

REGISTRATION FORM

AN INTENSIVE
SHORT COURSE
IN...

Transfer Chute Design, Modelling & Optimisation Course

Title: _____
First Name: _____
Surname: _____
Position: _____
Organisation: _____
Address: _____
Telephone: _____
Email: _____

PAYMENT OPTIONS:

Credit Card ☐ Visa ☐ Mastercard

For credit card payments please email Danielle.Harris@newcastle.edu.au to obtain a link to an online payment portal (please note we do not accept AMEX).

☐ Purchase Order

This registration form should be forwarded to:
TUNRA Bulk Solids
Newcastle Institute for Energy and Resources,
The University of Newcastle, Callaghan NSW 2308, Australia
Tel: +61 2 4033 9055
Email: danielle.harris@newcastle.edu.au

GENERAL INFORMATION

FEES

Early Bird Delegate Registration: \$2200 + GST
(Before 27 March 2027)
Delegate Registration: \$2,500 + GST
5 or more delegates receive a 10% discount.

All fees are in Australian dollars and must be paid prior to the event. Fees include electronic program notes..

VENUE

TUNRA Bulk Solids
NIER Site, A Block
70 Vale St,
Shortland NSW 2308

SESSION SCHEDULE

2-Day Course Schedule
9:00 am - 5.00 pm 27th April
9:00 am - 5.00 pm 28th April

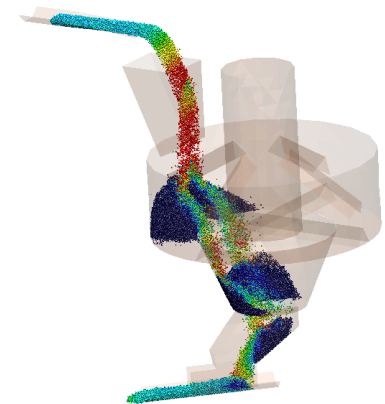
CANCELLATIONS

All face-to-face courses are subject to current COVID government regulations. If you are unable to attend the event a substitute delegate is welcomed at no extra charge. If notification of withdrawal is received no less than 14 days prior to the event, 80% of the fee will be refunded. No refunds will be made if notification of cancellation is received less than 13 days prior to the date of the event. The organisers reserve the right to alter or cancel the course due to unforeseen circumstances. In the event of cancellation, a full refund of fees will be made.



Transfer Chute Design, Modelling & Optimisation Course

27th - 28th April 2027



OVERVIEW

The storage, handling and transportation of bulk solid materials are major activities for a vast number and variety of industries throughout the world. These range from the gentle handling of very small quantities of material in the pharmaceutical and chemical industries to the large quantities handled and processed by the mining and mineral companies. This diversity is particularly evident in Australia where the wide-ranging nature and scale of operations is somewhat unique.

Considerable advances continue to be made in research, development, application and implementation of the technologies associated with various aspects of bulk solids handling. This course will be of particular interest to a wide range of industries including:

- Mining and mineral production and processing
- Power generation
- Energy and environment
- Chemical and petrochemical process industries
- Agriculture processing and production
- Manufacturing
- Pharmaceuticals
- Food industry

TUNRA Bulk Solids are world leaders in applied and fundamental bulk solids handling research and have been in business for 50 years. TUNRA has built a strong reputation in industry for its professional services and world class research in materials handling and flow properties. TUNRA have completed more than 4,000 projects for over 1,000 companies across Australia and more than 40 countries internationally.

Comprehensive laboratory test facilities which are ISO 9001, ISO45001 and ISO14001 certified, are available at TUNRA to aid research and consulting activities at the University of Newcastle. TUNRA is committed to forming long term partnerships with businesses to help them overcome existing handling problems and assist with planning projects to ensure trouble-free plant operation.

The Centre for Bulk Solids and Particulate Technologies (CBSPT) is actively involved in both fundamental and applied research on a range of problems associated with bulk solids and particulate technology. Research areas include storage, flow, processing and transportation of bulk solids.

It was established in 1995 and supported by the Australian Research Council (ARC) as one of a prestigious handful of national Key Centres of Teaching and Research between the University of Newcastle and the University of Wollongong. The Centre's Newcastle Node is strongly linked with TUNRA Bulk Solids and the Faculty of Engineering & Built Environment at the University of Newcastle.

THE CENTRE FOR BULK SOLIDS



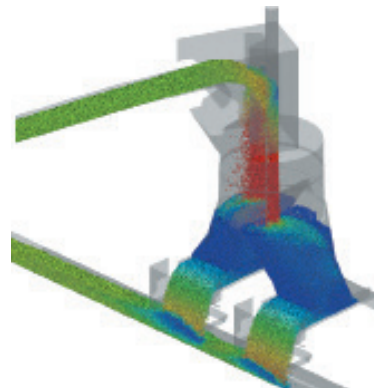
2-DAY COURSE OUTLINE

ABOUT THIS COURSE

This course presents current practices in the conceptual design and flow analysis of transfer chute systems. An overview of the crucial bulk solid material properties including tests and procedures for their determination is presented. A number of calibration tests that may be implemented for the selection of characterising modelling parameters are applied and presented with results compared to laboratory and full scale tests. The importance of understanding the characteristics of the material handled as the platform for the selection of favourable design criteria and accurate modelling parameters will be demonstrated. Application of the continuum analysis technique and Discrete Element Modelling is explained through a combination of theoretical approaches, three dimensional simulations and real-life case studies.

KEY LEARNING OUTCOMES

- Design principles for favourable transfer chute design
- Bulk solid material properties and testing
- DEM modelling calibration testing
- Procedures required for design and flow analysis
- TUNRA's 10 commandments for reliable transfer chute design
- Application of material properties in the design process
- Continuum Approach for hood/spoon and rock box type chute
- Trajectory considerations
- Chute flow problems due to adhesion and wear
- Dynamic modelling of transfer chutes
- Components for optimum accelerated flow
- Optimising transfer chute design for feeding and transfer
- Practical implementation of continuum mechanics analysis
- Interactive design exercise
- Overview of the principles of DEM analysis
- Application of DEM and other modelling techniques
- Design for dust emission minimisation and dust and spillage prevention
- Chute scale modelling
- Optimising chute geometry for controlled wear in the flow zone and at the belt feed point
- Influence of bulk solid material and conveyor belt interaction prior to and post transfer
- Obtain specific problem solving skills for transfer chutes



2-DAY COURSE INFORMATION

WHY ATTEND THIS COURSE

- Diversify your expertise and further knowledge of materials handling concepts
- Professional Development (CPD hours)
- Increase awareness of material phenomena occurring on site
- Learn methods for troubleshooting, optimisation and best practice design
- Develop skills in fundamental and numerical analysis approaches
- Learn how to apply flow properties test results to benefit your operation or designs
- Stay up to date with the latest developments in industry and bulk solids research

COURSE PRESENTERS

Emeritus Professor Alan Roberts founded TUNRA Bulk Solids in 1975 to facilitate research and consulting services in bulk materials handling. Following Alan's long standing commitment to the bulk handling industry, he developed, guided and led a team of experts at TUNRA Bulk Solids who continue to be at the forefront of the materials handling industry. Following in Alan's footsteps, TUNRA continues to offer professional training courses to industry as a part of our commitment to continuous improvement of the materials handling field. These training courses are run by a minimum of 3 experts from our engineering group who are specialists in their fields.

FURTHER INFORMATION

Should you require any further information regarding the course, please contact:

TUNRA Bulk Solids

The University of Newcastle
Callaghan NSW 2308, Australia

Tel: +61 2 4033 9039

Email: danielle.harris@newcastle.edu.au

www.bulksolids.com.au

