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Volume 17 No 4          April, 2004

Office Bearers : 2003 - 2006

Editorial       Reports on ISRP-9
                New Members and Address
                Changes

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Dear Members,

This issue concludes volume 17 and deals mostly with news from our recent symposium.

We now resume a regular publication schedule with Volume 18 number 1 to be issued shortly.

I once again urge the membership to contribute articles or ideas for articles to me in order that we can revitalize this enterprise. Paul Bergstrom
The ninth edition of the triennia International Symposium on Radiation Physics (ISRP-9) was held in Cape Town, South Africa from 11-16 September 2000 under the patronage of the International Radiation Physics Society (IRPS) and iThemba Laboratory for Accelerator Based Sciences (iThemba LABS). The meeting was co-sponsored by the International Union of Crystallography (IUCr), the International Center for Diffraction Data (ICDD), the South African Nuclear Energy Corporation (NECSA), the National Research Foundation (NRF), the Department of Science and Technology (DST), the South African Institute of Physics, the University of Cape Town, and the University of Stellenbosch. The meeting was attended by 144 delegates from 37 countries,

The programmes for both ISRP-9 and the Workshop covered a wide variety of topics. The oral-presentations were held in plenary sessions, symposia, special sessions, and poster sessions. The symposia and the number of delegates who attended indicated that it was a great success, a notable forum for learning and a template for the future. The generosity of all the invited speakers, who agreed to pay their registration fees, enabled the Organizing Committee to reduce the costs for delegates from developing countries which contributed in no small way to full sponsorship.

Naturally the majority of delegates were from South Africa. Globally it has been a great success, a notable forum for learning and a template for the future. The generosity of all the invited speakers, who agreed to pay their registration fees, enabled the Organizing Committee to reduce the costs for delegates from developing countries which contributed in no small way to full sponsorship.

A total of 40 delegates were supported - from small contributions to registration fees, to full sponsorship. Naturally the majority of delegates were from South Africa. Globally it has been a notable forum for learning and a template for the future. The generosity of all the invited speakers, who agreed to pay their registration fees, enabled the Organizing Committee to reduce the costs for delegates from developing countries which contributed in no small way to full sponsorship.

Of the 144 delegates, a total of 73 attended the Workshop which was held immediately after the symposium. The theme of the Workshop was ‘Fundamental Scattering and Absorption Techniques in Earth and Environmental Sciences’. The Workshop was an innovation for these international delegates and an opportunity for the South African scientists to foster international goodwill and communication. The delegate profile is given in Table 1. The Workshop was attended by 73 delegates from all over the world, and also included an International SARS of Delegates in order to encourage the participation of African scientists.

The Workshop had the objective of being an educational event for the trainees and postgraduate students who are desirous of becoming conversant with the modern techniques of materials analysis. Nine workshops were offered to trainees and postgraduate students desirous of becoming conversant with the modern techniques of materials analysis. Nine workshops were offered to trainees and postgraduate students desirous of becoming conversant with the modern techniques of materials analysis. The programmes for both ISRP-9 and the Workshop covered a wide variety of topics. The oral-presentations were held in plenary sessions, symposia, special sessions, and poster sessions. The symposia and the number of delegates who attended indicated that it was a great success, a notable forum for learning and a template for the future. The generosity of all the invited speakers, who agreed to pay their registration fees, enabled the Organizing Committee to reduce the costs for delegates from developing countries which contributed in no small way to full sponsorship.

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Welcome to New Member:

Mr Krishna Prasad Aryal, Nepal

New Members' addresses are listed in the Contact Members' Details (click on country next to name)

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The Workshop on Radiation Based Analytical Techniques was held at iThemba Laboratories, Cape Town, from 24 to 26 October 2003, just prior to the ISRP9 Congress.

It was the first attempt by the IRPS to hold such an event, and it was a response to the perceived need to give young African scientists formal instruction in radiation based analytical techniques. The attendance of young scientists was facilitated by generous grants from the International Commission for Diffraction Data and the International Union of Crystallography.

Around sixty scientists attended the Workshop and, as can be seen in Figure 1, these scientists came from a wide range of countries. About twenty-five were young scientists.

The invited speakers, fifteen in all, came from eight countries: Australia, South Africa, Brazil, the United Kingdom, the Netherlands, Egypt, New Zealand, and Italy.

The first two days were devoted to lectures on aspects of x- and g-ray scattering and spectroscopy, neutron diffraction and scattering, and ion beam spectroscopy.

On the first day Dudley Creagh spoke on the basic interactions of radiation with materials. Brendan Kennedy built on this introduction in his illuminating lecture on x-ray and neutron diffraction. Chris Chantler completed the section on fundamental properties and interactions with a talk on the absorption and scattering of x-rays.

A section on spectroscopic techniques followed, with papers given by Dudley Creagh (x-ray spectroscopy), Anselmo Paschoa (g-ray spectroscopy on uranium in soils) and E. Sidderas-Haddad (charged particle spectroscopy).

After a tour of the XRD, PIXE, nuclear microprobe, and Rutherford Backscattering facilities at the iThemba Laboratories, Malcolm Cooper delivered a lecture entitled "Synchrotrons and Brilliant" which introduced formally the topic of synchrotron radiation and its applications.

The second day was devoted to specific applications of radiation in scientific projects. Brendan Kennedy gave an introduction to Rietveld Analysis. Henk Schenk spoke on the use of x-ray diffraction. M. Hopton spoke on the use of x-rays to study stress and the topic of texture. W. Przybylowicz discussed x-ray fluorescence analysis and in a later talk he gave a description of the use of the nuclear microscope in geological applications. J. Meszja-Przybylowicz gave a description of the use of the nuclear microscope in biology. D. Britton gave a paper on positron beam spectroscopy and E. Sidderas-Haddad spoke on accelerator mass spectrometry. The analysis of atmospheric aerosols was discussed by H. Annegam. N. Iksander gave two very interesting papers on the use of a variety of analytical techniques to study important objects in the Cairo Museum collection of antiquities.

For something completely different as far as applications (though still dealing with dead bodies) Murray Bartle described how dual energy x-ray systems have been adapted to assist in analysis of meat packs and wool bales in the New Zealand export industry.

Andy Butler spoke on the use of neutrons in the detection of contraband. F. De Beer gave examples of the use of neutron radiography in the study of porous media. Finally, F. Cassi showed, in an elegant paper, the use of high resolution x-ray digital tomography for non-medical applications.

On the third day Brendan Kennedy and Dudley Creagh held a workshop on Rietveld analysis and relational databases. This workshop was attended by twenty-two, mostly young, scientists. The proceedings of the workshop, as represented by the presentations of the speakers, have been made available to all the participants of the workshop.

Fig. 1. Participants of the Workshop on Radiation Based Analytical Techniques.
The first speaker, Dr. Murray Bartle of the ISOSCAN Institute of Geological and Radiation Physics in Technology and Industry of Kansas State University for a session on Photoelectron Spectroscopy and Photoabsorption Spectroscopy, IR Spectroscopy and are being planned for MAD Protein Crystallography, SAXS and WAXS for polymers construction approximately 30 km north-west of Amman in Jordan. The initial beam lines Authority, Turkey and the United Arab Emirates. The project is under

Meijer of the Rijksuniversiteit Groningen, the Netherlands on the relative advantages of each.

Dr. V.R.K. Murty of the University of Botswana was the chair. Fundamental Processes in Radiation Physics and Archaeology

He reviewed the history of the society. He talked about it's purpose and goals. He announced that the present symposium, membership issues and Bulletin contributions. He announced that the host site and more information about this event will appear in upcoming Bulletins.

The second lecture of the morning was by Dr. Suprakash Roy of the Bose Institute, Kolkata.

The tea break was followed by the moderation by the hydrogen in the explosives.

nuclear methods discussed were neutron capture or neutron inelastic scattering, followed problem considered is enormous. There are approximately 100 million abandoned landmines

recoil detection analysis (ERDA) is based on measurements of the recoiling particles. combine these techniques with imaging methods such as scanning transmission ion x-rays that were reviewed were the application of XANES, XRD and XPS to the 17th

incoming and outgoing presidents - Richard Pratt and Malcolm Cooper

Emissions from open cut or strip mines, the contributions of motor vehicle traffic

Time resolved studies with temperature control led to, region around the River Zaans and it's 300 - 400 year old windmills. The discussion of crystallographic equipment, post-graduate programs in crystallography, an overview of abundances of

tying up a final tea and coffee break, Rex Keddy of the University of the

outlook for new techniques and sources.

Scattering. He also discussed some of the reconstruction techniques employed and the

Detector types considered were NaI and BGO.

Kennedy discussed the use of high-resolution powder diffraction methods in the study of crystallographic equipment, post-graduate programs in crystallography, an overview of abundances of

by Dr. Enzo Menapace of ENEA, Italy on

Professor Peter Kozma of the Institute of Technological Investigations on

"Revealing Tilts, Disorder and Phase Transitions in Perovskite

"Understanding the structure of chocolate"

By Dr. R. P. Choudhary of the India National Centre for Physics.

The second lecture of the morning was delivered by Dr. V.R.K. Murty of the University of Botswana, who addressed the challenges in the field of radiation physics and archaeology.

Meijer of the Rijksuniversiteit Groningen, the Netherlands, presented his thoughts on the relative advantages of each approach.

The second session of the morning was moderated by Suprakash Roy of the Bose Institute, Kolkata, and included a presentation on nuclear methods by Dr. Suprakash Roy.

A tea break followed the discussions, providing an opportunity for networking and informal exchanges among participants.

Rex Keddy of the University of the

Time resolved studies with temperature control led to, region around the River Zaans and it’s 300 - 400 year old windmills. The discussion of crystallographic equipment, post-graduate programs in crystallography, an overview of abundances of

Dr. Suprakash Roy of the Bose Institute, Kolkata, delivered the second lecture of the morning, focusing on nuclear methods such as neutron capture or neutron inelastic scattering.

In the afternoon session, Dr. R.P. Choudhary of the India National Centre for Physics presented on “Revealing Tilts, Disorder and Phase Transitions in Perovskite,” addressing the complexities and challenges in the field of radiation physics.

Additionally, Dr. R.P. Choudhary delivered a second lecture, “Understanding the Structure of Chocolate,” delving into the science and technology behind this popular confection.

A final tea and coffee break took place, followed by dinner plans.

After a magnificent meal at Nandos, it was time to go to the Protea Hotel President for dinner with members and guests.

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