



13TH ICRA WORKSHOP

USING PEPT IMAGING TECHNIQUES TO ADVANCE COMMINUTION MODELLING

10 - 12 APRIL 2010

LE FRANSCHHOEK HOTEL & SPA
FRANSCHHOEK, CAPE OF GOOD HOPE, SOUTH AFRICA



Positron emission particle tracking (PEPT) is a powerful technique for studying the flow of particulate systems. Initially developed for the medical imaging industry, positron emission tomography has been adapted for engineering applications at the University of Birmingham. In 2009 a new PEPT laboratory “PEPT Cape Town” was established at the iThemba LABS nuclear laboratories, near Cape Town. With the high prevalence of particulate systems in the minerals industry there is interest in using PEPT to study flow behaviour in tumbling mills, stirred mills, flotation cells, etc. The particular value of PEPT is the ability to look deep within the system and thereby elucidating the in-situ kinematics and dynamics of the particulate flow. This is done by tracking a single labelled particle for extended periods of time to get statistically meaningful data.

PEPT is attractive for comminution modelling because it is a non-invasive technique capable of mapping in-situ flow fields in an aggressive system containing media and slurries such as those encountered in industry to the level of detail required for developing mechanistic models. Advances in computing have made numerical modelling of complex flows conceivable but these still require validation and the PEPT imaging technique offers detailed flow fields and related information that can be used for this purpose. .

We would be seeking:

- to explore how PEPT imaging can contribute to comminution research.
- promising regions of application for PEPT in comminution studies
- ideas on how to utilise PEPT along with powerful computational techniques to develop mechanistic models comminution devices.
- validation studies/techniques to ensure realistic output
- elegant ways of using PEPT in conjunction with other measurement techniques such as load & pulp level sensors, LDV, tomography.



DEMONSTRATION OF PEPT EXPERIMENTS AT ITHEMBA LABS

A demonstration of the capabilities of PEPT is arranged at the PEPT Cape Town laboratories at iThemba

LABS for Monday, 12th April 2010.

PROPOSED ITINERARY

SATURDAY 10TH APRIL, 2010 - DELEGATES & PARTNERS:

12:00: Transfer from Cape Town International Airport and city centre to Le Franschhoek Hotel & Spa.

Check in to room (lunch, swim, jacuzzi, gym, walk - relax!!!)

15:00 Conference Registration.

16:00 Welcome, introductions and plenary address on the PEPT technique.

18:30 Dinner at Le Franschhoek Hotel.



SUNDAY 11TH APRIL 2010 - DELEGATES:

Breakfast for delegates and partners

8:00 Full day workshop: technical presentations & round table discussion sessions

Includes tea breaks and lunch

18:00 Evening Banquet and Dancing at a local wine estate



SUNDAY 11TH APRIL, 2010 - PARTNERS:

Breakfast & lunch at Le Franschhoek or packed picnic, + choice of: walk in the mountains/vineyard tour, visiting other local vineyards, shopping - exploring the many wonderful shops in Franschhoek, relaxing around the pool, spa treatments, etc.

MONDAY 12TH APRIL, 2010 – DELEGATES & PARTNERS:

Breakfast & Check out of Le Franschhoek

Bus trip to iThemba LABS for a demonstration at PEPT Cape Town featuring experiments on the communiton device suggested at the ICRA meeting held in Sweden.



3pm bus from iThemba LABS to the Vineyard Hotel in Claremont, Cape Town to register for Communion 2010 - MEI Communion Conference 13th till 16th April, 2010

Go to: www.lefranschhoek.co.za to see more

DELEGATES PRICE:-

Inclusive of conference fees, transport, accommodation, all meals, banquet, conference gift = R7500 per person single accommodation

PARTNERS:-

Accommodation (Sharing - Twin or Double) all meals, banquet, conference gift, one outing or spa treatment = R6800 per person.

STUDENTS:-

Inclusive of conference fees, transport, shared accommodation, all meals, banquet, conference gift & equipment = R6000

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International Delegates Preliminary Registration Form

Surname.....

Title + Initials.....

Organisation.....

Address.....

.....

Tel Cell Phone: Fax.....

E-mail.....

Indicate your interest in receiving more information on:

I wish to attend the ICRA Workshop

I will submit an abstract entitled

.....

.....

I'm interested in joining ICRA

For registration please email or fax this form before **25 February 2010**

Fax no: + 27 (0)21 650 5535

Email: Judy.LeCash@uct.ac.za

ACCOMMODATION - Tick box section for option of room type

DELEGATES

R7500 Accommodation, (Single room) Conference, Food & Beverage, Transport & Incidentals

PARTNERS

R6800 – Accommodation (Double or Twin room PLEASE SPECIFY) Food & Beverage, Transport & Incidentals, Outing or Spar Treatment

NAME OF PARTNER.....

MALE FEMALE

STUDENTS

R6000 Accommodation (shared), Conference, Food & Beverage, Transport & Incidentals

TOTAL:R

REGISTRATION FORM & PROOF OF PAYMENT FOR FEE MUST BE RECEIVED BY 26 FEBRUARY 2010

LATE REGISTRATIONS WILL BE ACCEPTED AT A COST OF 15% EXTRA