

Indaba 8

Serendipity vs
Prediction | 16-21
August 2015 | Skukuza,
Kruger National Park,
South Africa

DATES	16-21 August 2015	VENUE	Skukuza, Kruger National Park	THEME	Serendipity vs Prediction
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Theme

The next Indaba, the eighth in a series of interdisciplinary workshops, organized by the South African Crystallographic Society in conjunction with the Structural Chemistry Commission of the International Union of Crystallography, was held over the period 16-21 August 2015 at Skukuza in the Kruger National Park, South Africa.

Indaba 8 was dedicated to the discussion of "Serendipity vs Prediction" of scientific phenomena related to structure, dynamics, activity and function of molecular and other materials and processes.

Scientific Focus

The discovery of processes, novel molecular compounds and materials with exciting properties is often to a large extent based on serendipity, but in other cases on the careful observation and interpretation of experimental data. Classical models and approaches derived from qualitative molecular orbital theory, methods based on donor-acceptor strengths, or empirical concepts based on geometric and steric effects may be employed.

Following these discoveries, a thorough analysis of experimental data such as state-of-the-art spectroscopy, magnetism, thermodynamic properties, detailed mechanistic information and electronic structure calculations is often performed to understand as many aspects as possible.

New models and theories may emerge, leading to rules concerning how the relevant properties of the process or the new class of compounds may be predicted and improved. Novel compounds and mechanistic ideas may also emerge from theoretical studies or close collaboration between theoretically oriented individuals and experimentalists.

This has often led to the development of efficient models for the design and interpretation of experiments, based on some understanding of intra- and intermolecular interactions or processes.

Sessions and Participation

The scientific sessions included invited keynote lectures, a small number of contributed oral presentations and poster sessions spanning Theory and Molecular Modeling, Crystallography, Crystal Engineering,

Materials, Supramolecular Chemistry, Organometallics, Biochemistry, Biology and other relevant fields.

In the poster sessions, a number of poster presenters were invited to present their work orally in flash presentations of 2-3 minutes each.

Participation was unrestricted except for a limitation on numbers due to the nature of the venue, which could accommodate only 120 delegates. Preference was given to presenters of original research and to students and postdoctoral associates.

IUCr-Sponsored Bursaries

A limited number of IUCr-sponsored bursaries were available for students and other young scientists. Applicants were asked to apply with the recommendation of a supervisor or senior colleague to the Secretariat. A preliminary registration, including a presentation title and abstract, was required, and the invoice number was to be quoted on all correspondence.

Any support granted was conditional on acceptance by the Organising Committee of the abstract submitted by the delegate. The cut-off date for applications was 30 April 2015, with early application and abstract submission encouraged for delegates seeking support.

Jan Boeyens Prize

The Jan Boeyens Prize Committee announced that Professor Delia Haynes from the University of Stellenbosch had been awarded the 3rd Jan Boeyens Medal and R10,000 cash prize.

The Jan Boeyens Prize is awarded to a young South African researcher under the age of 40 who has made a distinguished contribution to the utilization of crystallography and other structural methods in a holistic manner to investigate fundamental problems in nature.

Delia completed her BSc Honours, cum laude, in 1998 at the University of Natal, Pietermaritzburg in Molecular Genetics. She completed a PhD in Inorganic Chemistry at the University of Cambridge in 2002 under Dr Jeremy Rawson, then held a postdoctoral position at the Pfizer Institute for Pharmaceutical Materials Science before lecturing at the University of KwaZulu-Natal.

She joined the Department of Chemistry and Polymer Science, Stellenbosch University, as a senior lecturer in 2007 and has been an Associate Professor there since January 2014. Her research investigates factors important in determining crystal structures and the properties of molecule-based materials, with recent focus on multi-component crystals, ionic framework materials and materials with interesting magnetic properties.

She has published 36 research articles in journals including CrystEngComm, Crystal Growth and Design, Chemical Communications and the Journal of the American Chemical Society, and has won numerous other awards.

Demi Levendis, Chair of the Jan Boeyens Prize Committee, 2015.

Contact and Policy

Organising Committee Chair: Prof. Andreas Roodt

Programme Committee Chair: Prof. Peter Comba

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ICSU supported delegates from Africa via the IUCr to attend Indaba 8, to participate and interact with renowned scientists from across the globe as part of the initiative "Building Science Capacity in Africa via

Crystallography".

The Organising Committee of Indaba8 observed the basic policy of non-discrimination and affirmed the right and freedom of scientists to associate in international scientific activity without regard to ethnic origin, religion, citizenship, language, political stance, gender, sex or age.