

**Mine Subsidence
Technological Society** 
11th Conference on Mine Subsidence
Subsidence Engineering - from Art to Science
1 - 3 May 2022, Pokolbin NSW

Conference topics, papers and authors

The conference theme is Subsidence Engineering from Art to Science and the program of papers to be presented includes case studies and discussions around recent developments in mine subsidence from technical specialists in the engineering and mining sectors, academics, regulators and government agencies.

The full list of topics, papers and authors is now available – see following pages...

Subsidence Engineering – from Art to Science

Keynote address by Ken Mills, SCT Operations

Over the last three decades, the development of three dimensional survey techniques, instrumentation systems for monitoring sub-surface ground movements and numerical modelling have greatly improved our ability to understand and interpret ground responses to underground mining.

Images showing the distribution of ground movements throughout the overburden strata once relied strongly on artistic interpretation, but these developments mean we now have the tools that enable us to measure and bring clarity to processes that were previously unimaginable.

In his keynote address, Ken will discuss the development of key understandings and shine a light along the path we might follow to enable subsidence engineering to be able to answer the more and more complex questions that the community is asking.

Venue and dates

The conference will be held at Voco Kirkton Park Hunter Valley at 336 Oakey Creek Road, Pokolbin, NSW, 2320. See details of this venue at: <https://huntervalley.vocohotels.com/>

The conference program will include:

- Sunday 1 May, 6pm to 8pm - pre-conference reception
 - Monday 2 May - morning and afternoon presentation sessions
 - Monday 2 May - conference dinner
 - Tuesday 3 May - morning and afternoon presentation sessions
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Register now!

Register online to book your place at the conference and to secure your accommodation:

<https://regodirectv2.com.au/msts2022>

Conference papers and authors

Keynote

- Subsidence Engineering – From Art to Science (K Mills)

Subsidence Prediction

- An Introduction to the Standardised Subsidence Information Management System (G Li)

Subsidence Mechanisms

- Demonstration of valley closure through Punch Longwall Mining at Broadmeadow Mine (B Coutts and D Payne)
- Observations of Multi-Seam Subsidence at Ashton Underground Mine (K Mills and S Wilson)
- Improved understanding of Residual Subsidence Movements after Longwall Mining (D Kay, P DeBono and M Montgomery)
- Determination of the Subsidence Mechanism for Subcritical Miniwall Panels, Airly Coal Mine (Y Heritage, A Boyling and P Corbett)

Caving and Groundwater Connectivity

- Geological And Hydrogeological characteristics of the Elouera Fault and the impacts of mining (R Walsh, S Brown, K Mills and R Heritage)
- The Height of Connected Fracturing above a Longwall Coal Mine: A Field and Isotopic Investigation (S. Brown and R. Walsh)
- Definition of Measured Hydraulic Conductivity Zones above a Longwall Panel, United Colliery (Y Heritage, B Blacka and N Le-Baut)
- Groundwater System Response to Longwall Mining at Springvale Mine (P Corbett)

Pillar Failure and Subsidence

- An Analysis of Unplanned Coal Mine Pillar System Failures (K Black, I Canbulat, C Twomey, M Semmler and J Johnston)
- The Morphology of collapsed workings inferred from Surface Investigations (S Fityus and J Johnston)
- Subsidence Prediction from Seam Convergence Data in Bord & Pillar Mine Workings below the Newcastle CBD (S Baker and S Ditton)

Measurement/Technology

- Back-calculation of Pillar Stability in NSWs abandoned Coal Mines – An automated GIS based approach (C Twomey, J Johnston, K Black and M Montgomery)
- GNSS Based Real-time 3D Position Monitoring - Informing the Art of Subsidence Engineering (M Nicholson)
- The use of RPAS Based Aerial Photogrammetry and Aerial Lidar in Wide Area Subsidence Monitoring and its place In the Monitoring Regime for Mining Projects (P. Sergeant and M. Ewing)

Infrastructure

- Structural Evaluation of Polyethylene Pipeline subject to Mine Subsidence (D Ho et al.)
- Management of Subsidence for the Mt. Owen Railway (J Barbato, S Holmes, J Kowalczyk, L Wicks, S Moreno, E Smit, C Martin, M Hill, A Pidgeon, C Banks, A Nunes, and T Furney)
- Experiences From Longwall Mining Beneath the M31 Hume Motorway (D J kay, HG Buys, G Swarbrick, D Lee Shoy, C Gunaratne, M Chadwick, R Walsh, M Brunton, C Dove and A Rayner)
- Responses of free-standing railway embankments to Mine Subsidence in the Southern Coalfield (A Leventhal, T Hull, R Walsh and R Barber)

Management

- Mine Grouting Remediation Projects in the Hunter Region (M Semmler, J Johnston, C Twomey, T Cairnes and S Fityus)
- Managing Subsidence at Harris Creek Cliff Line (R Walsh, J Barbato, A Leventhal and G Swarbrick)
- Permeation Grouting of a Subsidence impacted watercourse in the Southern Coalfields (G Price, B Blacka and N Le Baut)

Management Risk

- Subsidence Features – What is safe? (S Mackenzie)
- Newcastle CBD Mine Subsidence Model – Paper 1 – Background and Mining (D L Knott, S Ditton, H Streater, K Black and R Kingsland)
- Newcastle CBD Mine Subsidence Model – Paper 2 – Pillar Stability and Subsidence Assessment (D L Knott, S Ditton, H Streater, K Black and R Kingsland)

More information...

If you have any queries regarding the MSTs or this conference, please do not hesitate to contact us via www.msts.org.au, or you can email queries to convenor@msts.org.au.

Tell others about the conference!

Please forward this announcement to all your colleagues and any contact who may be potentially interested in attending this conference. Thank you in advance for your contribution to the dissemination of this information, and to the success of the conference.

MSTs conference organising committee

Chairman - Richard Walsh

Secretary - Don Kay

Treasurer - Ken Mills

Committee Members - Jamie Reeves, James Barbato, Gang Li, Yvette Heritage, Michael Nicholson, Matt Richardson