Thank you for your interest in the 1st Australasian Conference on Computational Mechanics (ACCM2013). Please send your abstract as an email attachment to our conference secretary accm2013@gmail.com as soon as possible.

Select your symposium:
- Adaptive meshing for fluid dynamics
- Advanced computational cardiovascular modelling
- Advanced developments on finite element and meshless technologies
- Advanced gridding and discretization techniques for petroleum reservoir simulation
- Advanced materials: computational analysis of properties and performance
- Advanced numerical methods for fluid structure interaction
- Advances in boundary element methods and mesh reducing techniques
- Advances in discontinuous galerkin method
- Advances in membrane structures computations
- Bio- and nano-mechanics and materials with applications
- Computational aspects in damage and failure mechanics
- Computational aspects of smart structures and materials
- Computational bioengineering and biomedicine
- Computational bioimaging and visualization
- Computational biomechanics
- Computational contact mechanics
- Computational geomechanics
- Computational mechanics of composite materials
- Computational modelling and simulation in dentistry
- Generalised continuum, higher-order homogenization and multiscale methods
- Generalised/extended FEM and other enriched partition of unity based methods
- Inverse problems, design and optimization
- Multidisciplinary design optimization in computational mechanics
- Multi-scale computational modelling
- New trends in topology optimisation
- Other, please specify

Abstract title

Distinct element modeling of the effect of joint persistence on dynamic fracturing of jointed rock masses
Rock masses consist of intact rock and discontinuities such as faults, joints and bedding planes. The presence of such discontinuities in rock masses dominates the response of jointed rock masses to static and dynamic loading. These structural weak planes seriously hinder and affect the propagation of stress waves in rock mass. The joints parameters such as persistence, orientation, distribution patterns, spacing and filling material have a significant effect on the response of rock masses against wave propagation. Rock bridges and discontinuous joints have a different effect on wave and fracture propagation in the blasting process. With regard to the complexities associated with rock blasting numerical tools are viable alternatives for rock blasting analysis. In this study the DEM method was employed to investigate the effects of rock bridges on wave propagation. The analysis results show that the stress concentration at the rock bridge location leads to excessive fracturing. This effect is more visible at the free face where the stress wave reflection occurs.
Presenting author’s information

First name: Zeinab
Middle name: 
Last name: Aliabadian

Profession: Postgraduate
If you choose other, please give details: 

Organisation: Amirkabir University of Technology

Department: Mining Engineering

Email Address: aliabadian2000@gmail.com

☑ Oral presentation
☐ Poster presentation