REGISTRATION FORM

AN INTENSIVE SHORT COURSE IN...

Bulk Solids Handling

Storage, Feeding, Transfer, Belt Conveying

Title:	
First Name:	_
Surname:	VEN
Position:	
Organisation:	
Address:	050
	SES
Postcode:	
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

Early Bird Delegate Registration: \$3,250+ GST (Before 19 October 2024) Delegate Registration: \$3,750 + GST 5 or more delegates receive a 10% discount. All fees must be paid prior to the event.

All fees are in Australian Dollars and must be paid prior to the event. Fees include electronic program notes, lunches and refreshments.

Double Tree by Hilton Perth Waterfront 1 Barrack Square Perth, W.A Ph: 08 6372 1000

3-Day Course 8:30 am - 5:00 pm 19th November 9:00 am - 5:00 pm 20th November 9:00 am - 4:00 pm 21st November

CANCELLATIONS

FEES

UE

SION EDULE

> 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.

> All face-to-face courses are subject to current



BULK SOLIDS

Bulk Solids Handling

Storage, Feeding, Transfer, Belt Conveying

3-Day Course 19 - 21 November 2024

> Double Tree by Hilton Perth Waterfront



Presented in Perth, Western Australia

THE UNIVERSITY OF

NEWCASTLE

AUSTRALIA

OVERVIEW

The storage, handling and transportation of bulk solid materials are ma for a vast number and variety of industries throughout the world. Thes the gentle handling of very small quantities of material in the pharma chemical industries to the vast quantities handled and processed by and mineral companies. This diversity is particularly evident in Austra wide-ranging nature and scale of operations is somewhat unique.

Considerable advances continue to be made in research, developmer and implementation of the technologies associated with various asp solids handling. This course will be of particular interest to a wide range 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

ABOUT TUNRA

BULK SOLIDS

TUNRA Bulk Solids are world leaders in a fundamental bulk solids handling research and in business for more than 40 years. TUNRA strong reputation in industry for its professio and world class research in materials handlin properties. TUNRA have completed more projects for over 1,000 companies across Au more than 40 countries internationally.

Comprehensive laboratory test facilities ISO9001, ISO45001 and ISO14001 certified, a at TUNRA to aid research and consulting acti University of Newcastle. TUNRA is committee long term partnerships with businesses to overcome existing handling problems and planning projects to ensure trouble-free plant

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.



major activities nese range from maceutical and I by the mining tralia where the	FLOW PROPERTIES TESTING	 Description of test equipment and procedures Influence of storage time and environmental factors such as temperature and moisture Evaluation of hopper and chute lining materials for friction and wear Application specific testing (inc. Dust and TML) Analysis and application
ent, application aspects of bulk nge of industries	MASS FLOW & FUNNEL FLOW	 Mass-flow and funnel-flow design procedures Basic hopper geometry Interpretation of flow property reports in relation to bin design Case studies Dynamic modelling of bulk solids systems
	STOCKPILE DESIGN	 Influence of flow properties and geometry on draw- down and live capacity Selection and positioning of hoppers and feeders for optimising gravity reclaim Stockpile base pressures and loads on reclaim tunnels, hoppers and feeders
n applied and and have been RA has built a sional services dling and flow	D.E.M. ANALYSIS	 Introduction to the Discrete Element Method Modelling approaches and limitations Overview of critical model parameters including particle size and shape Considerations and best practices for industrial application
e than 4,000 Australia and s which are d, are available activities at the	WALL LOADS	 Application of AS3774 for static and flow load cases Gate Loads Symmetric versus Eccentric Discharge Silo Quaking and Shock Loads Loads on Buried Structural Elements
ted to forming to help them nd assist with ant operation.	FEEDERS	 Importance of hopper and feeder interfacing Review of basic feeder types Determination of optimum hopper and feeder interfacing for uniform draw-down Determination of feeder loads, torque and power for initial and running conditions Controlling feeder loads and start-up torque
THE CENTRE FOR BULK SOLIDS	TRANSFER CHUTES	 Basic principles of chute design Application of flow properties in the design process Chute flow problems due to adhesion and wear Dynamic modelling of hood and spoon for optimum accelerated flow Optimising chute profiles for feeding and transfer

• Optimising chute profiles for feeding and transfer

3-DAY COURSE OUTLINE

- Optimising chute geometry for controlled wear in the flow zone and at the belt feed point
- Dust control in transfer chutes
- Application of DEM and CFD in chute design and performance evaluation
- **BELT CONVEYING** • Overview of open and closed systems. Special belt conveyors and conveyor selection recommendations
 - Review of basic design procedures
 - Economic and technical considerations in optimising conveyor design
 - Analysis of main resistances idler indentation, idler spacing, bearings and seals, stress states in bulk solids and contribution to drag.
 - Specialised testing

3-DAY COURSE INFORMATION

WHY ATTEND THIS COURSE

- materials handling concepts Professional Development (CPD hours)
 - Increase awareness of material phenomena occurring on site

• Diversify your expertise and further knowledge of

- 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

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 Solid 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

BULK SOLIDS

COURSE

PRESENTERS

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