

Day 1 Monday 25 November 2019					
7:30	Exhibition / Registrations Open				
8:00	Opening Jim Underschultz Welcome to Country Shannon Ruska				
8:15	AGC2019 Opening Address Professor Paul Bertsch, Chief Scientist, Queensland				
8:30	Plenary: Integrated management of groundwater-energy-food nexus for sustainability. Makoto Taniguchi, Deputy Director-General, RIHN, Japan.				
8:50	Plenary: Planning for a water secure world - a global miner's perspective. Laura Tyler, Chief of Geoscience and Asset President, Olympic Dam, BHP				
9:10	Plenary: Hydrogeology: the role, integration of the profession, and the need for common technical language. Chris Langton, Vice President, KCB.				
9:30	Morning Tea Sponsored by Daly Bros				
	Boulevard Auditorium	Boulevard B1	Boulevard B2	Boulevard B3	Boulevard Room
10:00 - 12:00	Special Session: Great Artesian Basin - Hydrogeology Journal Special Issue Sponsored by University of QLD Centre for Natural Gas	Coupled Modelling(Reactive Chemistry & Transport, Geomechanics & Transport)	Cumulative Groundwater Impacts - Assessment & Management	Recharge & Groundwater - Surface Water Interaction	Indigenous Groundwater Values and Connections
10:00	The Great Artesian Basin, Australia from discovery to current hydrogeological, hydrochemical and isotope hydrology interpretations. M.A. Habermehl	Development of upscaling laws for geochemical reactions and their integration in reservoir-scale models. Achyut Mishra, Uni of Melbourne.	Stream depletion calculations for resource consenting reality and uncertainties. Alexandra Badenhop, e3Scientific Ltd.	Influence of new constructed wetlands on groundwater recharge in a rapidly urbanising catchment. Ben Hall, RMIT.	Keynote: Indigenous groundwater values and connections. Brad Moggridge, Uni of Canberra.
10:15	Estimation methodology and improved characterisation of unmetered stock and domestic groundwater use in the Surat and southern Bowen basins of the GAB (Australia). Steve Flook, OGIA.	Understanding flow and chemical reactions at the pore scale. Apoorv Jyoti, Uni of Melbourne.	Communicating groundwater science: reporting to reduce cognitive strain and reach a broader audience. Claire Stephenson, SLR.	The development of recharge models under irrigation districts with perched water tables. Glen Walker, Grounded in Water.	
10:30	Estimating current and historical water extraction from the Great Artesian Basin and other regional scale aquifers in Queensland, Australia. Claire Kent, KCB.	Scenario modelling of reactive transport processes governing fluoride release and attenuation during managed aquifer recharge. David Schafer, Uni of WADWATER.	Application of uncertainty analysis to salinity modelling. Greg Hoxley, Jacobs.	Locating groundwater discharge into a large coastal lagoon. Katie Coluccio, Uni of Canterbury.	Partnering indigenous knowledge (Matauranga Maori) and biophysical science: developing a planning framework for rock art and cultural landscape protection in relation to disturbance of freshwater environments. Richard Harmon, Victoria Uni.
10:45	Field investigations of potential terrestrial groundwater dependent ecosystems and comparison to popular conceptual models within the Surat Basin. Chris Jones, Arrow Energy.	Metal mobilisation and re-precipitation with CO2 stream injection in the Precipice Sandstone: Experimental data input for a reactive transport model. Julie Pearce, Uni of QLD.	Estimating sources of inflow on mining complexes. Juan Berrio, AGE Consultants.	Understanding recharge process on North Stradbroke Island. Leon Leach, Dept Environment & Science.	Scientific benefits of partnering with Traditional Owners. Josephine Searle, Dept Water & Env, Regulation.
11:00	Groundwater recharge at the eastern intake beds of the Great Artesian Basin using multi-isotope studies. Axel Suckow, CSIRO.	Denitrification parameter uncertainty under uncertain redox conditions. Theo Sarris, IESR.	Dealing in groundwater. New South Wales. Ken Kolstad, NSW DPI.	Assessment of spatial distribution of river recharge through hyporheic zone. Maria Grodzka-Lukaszewska, Warsaw Uni of Technology.	A collaborative study combining contemporary hydrogeological methods with traditional knowledge to understand living water in the Great Sandy Desert. Steven Bolton, Rockwater.
11:15	Hydrogeological implications of active tectonics in the Great Artesian Basin. Mike Sandiford, Uni of Melbourne.	Horizontal dewatering well construction: a combination of technologies and practices delivering the next generation mine dewatering solution. David Hoffman, Dunstons Construction Group.	Flowing Wells on the Adelaide Plains: Implications for ASR management. Paul Magarey, Groundwater Science.	Using multiple lines of evidence to characterise groundwater recharge in a rapidly urbanising catchment: implications for future land & water management. Matt Currell, RMIT.	
11:30	Sequence stratigraphy, palaeo-depositional environments, and aquifer geometries and connectivity of the Hutton Sandstone to Springbok Sandstone interval of the Surat Basin, Queensland. Mark Reilly, Uni of QLD.	Longitudinal dispersivity increases with distance. Should we allow for this in our analyses? Dylan Irvine, Flinders Uni.	Tip toe through the tulips - the role of the OWS in EPBC assessments. Sarah Taylor, Dept Environment & Energy.	Strontium isotopes as tracers to assess inter-aquifer and groundwater-surface water exchanges in sedimentary basins: an example from the Surat and Clarence-Moreton basins in Australia. Matthias Raiber, CSIRO.	Panel: Indigenous Groundwater Connections and Values
11:45	Hydrochemical variations of groundwater and spring discharge of the western Great Artesian Basin: implications for regional groundwater flow. Stacey Priestley, ANSTO / Flinders Uni.	Geomechanical considerations for hydraulic conductivity estimation of the jointed rocks. Mahdi Zoorabadi, Golder.	Groundwater level trend analysis to inform likelihood of cumulative coal seam gas impacts in the Surat CMA. Sanjeev Pandey, OGIA.	Hydrogeological, climatic and anthropogenic drivers of acidification within an inland acid sulfate soil wetland investigations to inform remediation. Nicolaas Unland, Jacobs.	
12:00	Networking Lunch Sponsored by AGE Consultants				
	Boulevard Auditorium	Boulevard B1	Boulevard B2	Boulevard B3	Boulevard Room
12:45 - 14:45	Special Session: Springs of the Great Artesian Basin - The Royal Society of QLD Special Issue	Emerging Analytical & Numerical Methods	Groundwater Dependent Ecosystems	Recharge & Groundwater-Surface Water Interactions / Novel Investigation Techniques	Community Engagement, Cultural Values and Groundwater Resources Sponsored by Arrow Energy
12:45	The evolution of knowledge and management of springs in the Great Artesian Basin. Steven Flook, OGIA. Springs of the Great Artesian Basin – an initiative of the Royal Society of Queensland. Angela Arthington, Griffith Uni.	Keynote: The Ensemble Optimizer: Making management optimization under uncertainty possible since 2019. Matt Knowling, GNS Science.	Where does submarine groundwater discharge occur? Jodie Pritchard, CSIRO.	Infiltration, recharge and plant water availability in a tropical environment Ranger Uranium Mine, Northern Territory. Peter Baker, Office of Water Science.	Community involvement in water management in Punjab, Pakistan: A strategy to sustainability of livelihoods of Farmers. Saira Akhtar, Uni of Agriculture.
13:00	Artesian springs of the Great Artesian Basin – Hydrogeology, hydrochemistry and age dating of artesian groundwater and spring deposits. M.A. Habermehl.	Using an adjoint state approach to estimate cumulative streamflow depletion efficiently. Chris Turnadge, CSIRO.	Murray Darling Basin groundwater management under the Basin Plan. Kristanne Mahony, MDBA.	Modelling shallow groundwater recharge and ET processes using FloPy. Rebecca Doble, CSIRO.	Lining of canals and ground water recharging: socio-economic implications for sustainable agricultural development in Pakistan. Saira Akhtar, Uni of Agriculture.
13:15	In search of lost springs in the eastern Great Artesian Basin. Jen Silcock, Uni of QLD.	Recent developments in speeding up MODFLOW-USG simulations: the truncated Newton Method and GPU acceleration. Damian Merrick, HydroAlgorithms.	Mapping groundwater dependence in data poor areas: analysis of earth observation data in the Isa Geological and Bioregional Assessment region, north-west QLD. Prachi Dixon-Jain, Geoscience Australia.	How uncertain are our recharge estimates? Russell Crosbie, CSIRO.	Engaging Surat Basin landholders in groundwater monitoring. Mabbie Eison, Dept Natural Resources Mines & Energy.
13:30	Macro-invertebrates of the GAB springs; how understanding their distributions can help us conserve them. Renee Rossini, Uni of QLD.	Reconstruction of baseline groundwater levels using backwards Cumulative Rainfall Departure and highly-parameterised parameter inversion. Eduardo De Sousa, DHI.	A new approach to prioritising groundwater dependent vegetation communities in NSW, Australia. Jodie Dabovic, Dept of Industry - Water.	Estimating recharge from recirculated groundwater with dissolved gases: an end-member mixing analysis. Shawan Dogramaci, RioTinto.	Social and gender constructions associated to water resources in isolated rural Pakistan. Farooq Tanwir, Uni of Agriculture.

13:45	Evolution in Isolation: the endemic fishes of Australia's remote Great Artesian Basin springs. Adam Kerezy, Dr Fish Contracting.	Generating hydrogeological virtual realities for hypothesis testing in groundwater modelling. Jeremy Bennett, Tonkin & Taylor / Uni of Tubingen.	The Groundwater Dependent Ecosystems (GDE) Atlas' role in decision-making. Eloise Nation, BoM.	Evaluation of natural and anthropogenic factors on changes in river discharge and groundwater exchange in a Mekong sub-basin. Somphasith Douangsavanh, Flinders Uni.	Out of the comfort zone stakeholder engagement outside the Ivory Tower. Petah Rhynehart, Office of Water Science.
14:00	Regulatory tools for managing resource development impacts on spring ecosystems. Revel Pointon, EDO QLD.	Comparing modelling approaches for salinity impact assessment of irrigation in SA Mallee. Juliette Woods, Dept Env. & Water.	Root-zone periscope and its applications for investigating plant-water relations and modelling transpiration. Huade Guan, Flinders Uni.	Increased groundwater and contaminant discharge to surface water in response to catchment loading. Dana Windle, ERM.	Integrating stakeholder engagement into bioregion scale assessments. Emily Turner, Dept Env. & Energy.
14:15	An adaptive management plan for Great Artesian Basin springs. Mark Keppel, SA Gov.	The early days of groundwater modelling in Australia, 25 years from 1970 to 1994. Noel Merrick, SLR.	Drought-induced hydrogeological impact causing dieback in a grassy woodland threatened ecological community, Monaro, NSW. Leah Moore, Uni of Canberra.	Quantifying air-water gas exchange in rivers and lakes using high-resolution time series of dissolved atmospheric gases. Peter Cook, Flinders Uni.	Groundwater recharge and water security for Bengaluru city with traditional well diggers and their knowledge systems. Vishwanath Srikanataiah, Biome Environmental Trust.
14:30	Discussion	A novel approach to representing longwall induced fracturing in finite difference groundwater models. Neil Manewell, AGE.	Multidisciplinary and adaptive approach to assessing groundwater dependence of River Oak community in NSW Hunter Coalfields. Adam Skorulis, SLR.	Assessment of PFAS as a novel tool for estimating groundwater recharge and aquifer characteristics. John Bradd, GHD.	Social research in socio-hydrology. Yongping Wei, Uni of QLD.
14:45	Afternoon Tea Sponsored by SkyTEM				
15:15	Poster Session				
	Boulevard Auditorium	Boulevard B1	Boulevard B2	Boulevard B3	Boulevard Room
16:00 - 17:30	Big Data & Innovation Applications	Emerging Analytical & Numerical Methods	Nutrients Diffuse Pollution in Aquifers & Catchments	Coastal Processes & Tropical Island Hydrogeology	Geophysical & Petrophysical Methods & Groundwater <i>Sponsored by Shell QGC</i>
16:00	Groundwater field data capture: custom mobile apps for the groundwater industry. Alice Drummond, DiscoverEI.	Modelling groundwater-surface water interactions with the Double-Averaged Navier Stokes Equations: a step towards next-generation tools for integrated limit setting. Andrew Dark, Aqualinc.	The nitrate load to come: a tale of two porosity. Helen Rutter, Aqualinc.	Seawater intrusion and aquifer compartmentalisation in the Darwin rural area. Anna Hablin, Geoscience Australia / Melissa Woltmann, Dept Env. & Natural Resources.	Deriving groundwater volume estimates for Managed Aquifer Recharge: an interdisciplinary approach. Larysa Halas, Geoscience Australia.
16:15	Documenting provenance of science in a state government agency - a groundwater example. Angela London, Dept Env. & Water.	Seepage analysis through the body and the vicinity of an earth water dam by using unstructured-mesh finite element modelling. The Mornos dam case study. Panagiotis Giannouloupoulos, Pennington Scott.	Nutrient transfer through the vadose zone under sugarcane in the Wet Tropics. Rezaul Karim, QUT.	Effects of dispersion on the offshore fresh groundwater extent. S Cristina Solorzano-Rivas, Flinders Uni.	The utility of shallow geophysics to contribute to the characterisation of shallow groundwater conditions. Okke Batelaan, Flinders Uni.
16:30	Coding to automate groundwater data analysis and visualisation. Cassandra Murphy, AECOM.	Practical examples of numerical modelling techniques to inform groundwater impact assessments for major infrastructure projects. Rikito Gresswell, GHD.	Denitrification walls as a tool to reduce nitrate load to the Greats Barrier Reef whilst reducing nitrous oxide emissions: results from the Southeast Queensland trials. Fabio Manca, QUT.	The value of geophysics in understanding the variability of groundwater systems in low carbonate islands. Andreas Antoniou, Pacific Community (SPC).	Improving hydrogeological characterisation with borehole magnetic resonance for managed aquifer recharge. Benjamin Birt, Qteq.
16:45	Hidden water in remote areas - using innovative exploration to uncover the past. Adrian Costar, Dept Env. & Water.	Dynamic meshing for integrated hydrologic modelling in mining. Steven Berg, Aquanty.	Removing nitrate from artificial subsurface drainage under pastoral agriculture using woodchip bioreactors. Aldrin Rivas, Lincoln Agritech.	Evaluation of hydrogeophysical data to constrain a 3D variable density numerical groundwater model of a freshwater lens in a multi-layered, island aquifer system. Eddie Banks, Flinders Uni.	Is there a fault in the geology, or in the geophysics? Titus Murray, Southern Highland Structural Geology.
17:00	Hydrogeol_utils: an open-source, data processing, integration and visualisation toolkit for hydrogeology. Neil Symington, Geoscience Australia.	Time series analytical modelling using HydroSight to investigate drivers of groundwater level fluctuation. Tim Armstrong, AGE.	Reducing N-discharges from agriculture: modelling the potential benefits of spatially targeted regulation. Theo Sarris, IESR.	Investigating submarine groundwater discharge at sellicks beach, using hydrogeophysical techniques. Marianna Ramirez-Lagunas, Flinders Uni.	Origin of ultra-basic, strongly-reducing groundwater conditions within an epithermal gold-bearing system. Matthew Lenahan, AGE.
17:15	The exploring for the future web portal democratising access to geoscience data, tools and information. Donna Cathro, Geoscience Australia.	Simulate the impact of external loading on groundwater level. Vahid Shapoori, AGE.	A participatory approach to better understand well water quality in Canterbury, New Zealand. Abie Horrocks, FAR.	Adding spatial comprehensiveness to the characterisation of remote freshwater lens systems in tropical island settings in Northern Australia using airborne electromagnetics. Timothy Munday, CSIRO.	Insights into subsurface properties from sonic core drilling in the Keep River region, East Kimberley, northern Australia. David Gibson, Geoscience Australia.
18:30	Student Industry Night & IAH Awards (Queensland Museum) <i>Sponsored by SLR Consulting</i>				

Day 2 Tuesday 26 November 2019					
7:30	Exhibition / Registrations Open				
8:00	Panel Groundwater in a Changing World				
9:00	Panel Groundwater and the Environment				
10:00	Morning Tea Sponsored by Golder				
	Boulevard Auditorium	Boulevard B1	Boulevard B2	Boulevard B3	Boulevard Room
10:30 - 12:30	Groundwater Contamination & Remediation	Groundwater Resources Vulnerability in a Changing Climate	Social Engagement, Attitudes & Connection to Groundwater	Geophysical & Petrophysical Methods & Groundwater <i>Session sponsored by Shell QGC</i>	Use of Big Data & Groundwater Databases - Mapping, Cleansing & Maintenance
10:30	Clever communication: applying data analytics and dashboards to communicate groundwater quality data. Christian Borovac, DiscoverEI.	Managed aquifer recharge feasibility assessment, City of Rockingham WA. Cassie Turvey, RPS.	Water impacts from unconventional gas development: more than just fracking. Margaret Shanfield, Flinders Uni.	Advancements in frequency domain electromagnetic surveys & their interpretation & effectiveness for determining flow in mine waste rock dumps and below tailing's storage facilities. Bradley van Blomestein, AquaGeo.	Groundwater Intelligence: Applying data analytics and visualisation tools to process, analyse and communicate groundwater data. Alice Drummond, DiscoverEI.
10:45	Sustainable outcomes with surfactant enhanced aquifer remediation of Coal Tar NAPL. Daniel Hirth, BlueSphere Environmental.	Increased recharge due to land clearing vs decreased recharge due to climate change: observations & modelling from the northern Perth basin. David Schafer, Dept Water & Env. Regulation.	Case studies on community engagement to achieve groundwater allocation reductions. Steve Barnett, Dept Env. & Water.	Testing innovative technologies for Atoll groundwater mapping. Amini Loco, Pacific Community (SPC).	Managing an extensive regional groundwater monitoring network in the Surat Basin: key challenges, opportunities and innovation. Ben Cairns, OGIA.
11:00	Sources of nutrient contamination in groundwater at Recycled Water Plants and implications for management. Kate Dowsley, Jacobs.	A 35 ka record of groundwater recharge using stable water isotopes for Perth Basin in SW Australia. Stacey Priestley, ANSTO.	Grassroots education of groundwater. Rhona Cartwright, KCB.	Revisiting old cased bores for new hydrogeological data; borehole magnetic resonance. Olga Filipsova, Dept Water & Env. Regulation.	Moving towards near real-time groundwater level data. Providing an automated and consistent groundwater level dataset for Australia. Brendan Dimech, BoM.
11:15	Changing nitrate to nitrogen gas in a gravel aquifer, using a woodchip denitrification wall. Lee Burberry, IESR.	Port Phillip Bay - the real value. Derek Walters, Center for eResearch & Digital Innovation.	Raising a glass to citizen science: collecting more data and establishing better relationships between water users and government. Saeed Ghaderi, Dept Env. & Water.	GAB Bore Doctor. Brendon Isbister, Dept Env. & Science.	When groundwater strikes: mapping shallow groundwater risks. Jeremy Bennett, Tonkin & Taylor.

11:30	Using environmental isotopes to constrain pollutant migration pathways in an intensive agricultural area - Pampas, Argentina. Agustin Cabrera, RMIT.	Groundwater availability and climate change - assessing the combined influence of reduced water availability and increasing demand on the Barwon Downs groundwater resource. Louise Lennon, Jacobs.	Supporting better management of groundwater in Pakistan: a collaborative approach. Michael Mitchell, Charles Sturt Uni.	A series of case studies to highlight the use of geophysics for hydrogeological applications. Karen Gilgallon, Southern Geoscience Consultants.	Validating and scaling metered groundwater use data for the development of the Central Condamine Groundwater flow model. Leon Leach, Dept Env. & Science.
11:45	Considerations for mine planning to reduce potential groundwater impacts. Dana Windle, ERM.	Uncertainty analysis in groundwater modelling and its environmental management applications. Mahsa Amirabdollahian, NSW Department of Industry.	Improving groundwater management using a participatory research approach in Balochistan, Pakistan. Syed Khair, Balochistan Uni.	Characterising the access constrained valley by using non-destructive investigation methods: Thirlmere lakes case study. Katarina David, UNSW.	Porosity and permeability of the springbok sandstone, Surat Basin. Integrating Wireline and Laboratory Data. Oliver Gaede, OUT.
12:00	Are there interactions between per- and polyfluoroalkyl substances and in situ microbial populations at a legacy firefighting training area? Denis O'Carroll, UNSW.	Meeting growing water demands in an uncertain future: a case study of current and future groundwater supply challenges and opportunities for Honiara, Solomon Islands. Shaun Kies-Ryan, Earth Water People.	Exploring options for improved groundwater management using a participatory research approach in Sindh, Pakistan. Tehmina Mangan, Sindh Agricultural Uni.	Looking beyond wells: geophysical methods for improved groundwater assessments. Kevin Hayley, Groundwater Solutions.	Field-scale downscaling of passive microwave soil moisture retrievals using a neural network trained on integrated hydrological model predictions. Steven Berg, Aquanty.
12:15	Investigating the bioattenuation of emerging organic contaminants in managed groundwater environments to protect human health and the environment. Peter Reeve, Flinders Uni.	Seawater intrusion in a warming world. Chenming Zhang, Uni of QLD.	Evolution of groundwater concerns over the Carmichael Mine: 2014 to 2019. Adrian Werner, Flinders Uni.	WITHDRAWN: Hydrogeophysical approach towards SWI investigation in Keep river, NT. Klara Steklova, Geoscience Australia.	The importance of quality assurance and quality control for making the most out of hydrogeochemistry data. Ivan Schroder, Geoscience Australia.
12:30	Networking Lunch Sponsored by AGE Consultants				
	Boulevard Auditorium	Boulevard B1	Boulevard B2	Boulevard B3	Boulevard Room
13:15 - 15:15	Data Assimilation & Metrics for Models in Decision Support Roles	Climate Change/Variability Impacts and Water Security in Tropical & Arid Climates	Stygofauna & Microbiology	Intermittent/Ephemeral Drainage Systems	Tracers & Isotopes
13:15	A novel approach to collating and mapping groundwater recharge and aquifer property data to communicate variability from temporal and spatial scales. Andrew Barker, CDM Smith.	Mapping groundwater trends across Australia: Visualising the impact of drought. John Sharples, BoM.	Keynote: What happens to groundwater ecosystems when you take out the groundwater? Grant Hose, Macquarie Uni.	Are all rivers equal? Attitudes towards intermittent and ephemeral rivers in Australia, the UK and USA. Catherine Leigh, QUT.	Multi-tracer characterisation of the Cambrian Limestone Aquifer in the Beetaloo Sub-Basin. Alec Deslandes, CSIRO.
13:30	Data Fusion - merging model results with telemetry data to obtain design water levels, real-time monitoring and virtual sensors. Eduardo DeSousa, DHI.	Rationalisation of the Shepparton Irrigation Region public groundwater pump network - an adaptive response to a changing climate. Simon Cowan, Goulburn-Murray Rural Water Corp.		Identification and systematic prioritisation of surface water refuges to sustain freshwater biodiversity in eastern Australian intermittent stream networks. Mark Kennard, Griffith Uni.	Characterising changes in isotope hydrochemistry through time in a high use, arid-zone aquifer. Stephen Hostetter, Geoscience Australia.
13:45	On regional groundwater models as tools for informing management: An example of effective and efficient decision-support modelling (Wairarapa Valley; NZ). Brioch Hemmings, GNS Science.	Climate change adaptation: Protecting and expanding freshwater lens resources during land reclamation on low lying islands. Phil Hayes, Uni of QLD.	What's going on down (under) there? Unravelling biochemical flows under differential rainfall periods in a Western Australian calcrete. Mattia Sacco, Curtin Uni.	Use of multiple methods for studying recharge/discharge processes in regulated and unregulated reaches of the Dumaresq River. Dawit Berhane, Dept Env. & Science.	Understanding the sources and transit times of water sustaining streamflow in upland catchments. Ian Cartwright, Monash Uni.
14:00	Is steady state model calibration sufficient? Catherine Moore, CSIRO.	Application of MAR technology in Sri Lanka. Craig Flavel, Water Technology.	Can metabarcoding provide insights into trophic web interactions underground: a case study from the Yilgarn region of Western Australia. Nicole White, Curtin Uni.	The canary or the coalmine? Isotopic evidence of drying climate versus groundwater outflow as the cause for recent losses from Thirlmere Lakes, NSW. Mark Peterson, ANSTO.	Use of environmental tracers in environmental impact assessments for CSG & large coal mining developments. Kelly Strike, Dept Env. & Energy.
14:15	The full Monty for a regional-scale CSG groundwater impact model. Daan Herckenrath, OGIA.	Impact of climate change on the groundwater resources of India. Need of an appropriate adaptation strategy. Shadananan Nair Krishnapillai, CEREM.	All creatures great and small - a case study of stygofauna from an agricultural field site in Canterbury, New Zealand. Annette Bolton, IESR.	Streamflow generation mechanisms for an intermittent-ephemeral catchment in South Australia: a modelling approach. Karina Gutierrez-Jurado, Flinders Uni.	Using environmental tracers to quantify recharge mechanisms and variation in the semi-arid Pilbara region. James McCallum, Uni of WA.
14:30	PEST ++ IES and cloud computing: case study of a numerically challenging mine-closure model with rigorous uncertainty analysis, within the confines of a realistic consulting timeframe and budget. Kevin Hayley, Groundwater Solutions.	Future scenarios for reliability of community groundwater supplies in East Sumba, Indonesia: a karst savanna case study. Penelope Godwin, ANU.	Biological exchanges within the hyporheic zone: the importance of maintaining connectivity between surface and groundwaters. Kathryn Korbel, Macquarie Uni.	Geological controls on the spatial variability of ephemeral flow regimes. Josephine Searle, Dept Water & Env. Regulation.	A golden age for environmental tracers in Australia. Sebastien Lamontagne, CSIRO.
14:45	Stochastic knowledge integration for groundwater exploration in data scarce areas. Luk Peeters, CSIRO.	Rising water levels in the Burdekin groundwater management area. Amy Becke, Dept Natural Resources, Mines & Energy.	Development of a Groundwater Health Index. Louise Weaver, ESR.	Directly measured soil evaporative losses in the semiarid Pilbara. Grzegorz Skrzypek, Uni of WA.	Partitioned mantle degassing through the Australian plate delineated by noble gas data. Karl Karlson, Uni of New Mexico.
15:00	Spatial data mapping for reduction of uncertainty in groundwater modelling. Xuyan Wang, KCB.	Climate resilient urban water security by recharge techniques. Jagannatha Venkataramaiah, Jain Uni.	Novel Bioremediation strategies for nitrogen contaminated groundwater. Justin Morrissy, RMIT.	Water velocity and groundwater upwelling control benthic algal biomass in an intermittent tropical river: implications for water resource development. Ryan Burrows, Griffith Uni.	Use of stable and radiogenic isotopes in characterising wastewater derived impacts in Urban and Peri-Urban Areas. William McCance, RMIT.
15:15	Afternoon Tea Sponsored by SkyTEM				
15:45	Poster Session				
	Boulevard Auditorium	Boulevard B1	Boulevard B2	Boulevard B3	Boulevard Room
16:30 - 17:30	Data Assimilation & Metrics for Models in Decision Support Roles	Water Quality Management	Regulation, Policies & Management	Irrigation & Groundwater Protection	Fractured Rock Hydrogeology Systems
16:30	PEST and Management models: the highs and lows of automated calibration for groundwater management. Kittiya Bushaway, Dept Env. & Water.	Keynote: Groundwater hydrochemistry data delivery in Australian Groundwater Explorer: the value of multi-agency collaboration for nationally consistent data. Eloise Nation, BoM.	Groundwater management at the localised scale in the Murray-Darling Basin. Tariq Rana, MDBA.	Targeted field investigations are fundamental to underpin future water planning and investment in northern Australia: insights from the Northern Australia Water Resource Assessment. Andrew Taylor, CSIRO.	To connect or not to connect: the importance of hydrogeological conceptualisation for groundwater impact assessments. Angela Bush, AGE.
16:45	Putting the geo back into hydrogeology: Geological uncertainty propagation impact on groundwater modelling. Evren Pakyuz-Charrier, Intrepid Geophysics.	Retrospective on 10 years of risk-based guidelines for managed aquifer recharge. Peter Dillon, CSIRO / Flinders Uni / WGA.	NSW groundwater team is on the move and looking ahead, getting ready for upcoming needs. Fabienne d'Hautefeuille, NSW Dept of Industry.	Lower Burdekin Water Management Challenges of a Large Aquifer Replenishment Scheme. David Sartori, Lower Burdekin Water.	Making sense of hydraulic tests in fractured rock. Todd Hamilton, KCB.
17:00	Does geophysics really reduce groundwater model uncertainty? Insights from a synthetic study on the benefits of including EM and SNMR in groundwater modelling. Chris Li, CSIRO.	Using aquifers for natural treatment: nutrient removal from urban stormwater during ASR. Karen Barry, CSIRO.	Murray-Darling Basin groundwater strategic planning beyond 2019. Kristanne Mahony, MDBA.	Management and optimisation of agricultural irrigation systems by using digital twins in the framework of a digital physical system (DPS). Douglas Graham, DHI.	The use of proxy data for hydrogeological site characterization. Todd Hamilton, KCB.

17:15	Assimilating remote sensing evapotranspiration into coupled groundwater - unsaturated zone model. Simone Gelsinari, Monash Uni.	Interaction between groundwater salinity and hydraulic head at an underground storage cavern, Port Botany, New South Wales. Ellen Kwantes, WSP.	The costs and benefits of managed aquifer recharge. Andrew Ross, ANU.	From investigation to legislation - Lakeland groundwater management, Cape York Peninsula, Australia case study. Glynis Orr, Dept Natural Resources, Mines & Energy.	Hydrogeological characterisation of volcanic-sedimentary rock aquifer within southern Johor Bahru, Malaysia. Vynotndni Rathinasamy, Uni Teknologi Malaysia.
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18:30 Conference Dinner & Entertainment (Greek Club, South Brisbane) Sponsored by The University of Queensland Centre for Natural Gas

Day 3 Wednesday 27 November 2019

7:30 Exhibition / Registrations Open

8:00 Panel: Groundwater and Infrastructure Panel. Sponsored by EMM

9:00 Panel: Groundwater in Mining and Resources. Sponsored by GHD

10:00 Morning Tea Sponsored by Golder

Boulevard Auditorium Boulevard B1 Boulevard B2 Boulevard B3 Boulevard Room

10:30 - 12:30 Large Scale Multidisciplinary Studies to Support Resources Development in Australia: Groundwater Perspective
Groundwater & Agriculture Regulation, Policies & Management Regional Scale Studies Groundwater Settings/Systems

10:30 Deliberating about new gas markets in Australia: Exploring potential tight and shale gas industry development with regional stakeholders. Justine Lacey, CSIRO. The economics of integrating irrigation water sourced from a regional-scale groundwater system into an existing beef enterprise in the semi-arid tropics. Cuan Petheram, CSIRO. Setting the Strategic Direction for the Great Artesian Basin. Christopher Biesaga, Dept of Agriculture. Keynote: Hydrogeology of inland basins in NW China. Lih Yin, China Geological Survey. Continental scale hydrogeochemistry: Groundwater system processes and prediction of groundwater chemistry through water-rock interactions across Australia. Luke Wallace, Geoscience Australia.

10:45 How structural geology and environmental tracers can support groundwater impact assessments in large sedimentary basins. Jorge Martinez, CSIRO. The role of Managed Aquifer Recharge (MAR) in developing Northern Territory agriculture. Louise Lennon, Jacobs. Can we model management? Emma White, Uni of Melbourne. NSW Great Artesian Basin Bore Survey and Pressure Prediction Projects. Andrew McCallum, NSW Department of Industry. Can we use Deep Formation Water in Basalt for CO2 Disposal? Meghalim Phukan, Uni of Melbourne.

11:00 The Decision Support Groundwater Modelling Project: An Industry Perspective. Keith Brown, Rio Tinto. Water bore siting using farm-scale electrical resistivity mapping. David Allen, Groundwater Imaging. Groundwater regulation-governance-management nexus; a case study from Punjab, Pakistan. Ghulam Hassan, Irrigation Research Institute. Building a regional geological model for hydrogeological applications. Anna Bui Xuan Hy, Dept Natural Resources & Mines. Conceptualisation of groundwater systems in the Peel Region (WA) using multiple lines of evidence. Olga Barron, CSIRO.

11:15 Inter-disciplinary, multi-physics, multi-scale approaches for groundwater system investigations and hydrogeological assessments in Northern Australia: The Exploring for the Future Groundwater Program. Richard Blewett, Geoscience Australia. Understanding risk in order to manage it. Diana Mathers, Foundation for Arable Research. How to make a quantum leap for the hydrogeological profession in Australia: the case for Groundwater Guidelines and Codes of Practice. Richard Evans, Jacobs. Recommendation for groundwater management for lower Indus basin: A case study of Sukkur barrage left bank command. Waqas Ahmed, Mehran Uni of Engineering & Technology. Hydrogeology of the Elang Copper Deposit, Sumbawa Island, Indonesia. Toddy Samuel, Geotechnical & Environmental Services Indonesia.

11:30 Determining aquifer properties using Surface Nuclear Magnetic Resonance (SNMR) data: the Paleozoic Bonaparte Basin, East Kimberley, Australia. Neil Symington, Geoscience Australia. Transforming agriculture in the Pilbara through river and groundwater-fed irrigation. Kate Dowsley, Jacobs. Groundwater Quality Management and Environmental Regulation in Queensland. Sonia Claus, Dept Env. & Science. Monitoring groundwater extraction impacts within multi-level sandstone aquifers near World Heritage Blue Mountains National Park, west of Sydney. Richard Green, NSW Dept of Industry. Investigating the Source Waters of the Doongmabulla Spring Complex. Robin Keegan-Treloar, Flinders Uni.

11:45 Groundwater system characterisation and baselining - the Isa Geological and Bioregional Assessment region, QLD Australia. Sam Buchanan, Geoscience Australia. Estimation of Water Balance of Lower Bari Doab Canal (LBDC) Command Area, Pakistan: A Modelling Approach. Luban Anjum, Uni of Agriculture, Faisalabad. Evaluation of Community Centric Aquifer Management Strategies in Coastal Regions of Gujarat State, India. Yogendrashinh Jadjeja, Arid Communities & Technologies. Classification of springs derived from volcanic aquifers of the Nulla Basalt Province, north Queensland. Eamon Lai, Geoscience Australia. Conjoint use of hydraulic head and groundwater age data to detect hydrogeologic barriers. Sarah Marshall, Flinders Uni.

12:00 The role of communications in building collaborative inquiry: Reflections from a complex groundwater project. Kanza Javad, Ecoseal. Climate Resilient and Sustainable Water Resources Management in North-West Region of Bangladesh. Tarikul Islam, IWM. Western Australia's State Groundwater Investigation Program - a holistic prioritised approach to delivering evidence-based science for groundwater management. Sandie McHugh, Dept Water & Env. Regulation. Hydrogeological characterisation of faults in the Surat Basin. Gerhard Schoning, Dept Natural Resources Mines & Energy. Using appropriate methods to understand groundwater recharge: a case study in semi-arid areas. Shovon Barua, Monash Uni.

12:15 New approaches using geoscience and satellite data to remotely assess groundwater storage changes in the Great Artesian Basin for improved decision-making. Baskaran Sundaram, Geoscience Australia. Impact and Causes of Groundwater Depletion with its Remedial Measures in Irrigated Area of Bari Doab. Muhammad Arain, IWASRI. Metered groundwater extractions for stock and domestic use in the Surat Basin, Queensland. Louisa Rochford, Uni of QLD. WITHDRAWN: Rapid national hydrogeology assessment framework for groundwater prospectivity and vulnerability: Timor-Leste case study. Luke Wallace, Geoscience Australia. Understanding groundwater processes in New Zealand aquifers. Uwe Morgenstern, GNS Science.

12:30 Networking Lunch Sponsored by AGE Consultants

Boulevard Auditorium Boulevard B1 Boulevard B2 Boulevard B3 Boulevard Room

13:15 - 15:45 Groundwater Studies to Solve Geotechnical Issues Novel Investigation Technique Emerging Challenges in Mining & Groundwater Regional Scale Studies Groundwater in the Resources Sector / Alluvial Systems & Vadose Zone Hydrogeology

13:15 Groundwater Studies to Solve Geotechnical Problems. Duncan Irvine, AGE. Keynote: Tidal subsurface analysis using Earth and atmospheric tides: a step forward in the characterisation of the subsurface. Martin Andersen, UNSW. Geotechnical impacts on connective fracturing height above a coal longwall. Brett Poulsen, CSIRO. Keynote: Nested groundwater flow simulated through a fully coupled modelling approach. Yueqing Xie, Nanjing Uni. Instrumented column testing and numerical modelling of evaporation induced salt accumulation and precipitation from underlying bauxite residue to soil cover under natural weather conditions. Chenming Zhang, Uni of QLD.

13:30 Aquifer drawdown and tunnel blast zone permeability changes in a basalt aquifer. Stefan Charteris, GHD. Influence of automation methodology and fitting with error corrections in HydroRate. Gideon Steyl, ATC Williams. Securing a mine water supply in a challenging environment- Gippsland Basin, Victoria. Joel Georgiou, EMM. Underground technologies prefeasibility study: sand dam and sub-surface dam potential in QLD. James Hansen, QLD Gov. From Fact to Legend to Fact Alluvial Sedimentation in Magela Creek, Northern Territory. Peter Baker, Office of Water Science.

13:45 Predicting Tunnel Inflows - Statistical Models for Packer Test Information. Harry Asche, Aurecon. A revised packer test method for determining hydraulic conductivity. Stephen Parsons, Jacobs. Overcoming groundwater scarcity to meet mine water supply requirements in Central NSW. Kate Holder, EMM. Chasing Helium: Mantle-to-Surface Connections to Water Quality and Geomicrobiology. Laura Crossey, Uni of New Mexico. The Application of Horizontal Dewatering in the Pilbara - The Solomon Trial. Chris Oppenheim, Fortescue Metals Group.

14:00 Hydrogeological lessons learnt from major tunnelling projects in hard rock in Australia. Richard Evans, Jacobs. Tracking Footprint of Evapotranspiration in Stream Flow Hydrographs. Ali Shokri, Uni of Waikato. Aquifer recharge in a mining operations water management strategy. Kerstin Brauns, Mandalay Resources. WITHDRAWN: Effect of basement leakage in contrast with the common no-flow base conditions in 2D Tôhian flow. Andrew Love, Flinders Uni. Subsurface pressure waves: A kinematic explanation to rapid vadose-zone water movement to alluvial systems. Todd Rasmussen, Uni of Georgia.

14:15 Case Study of Groundwater Inflow Control into a Basement Excavation in a Fractured Rock Aquifer in Parramatta, NSW. Kumara Wanayalage, Coffey. Depth-resolved groundwater chemistry by longitudinal sampling of ambient and pumped flows within long-screened and open borehole wells. David Poulsen, Flinders Uni. Quantifying surface water losses from mining-subsided catchments. Maria Dubikova, WaterNSW. Integrated Modelling using MIKE SHE for Water Resources Assessment in the Northwest Region of Bangladesh. Monirul Islam, Institute of Water Modelling. WOMBAT (Water Optimisation Modelling Business Analysis Tool). Ji Zhang, DHI.

14:30	Horizontal drain design for slope drainage. Ross Best, Coffey.	Infiltration Characterization of Non-Newtonian Fluids through Cold Porous Media for Investigating Remediation of Adsorbed Contaminants. Debasmitta Misra, Uni of Alaska Fairbanks.	Groundwater modelling around underground coal mines. Andy Wilkins, CSIRO.	Paired use of low-fidelity surrogate models with integrated water resources system simulators for predictive analysis of water balance and climate impacts. Sreekanth Janardhanan, CSIRO.	Predicting baseflow provenance: The use of tritium to quantify groundwater discharge to streams. Richard Cresswell, Eco Logical Australia.
14:45	Influence of groundwater on embankments, a mechanism for change and TSF management. Gideon Steyl, ATC Williams.	Integrating web and mobile applications for improved groundwater management in a developing world context. Mobushir Khan, Swinburne Uni of Technology.	Returning surplus water to ground for future beneficial use: An approach to leading practice mine water management in the Pilbara, Western Australia. Jonathan Hanna, BHP.	Assessing the Groundwater Quality of the Coastal Aquifers of a Vulnerable Delta: A Case Study of the Sundarban Biosphere Reserve, India. Tuhin Bhadra, Adamas Uni.	Surveillance of borehole operations using distributed temperature sensing. Ludovic Ricard, CSIRO.
15:00	Use of geophysical techniques to investigate seepage around tailings dam embankments. Chris Taylor, ATC Williams.	SAR imagery applications to groundwater science in Australia. Pascal Castellazzi, CSIRO.	Regional application of hydrogeochemistry in northern Australia for new insights into mineral prospectivity. Ivan Schroder, Geoscience Australia.	Characterization of a regional aquifer system using 3D modelling: new insights to the geology and hydrogeology of the great barrier reef catchment, Australia. Haile Shishaye, Southern Cross Uni.	Estimations of dissolved methane concentrations from groundwater samples: an experimental and analytical assessment. Des Owen, Alluvium (presenting for Uni of QLD)
15:15	Hydrogeological assessments to support the design and groundwater impact assessments for drained motorway tunnels beneath Sydney, NSW. Graham Hawkes, Arcadis.	A novel PIV image processing method for the measurement of preferential flow velocity through rough-walled fractures. Claudia Cherubini, Uni of Ferrara.	Integrating Surplus and Potable Water Management in the Pilbara. Mal McGivern, BHP.	The Far North Prescribed Wells Area Groundwater Model. Mark Keppel, SA Gov.	Under reaming of deep injection bores to improve performance. Lauren Helm, Origin Energy / Ryan Morris, RDM Hydro.
15:30	Groundwater impacts assessment and minimisation for rail trenches in a sensitive location. Tony Cauchi, GHD.	Monitor More Groundwater Bore levels with cheaper sensors and cheaper Micro Satellite Telemetry and 10 year battery packs. Matt Saunders, Unidata.	An approach to development of monitoring triggers at mine sites. Nequita Coetzee, KCB.	Australian continental hydrogeochemistry: providing baselines for lithology mapping, health, agriculture and opening new areas for mineral exploration. Nathan Reid, CSIRO.	Predicting aquifer volume and groundwater quality in the Myalup region using AEM. Aaron Davis, CSIRO.
15:45	Afternoon Tea Sponsored by SkyTEM				
16:15	Plenary: Groundwater for a water secure world - leaving no one behind. Shahbaz Khan, Director, UNESCO Jakarta.				
16:35	Plenary: Make hydrogeology great again. Anthony Lane, Technical Director - Land Quality & Remediation and Hydrogeology, SLR Consulting Australia.				
16:55	Plenary: Groundwater forever – water for life. Jane Coram, Land and Water Director, CSIRO.				
17:15	Oral and Poster Awards Ceremony Sponsored by SLR Consulting (Career Scientist Awards) and CSIRO (Early Career Awards)				
17:30	Official Conference Close				

Monday Posters

A finite element 3D model to assess the impact of environmental changes on the coastal groundwater aquifer in Nauru. Louis Bouchet, SLR.
A GIS based graph representation for fault and fracture characterisation. Ulrich Kelka, CSIRO.
An analytical model for predicting evaporation rates from bare soils. Xiaocheng Liu, Uni of QLD.
Are heat tracers applicable to quantify groundwater-surface water interaction in a tidal wetland? Christian Anibas, UNSW.
Assessing risk to a coastal aquifer using a multi-model approach. Cameron Wood, Dept Env. & Water.
Closing the loop - delivering landholder supplied groundwater data to the community in CSG areas, Surat and Bowen basins, QLD. Tony Andresen, QLD Gov.
Complex interactions in modelling the floodplains of the Lower River Murray in South Australia. Juliette Woods, Dept Env & Water.
Effective groundwater monitoring of the Perth Superficial aquifer during a controlled CO ² release trial at Harvey, WA. Praveen Kumar Rachakonda, CSIRO.
Evaluation of unsaturated zone models coupling to MODFLOW for a more robust modelling of groundwater-vegetation interaction. Simone Gelsinari, CSIRO.
Field and numerical investigation of the evaporation induced unstable density flow within the tidal wetland system. Yue Liu, UQ.
GAB Springs Adaptive Management Plan. Lynn brake, UniSA.
Groundwater quality assessment and its driving factors. Qiuying Zhang, Chinese Research Academy of Environment Sciences.
How groundwater age relates to meandering history: insights from a simplified physical model. Guillaume Rongier, CSIRO.
How realistic are groundwater drawdown predictions? A quantitative evaluation of reported specific storage values. Wendy Timms, Deakin Uni.
Hydrochemical assessment and quality classification of the complex terminal Aquifer in the region of Oued Righ (Sahara Algerian). Aziza Hammadi, Uni of Batna.
Identifying GW-SW interactions and groundwater geochemistry in the Upper Murrumbidgee Catchment using surface water surveys. Sharon Gray, ANU.
Improving FEFLOW well boundary constraints using Theis-forward solution. Eduardo De Sousa, DHI.
Incorporating uncertainty in the design of a woodchip denitrifying bioreactor. Theo Sarris, Institute of Environmental Science and Research.
Losing condition or evaporation: Why the Thirlmere Lakes in NSW are falling dry? Christian Anibas, UNSW.
Machine learning emulation for reactive transport models. Xiayang Yu, CSIRO.
Modeling groundwater budget under increased anthropogenic pressure in the Modjo River catchment, Ethiopia. Nafyad Serre Kawo, Adama Science & Tech Uni.
Near real-time decision support insights with fully-integrated hydrologic models. Steven Berg, Aquanty.
Numerical modeling of surface water and groundwater interactions in the Stoney Creek Watershed, British Columbia. Yousef Beiraghdar, CSIRO.
Numerical modelling of tidal effect on contaminant transport in coastal aquifers. Congrui Li, The Uni of QLD.
Pore pressure modelling of pit slopes - the influence of drill holes. Todd Hamilton, KCB.
Porewater exchange drives solute export from a temperate mangrove wetland. Mahmood Sadat-Noori, UNSW.
Quantifying groundwater abstraction in the face of imperfect data. Helen Rutter, Aqualinc Research.
Sediment transport in porous media due to groundwater discharge. Amir Jazayeri, Flinders Uni.
Simulation of contaminant capture by an hydraulic containment system. Tingting Liu, SLR.
Simulation of the efficiency of MAR schemes to support sustainable development of groundwater resources. Panagiotis Giannouloupoulos, Pennington Scott.
Snowy 2.0: pumped hydro-electric power in an alpine groundwater environment. Doug Weatherill, EMM Consulting.
Taking the wonky out of Wonky Holes. Leon Leach, Dept Env. & Science.
The benefits of a multidisciplinary team model for groundwater-surface water investigations, Thirlmere Lakes, NSW. Kirsten Cowley, Office of Env. & Heritage.
The cumulative impact of potential groundwater extraction under the Murray-Darling Basin Plan. Glen Walker, Grounded in Water.
The impact of groundwater discharge on nutrients and carbon cycles in a freshwater lake. Helen Rutledge, UNSW.
The role of shallow groundwater as a nutrient export pathway under subsurface drained pastoral agriculture. Aldrin Rivas, Lincoln Agritech.
Using geochemistry to understand sources of groundwater inflow to intermittent rivers: the upper Wimmera catchment, southeast Australia. Zibo Zhou, Monash Uni.

Tuesday Posters

14 C-dating model for groundwater affected by CO ₂ inputs from deep underground formations. Tao Wang, Uni of QLD.
1D groundwater elevation prediction model. Stefan Charteris, GHD.
A comparison of methods for the numerical simulation of the unsaturated zone in the SA River Murray floodplain. Behzad Gitijamal, Flinders Uni.
A novel approach to characterising aquifer properties using pressure transducers in privately owned bores in SE QLD. Lisa Gurieff, QUT.
A different hydrogeochemical investigation utilising Pb and Sr isotopes in the vicinity of the Century Pb-Zn Mine, NW QLD. Candan Desem, The Uni of Melb.
A simplified methodology for uncertainty quantification in dewatering modelling of an operational mine. Ji Zhang, Rio Tinto.
An overview of the geological and bioregional assessments program. Mitchell Baskys - Dept Env & Energy.
Aquifer & aquitard permeability changes following earthquakes: insight from the water level response to earth tides and atmospheric pressure. Hui Zhang, China Uni.
Assessing seawater intrusion vulnerability to sea level rise in Christchurch, New Zealand using GIS-based methods. Irene Setiawan, NCGRT.

Can you have an in-pit tailings storage with a permanent water cover in Australia? Andrea Madden, WSP.

Case study of the application of EM34 geophysical surveys in assessing fresh groundwater potential in Onotoa atoll, Republic of Kiribati. Anesh Kumar, SPC.

Co-transport of the F-RNA coliphage MS2 & graphene oxide nanoparticles in saturated limestone-packed columns. Amirhosein Ramazanpour Esfahani, Flinders Uni.

Design of a simple tool for automated groundwater level forecasting. Andrew Dark, Aqualinc Research.

Diurnal water level fluctuation in pressure logger data: an evapotranspiration response or a pressure transducer artefact? Harald Hofmann, Uni of QLD.

Environmental watering requirements in the context of groundwater under the Murray-Darling Basin Plan. Tariq Rana, MDBA.

Evaluating the presence of chemotaxic microbes at a hydrocarbon contaminated site undergoing remediation. Cameron Murphy, CSIRO.

Field to desktop integrated water data management solution. Chris Jones, Arrow Energy.

Groundwater chemistry and microbiology in a wet tropics agricultural catchment. Jim Stanley, QUT.

Groundwater monitoring programs in mining- adaptive management considerations. Madelyn Harp, Fortescue Metals Group.

Guidelines for the application of adaptive management to groundwater contexts. Jason Thomann, Flinders Uni.

Handpump borehole functionality in rural Africa: using tracers to evaluate GW residence times, water quality risk & supply in SUA. Eddie Banks, Flinders Uni.

Helium-4 as a tool to assess sequences of hydrogeochemical reactions. Alec Deslandes, CSIRO.

Hydrogeological Bayesian hypothesis testing through trans-dimensional sampling of a stochastic water balance model. Luk Peeters - CSIRO Land and Water

Landscape patterning of riparian vegetation across a novel gradient of surface water persistence and groundwater proximity. Neil Pettit, Uni of WA.

Lessons learnt in shallow groundwater monitoring in urban areas: the Christchurch experience. Helen Rutter, Aqualinc Research Ltd.

Mining and the role of NSW Water Legislation in managing impact change. John Williams, NSW Dept of Industry.

Multi-isotope analysis for better understanding of GW recharge, flow-paths & SW interactions of McBride/Nulla Basalt Prov. Luke Wallace, Geoscience Australia.

New South Wales Great Artesian Basin bore survey projects. Madhwan Keshwan. NSW Department of Industries.

Northern Australia Hydrogeochemical Survey: groundwater as a tool for mineral & hydrocarbon prospectivity and env. baselines. Luke Wallace, Geoscience Australia.

Offshore fresh groundwater in New Zealand: a review. Leanne Morgan, Uni. of Canterbury.

Planning water resilience, by using an MAR approach in South Africa. Hugo Marais, KCB.

Protection schedule in Daihai Lake Basin, Xia Jiang, Chinese Research Academy of Environmental Sciences.

Recommendation for groundwater management for lower Indus basin: a case study of Sukkur barrage left bank command. Waqas Ahmed, Mehran Uni.

Reporting and compliance of groundwater use under the Murray-Darling Basin Plan. Rebecca Nixon, MDBA.

Review of methodologies to extract and measure noble gases in rock fluid inclusions. Axel Suckow, Punjehi Crane, CSIRO.

Reviewing three years of measurements of all stable Noble Gases in groundwater. Punjehi Crane, CSIRO.

Spatial and temporal stable isotope variability within Alpine Streams of the Snowy Mountains. Reuben Parige, ANU.

Stable isotopic and water quality characteristics of GW systems associated with methane pathways in Surat/Bowen Basins. Tikiri Tennakoon, DNRME.

Strontium isotopes as tracers to assess inter-aquifer and GW-SW exchanges in sedimentary basins. Matthias Raiber, CSIRO.

Towards a consistent approach to groundwater resource assessments in Victoria. Greg Hoxley, Jacobs.

Using 87 Sr/86 Sr ratios in groundwater to assess inter-aquifer connectivity. Christopher Harris-Pascal, Geoscience Australia.