# List of all accepted papers for IMWA 2012, arranged as per the themes, includes posters (indicated), no particular order, only presenting author listed.

# Keynotes

Bankable Mine Inflow and Impact Determination. **Adrian Brown**

Key Issues/challenges to the industry including water supply, AMD and mine dewatering and DMP’s (Department of Mines and Petroleum, WA) expectation. **Phil Gorey**

Water in mining challenges for the Australian and international mining industry. **David Jones**

TITLE **Andrew Moser**

TITLE **Pandey Sanjeev**

Maximising use of waters produced by mining. **Martin Schultze**

Mine water management in variable climate regimes. **Sue Vink**

**TITLE Paul Vogel**

# Protecting water values

## Coal mines - managing groundwater and impacts for open pit and underground mines

Inrush and mine inundation - A real threat to Australian coal mines? **Detlef Bringemeier**

Overview of Managing Groundwater and Impacts at Loy Yang Open Cut. **Genevieve Foley**

Simulation of Water Balance in Dump Slopes of Open-Cast Mining Pits for Geo Mechanical Stability Prognosis **Peter-Wolfgang Graeber**

Predicting the acid production potential of Mpumalanga coal mines. **Gideon Steyl**

Experience-based approaches to coal mine groundwater evaluation in Kalimantan, Indonesia. **John Waterhouse**

## Uranium mining and water

Dewatering of an underground uranium mine in Saskatchewan, Canada. **Rashid Bashir**

Conclusions From Using an Active Production Well for Mine Drawdown Compliance. **Gabor Bekesi**

Improved Calculation of Groundwater Heads for Environmental Management in the Great Artesian Basin, Australia. **Gabor Bekesi**

Remediation strategy for a waste rock dump at a former uranium leach operation. **Marcua Frenzel**

Review of solute selection for water quality and bioaccumulation monitoring at a Northern Australian uranium mine. **Alison Frostick**

Characterisation of hydrogeological conditions and solute transport pathways in the region of the Ranger Uranium Mine tailings storage facility, Northern Territory, Australia. **Alan Puhalovich**

One- and three-dimensional modelling of sub-surface solute transport processes in the region of Ranger Uranium Mine´s tailings storage facility, Northern Territory, Australia. **Alan Puhalovich**

## Groundwater and coal seam gas developments

Development of a management tool to optimize the beneficial reuse of associated (produced) water in eastern Australia. **Ryan Jakubowski**

Hydrochemical compatibility assessments of aquifer injection of treated coal seam gas water into Surat Basin Aquifers. **Matt Landers**

Leading practices for assessing the integrity of confining strata: application to mining and coal-seam gas extraction. **Wendy Timms**

A South African Perspective on Shale Gas Hydraulic Fracturing. **Danie Vermeulen**

## Mine water and mine closure

Deriving Surface Water Quality Closure Criteria for Natural Waterbodies adjacent to an Australian Uranium Mine. **Chris Humphrey**

Pit lakes as evaporative ‘terminal’ sinks: an approach to best available practice mine closure. **Clint McCullough**

The importance of having an agreed plan. **Jamie Robertson**

## Acid mine drainage - processes and treatment

Research and Development on Passive Mine Drainage Treatment using Anaerobic Bioreactor. **Hisatoshi Furuya**

Application of a jet loop reactor to enhance removal of sulphates from mine water using coal fly ash, lime and aluminium hydroxide. **Wilson Mugera Gitari**

Treatment Plant to Allow Mine Water Release, Morro Da Mina, Brazil. **Sam Hawker**

Review of sulphate reduction based bioprocesses for acid mine drainage treatment and metals recovery. **Anna Kaksonen**

Acid metalliferous leaching of a mineral sands deposit: From field to laboratory. **Matt Landers**

Mineralogical and geochemical studies on Pyrite and Chalcopyrite oxidations in the Sarcheshmeh copper mine tailings. **Sajjad Jannesar Malakooti**

A novel approach to exploit indigenous mining algal-microbes in a photo-rotating biological contactor for heavy metal removal from acid mine drainage. **Sanaz Orandi**

Biological sulphate reduction of acid mine drainage using primary sewage sludge. **Johann Poinapen**

Oxidation process and hydrology of tailings dams: Implication for Acid Mine Drainage from TSFs management -The Witwatersrand experience, South Africa. **Bisrat Yibas**

Stream sediment geochemistry of the Olifants Catchment, South Africa: Implication for Acid Mine Drainage. **Robert Netshitungulwana**

Approaches to predetermine the variables affecting the efficiency for the design of mining effluents and acidic drainage treatment systems. **Nora Hilda Panos Nora**

Liming of acid surface waters: Effect of water constituents and material impurities on calcite dissolution kinetics. **Mandy Schipek**

## Abandoned mine issues

The Collie Pit Lake District, Western Australia: An Overview. **Mark Lund** (Session Plenary)

Role of private sector and national policy for rehabilitation of abandoned mines in Portugal. **Hossain Md Anawar**

Antimony contamination of surface water at abandoned Sardinian mine sites. **Rosa Cidu**

Combined numerical and analytical modelling as a means to assess closure options for open-pit mines, Pilbara region. **Shawan Dogramaci**

Numerical Groundwater Flow Modeling at the historic Rum Jungle Mine Site, northern Australia. **Paul Ferguson**

Revegetation of historic acidic mine waste with *Agrostis capillaris* – Remediation strategy. **Stefan Karlsson**

The status and implications of the AMD legacy facing South Africa. **Mosidi Makgae**

Dispersion of Heavy Metals at Louis Moore Gold Tailings Dam, Limpopo Province, South Africa. **Jason Samuel Ogola**

Keeping the lid on it. **Jamie Robertson**

Best left to leach? Geochemical Understanding of Waste Tips at Abandoned Metal Mines. **Alison Turner**

# Conserving mine water resources

## Site-wide mine water management

Exemplar minesite water management A necessity in an era of climatic variability. **Geoff Pettifer** (Session Plenary)

Advances in Hydrogeologic Testing of Mineral Exploration Boreholes. **Joel Adams**

Is Water Conservation and Water Demand Management a real option? **Fanie Both**

Shallow anthropogenic aquifers may provide a solution to reduce nitrate in dirty mine water? **Fanie Both**

Reducing Capital Expenditure Using Probabilistic Simulation for Water Management. **Ari Craven**

Hydraulic performance of liners in tailings management and heap leach facilities **Gareth Digges La Touche**

Forensic Analysis of Mine Water Impacts. **Chris Gimber**

Mt Leyshon Gold Mine Automated Monitoring Network: Meeting Environmental and Social Commitments. **Rory Haymont**

What is a representative pan factor value for the eastern Pilbara? **Aditya Kumar Jha**

Management of mine and tailings seepage water discharge in an intensively used watershed. **Thomas Metschies**

Evaluation of the applicability of the passive treatment for the management of polluted mine water in the Witwatersrand Goldfields, South Africa. **Ntshengedzeni Obed NO Novhe** (Poster)

The Future of Water in the Mining Industry. **Jerry Rowe**

Water Security and Engineering Innovation for the Southdown Project. **Daniel Visser**

## Mine water and climate change

Climate science in mine water system design. **Jennifer Ahern**

Modelling the impact of a possible climate change on the water balance in post-mining areas. **Rene Blankenburg**

The Impact of Climate Change on a Mine Water Source. **Conor O'Hara**

Heat Storage Potential of a Flooded Mine in the Siegerland-Wied District, Germany. **Georg Wieber**

## Geochemistry of mine waters

Geochemical Assessment of Mineral Waste through the Mine Life Cycle. **Rosalind Green** (Session Plenary)

Groundwater modelling meets goechemistry: Building the bridge between FEFLOW and PHREQC with IFMPhreeqc. **Eduardo Reckziegel De Sousa**

Zn-Al sulphate Layered Double Hydroxide for Mo uptake . **Franco Frau**

Revegetation of historic acidic mine waste with *Agrostis capillaris* - Impact on leachate composition in pot experiments **Stefan Karlsson**

A critical review of static geochemical test methods applied to mining wastes, including their applicability to field conditions. **Pierre Rousseau**

Getting rid of Chemical Analysis – Mine Water Management with Indicator Parameters. **Christian Wolkersdorfer**

# Maximising use of waters produced by mining

## Pit lakes

Water and mining issues for mine closure in Western Australia. **Xuan Nguyen** (Session Plenary)

Post-Closure Mining Pit Lake Water Quality Modelling. **David Dettrick**

Upper and lower concentration thresholds for bioremediation of Acid Mine Drainage using bulk organic substrates. **Naresh Radhakrishnan Kumar**

Riverine breach and subsequent decant of an acidic pit lake: evaluating the effects of riverine flow-through on lake stratification and chemistry. **Clint McCullough**

Pit Lake Modelling – The Total System Approach . **David Richers**

The Implications of redox conditions for the perpetual management of mine pit lakes. **Phillip Whittle**

## Mine dewatering - maximising value and minimising costs

Mine Dewatering and Depressurisation: Industry Experiences and Challenges. **Jon Hall** (Session Plenary)

Dewatering of Opencast Mines using Horizontal Wells. **Rene Blankenburg**

An alternative approach to managing dewatering in an open pit mine. **Keith Brown**

Mine of the Future™: The Automated Mine Dewatering Design Module of PBMO™. **Eddy Lim**

## Treatment and disposal of mine waters

Treatment and disposal of mine waters. **Jeff Taylor** (Session Plenary)

Removal of zinc and lead from a neutral mine water using iron tailings and iron oxyhydroxide coated iron tailings. **Mattias Backstrom**

Zero Discharge Desalination (ZDD) Technology - Achieving Maximum Water Recovery. **Brad Biagini**

Effective desorption of metals from loaded biomass using response surface methodology based on Box-Behnken design. **E Elvis Fosso-Kankeu**

The next step in the bioremediation of heavy metal polluted water: development of suitable microbial-sorbent. **E Elvis Fosso-Kankeu**

Concomitant removal of iron and NAPLs within a mine water treatment system. **Jennifer Geroni**

A Case Study of Underground Brine Disposal. **Terry Harck**

Ecotoxicology of actively treated mine waters. **Andrew Harford**

Ettringite Precipitation vs. Nano-Filtration for Efficient Sulphate Removal from Mine Water. **Eberhard Janneck**

Novel application of membrane distillation for acid and water recovery from mining waste waters. **Uchenna Kesieme**

Membrane based water and wastewater treatment solutions. **Tim Lilley**

Study on the mining influenced water and a possibility to extract copper metal from tailings deposition in Bor, Serbia. **Nobuyuki Masuda**

Treatment of acidic and neutral metal-laden mine waters with bone meal filters. **Lotta Sartz**

Novel Salt Extractor System for Salt Removal from Mine Water and Calcium Sulfate Removal on the International Space Station. **Benjamin Sparrow**

The impact of co-disposal of sulphate brines on a fly-ash dam, a study of the physical-chemical influence on drainage patterns. **Gideon Steyl**

Strategies to reduce AMD liability treatment costs at Stockton Coal Mine, New Zealand. **David Thomas**

# Posters

Former Pit Mine Dive Parks. **Peter Buzzacott**

Influence of Acid Mine Drainage on River Water Quality in the Vicinity of the Osamu Utsumi Uranium Mine, Caldas-Minas Gerais, Brazil. **Carlos Alberto de Carvalho Filho**

Passive removal of iron at pH 3. **Kay Florence**

Seawater Desalination of the Chilean Coast for Water Manganese and Vanadium Uptake by *Cynodon Dactylon* grass species: A Case study in New Union Gold Mine Tailings, Limpopo, South Africa. **Jabulani Gumbo**

Supply to the Mining Industry. **Frans Knops**

Investigation of the Quality of Water Samples in the Entrance and effluents from the Sarcheshmeh Copper Mine Tailings, Kerman, Iran. **Sajjad Jannesar Malakooti**

Optimisation of a floating sulphur biofilm reactor in a passive acid mine drainage (AMD) treatment system. **Neehal Mooruth**

Treatment of Acid Mine Drainage (AMD) Using Iron Oxides. **James Navratil**

Removal of Vanadium from Neutralized Acid Mine Drainage (AMD) by Adsorption to Saw Dust. **Viktor Sjoberg**

An evaluation on coal mining safety above high pressure confined aquifers in a deep coalmine. **Wanghua Sui**

Current tailing dam management practice - a sustainable alternative. **Gary Thorne**

Evaluating the environmental impacts after the closure of mining activities, using remote sensing methods. The case study of Aliveri mine area. **Eleni Losif Vasileiou**