nath UNSW "Contactless Series Resistance Imaging of Solar Cells with Line-Scan Luminescence: A Quantitative Approach"	Benjamin Hofmann, ANU - "Understanding social impacts on local energy demand: An Agent Based Model"	Baran Yildiz UNSW "Turning household water heating systems into MW batteries to support the integration of consumer energy resources (CER)"	
		4.30 - 4.50 Rama Sharma UNSW "Fully automated photovoltaic defect and severity analysis at scale without labels"	(*G*S) Martin Egan, UTS - "Energy citizens: listening to the energy transitions newest stakeholder"	BIAN Mengmeng China Academy of Building Research "Research on GHG Reduction of Solar Hot Water System in China"	
	4:50 - 5:45	POSTER SESSION Location: Level 3 Room 301			
	7:00 - 10:00	Conference Dinner Location: Customs House 399 Queens St Brisbane COACHES ARE AVAILABLE TO TAKE YOU TO CUSTOMS HOUSE. MEET IN THE FOYER OF THE CONFERENCE VENUE AT 6:15PM ((if you take the CityCat, catch the 6pm service as the 6:15 may make you late for the dinner)			

4-Dec	8.00am	Registration opens		
	9.00 – 10.30	DAY 3 Plenary Session Location: GHD Auditorium Chair: Marnie Shaw, ANU		
THURS	9.00am	Prof. Karen Hussey, Australian Government's Emissions Reduction Assurance Committee Presentation: "Unpacking and understanding the climate change policy landscape (and where PVs do and don't fit)"		
	9.30am	Geoff Stapleton AO, GSES/SEIAP Presentation: "Establishing Solar Training in the Pacific Island Countries and Territories"		
	10.00am	Fengli Du, China Solar Thermal Alliance Presentation: "The current status of Solar Thermal deployment in China and key uptake drivers"		
	10.30 – 11.00	Morning Tea Located in Level 3 Foyer		
	11.00 – 12.20	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S = Nominated for a Stream Award		
		PV Devices PV Buffet Chairs: Arthur Julien, UNSW & Meera Sudeesh, UQ Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Mixed bag Chair: Baran Yildiz, UNSW Location: 301B	Solar Buildings & Solar Heating and Cooling Solar Buildings Chairs: Ken Guthrie, SET & Euca Brooks, UQ Location: 316A
	11.00 - 11.20	Harshvardhan Gupta, Technical University of Denmark "Surfactant-assisted hydrothermal growth of Sb2(S,Se)3 thin film solar cell performance"	Nathan Chang, UNSW - "Pathways to Reducing Utility PV Levelised Cost of Electricity Towards ARENA's 30- 30-30 Goal"	INVITED SPEAKER Li Bojia, China Academy of Building Research - "Research on Comprehensive Evaluation of PV Building in China"
	11.20 - 11.40	Sandhuli Hettiarachchi Dehigaspitiya, Macquarie University "Synthesis of AgInS2/ZnS Quantum Dots for Luminescent Solar Concentrators: PLQY Enhancement through Shell Optimization"	Bin Lu, ANU - "Ultra-low-cost-solar for economy-wide decarbonisation"	
	11.40 - 12.00	(*G*S) Oliver Lindsay, UQ "Designing multi-phase systems for single-component organic photovoltaics"	Ellie Kallmier, UNSW - "An overview of retail electricity tariffs in the National Electricity Market"	(*G) Hong Gic Oh, Exemplary Energy - "Enhanced Weather and Climate Data for Energy System and Weather-proofing Simulations"
	12.00 - 12.20	Brett Hallam, UNSW "Sustainable PV: Optimising Material Consumption, Cost and Environmental Outcomes Through Smart Sustainability Approaches"	Hossein Saberi, UNSW - "Assessing PV Compliance Across Australian Grids: Insights from Project CICCADA"	Nargess Nourbakhsh, UNSW "Energy Data Platform (EDP)"
	12.20 – 1.20	Lunch Located in Level 3 Foyer		
	1.20 – 3.00	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S = Nominated for a Stream Award		
		PV Devices Silicon Solar Cells Chairs: Ning Song, UNSW & Brendan Wright, UNSW Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Modelling Chair: Steve Blume, Secretary SEC; James Smyth, UQ Location: 301B	CST & Process Heat and Chemistry CST systems and technologies Chairs: Daniel Potter, CSIRO & Murtaza Madni, UQ Location: 316A
	1.20 - 1.40	Li Wang UNSW "Production-Ready Silver Revolution: 85% reduction in industrial TOPCon solar cells silver consumption through screen-printing metallisation"	Hanrong Huang, UNSW - "Py-Microgrid: An Open-Source Hybrid Microgrid Optimisation Framework for RE Integration in Remote Mining Operations"	Ye Wang, ANU - "Optimising Mirror Shapes of Target-aligned Heliostats for Maximum Annual Optical Performance"
	1.40 - 2.00	Aga Ridhova Melbourne University "Solution Processed MoOx Thin Films as Hole Selective Contacts for Silicon Solar Cells"	Ammar Elnosh, Murdoch Uni. - "Towards adaptive PV Digital Twins: Data-driven modelling challenges for diagnostics applications"	Ahmed Eissa, UNSW "On-Sun Thermal Performance and Flux Mapping of a CT/PV Hybrid Module"
	2.00 - 2.20	Di Yan Melbourne University "Improving the thermal stability of aluminium doped zinc oxide with different capping layers for polycrystalline silicon passivated contacts"	George Shang, UNSW - "An open-source PyPSA model for supporting off-grid hybrid renewable energy system investment decisions"	Mahdiar Taheri, ANU "Characterisation of low-grade Australian ores for fluidised bed ironmaking: Ore heating pathways"
	2.20 - 2.40	Yuhao Cheng UNSW "Screen-printed aluminium contacts for silver-free tunnel oxide passivated back contact (TBC) solar cells"	Dylan McConnell, UNSW - "Integrating Industrial Demand Response into Capacity Expansion Models: Curtailment and Load Shifting"	Tim Anderson, CSU "Effect of Localised High-Velocity Ports on Particle Heating in Solar Fluidised Beds"
	2.40 - 3.00	Kean Chern Fong ANU "Transparent Ultra Thin Polysilicon Passivated Contacts"	Moran Zhong, UNSW - "Revenue Sensitivity to PV Modelling Accuracy in the National Electricity Market"	Robert Taylor, UNSW "Decision Support Tool for Decarbonisation and Electrification of Low Temperature Industrial Thermal Systems"
	3.00 - 3.30	Afternoon Tea Located in Level 3 Foyer		
	3.30 – 4:50	Concurrent Sessions KEY: *G = Nominated for a General Award (Wal Read or Muriel Watt Awards), *S = Nominated for a Stream Award		
		PV Devices Characterisation II Chairs: Rabin Basnet, ANU & Khanzadi Omama Khan, UQ Location: GHD Auditorium (Rm 200)	Renewable Energy Deployment & Integration Optimisation of PV output Chairs: Roger Dargaville, Monash Location: 301B	PV Devices Perovskite Solar Cells II Chair: Jueming Bing, University of Sydney Location: 316A
	3.30 - 3.50	Hyunsun Song UNSW "Investigation of thin silicon solar cells for space application"	Yang Tang, UNSW - "Understanding and Reducing The Risk of Extreme Photovoltaic Degradation"	Jie Zhao Monash University "Toward Scalable, Efficient, and Stable Perovskite Solar Cells: From Ink Design to Interface Passivation"
	3.50 - 4.10	Khoa Nguyen ANU "Let's go outside! Enabling Australia-wide comparative outdoor testing of perovskite-based solar devices"	Sijin Wang, UNSW - "Quantifying photovoltaic module-to-module mismatch losses with real-world rooftop systems"	Hui Jin UQ "The Effects of Alkyl Chain Length and Halide Anions in Fluorinated Additives for Scalable Perovskite Solar Cells"
	4.10 - 4.30	Arthur Julien UNSW "Investigating perovskite solar cell non-uniformities via hyperspectral reflectance and PL imaging"	Grace Liu, UNSW - "Predicting panel soiling recovery from environmental measurements during rain events in Africa"	Dongxu He UQ "Homogeneous 2D/3D heterostructured tin halide perovskite photovoltaics"
	4.30 - 4.50	Tanushree JB Nath UNSW "Sensitivity analysis of photoluminescence-based series resistance imaging methods using a simulated ground truth"	Sijin Wang, UNSW - "Physics-informed machine learning pipeline for fault classification and forecasting in utility-scale photovoltaic systems"	Hongzhe Xu UQ "Heteroepitaxy for highly stable cesium tin halide perovskite solar cells"
	4:50 - 5:30	Closing Ceremony/Award Presentations Location: GHD Auditorium		
	5.30 - 7.00	Closing Networking Drinks Located in the Outdoor Area - the Amphitheatre		