AONSA

Newsletter From AONSA

The Asia-Oceania Neutron Scattering Association

Volume 2, No.1 (February 2010)

EC Meeting at Tsing-Hua University in Beijing, October 23, 2009

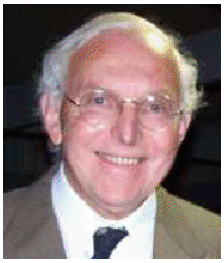
Contents

The new AONSA Presidency started as follows (Jan. 2010 – Dec. 2011):

President's message

By Prof. John White

President and Professor
AONSA and ANU



Growing our Collaborations

I first thank Prof Mahn Won Kim for his graceful and energetic Presidency at the beginning of AONSA. We look forward to working with him as past-President. Our Association is truly launched and has exciting things to do.

In January, your Board and some Executive members prepared a submission to the International Council of Science (ICSU) - the overarching body of all of the scientific unions worldwide. Our submission (see AONSA website) was to their 20-year Foresight Exercise whose charge embodied:

- *Two decades from now, how will international collaboration in science help progress in science and benefit society?*

The great potential for new science, technology with international collaboration our region was emphasized. I also made a submission to the Australian Government's inquiry into international collaborations. We have contacted the ICSU regional office in Malaysia and will meet with Professor Reiko Kuroda (ICSU Vice President - External Relations) in Tokyo.

After chairing the International Advisory Committee for J-PARC on March 15 and 16 we will attend the Asia-Europe Physics Summit (ASEPS) at Tsukuba between 24 and 26 March.

Methods to improve communication of AONSA business, including actions, between face to face meetings of Board and Executive will be considered at the 13 March Board.

I look forward to working with you all as President and will be glad to receive your personal views.

Prof. John W. White

Professor John White is a Fellow of the Australian Academy of Science, the Royal Society (London), The Royal Australian Chemical Institute and the Australian Institute of Physics.

John graduated from the University of Sydney with a BSc (Hons) and from Oxford University with DPhil. He was a Fellow of St John's College, Oxford University (1963-1985) He was first Adjoint Director then Director of the Institut Laue Langevin, Grenoble (1975-1980). Since 1985 he has been Professor of Physical and Theoretical Chemistry at the Research School of Chemistry at the Australian National University. http://chemistry.enu.edu.au/chem/people/john-white/

He has fostered neutron science in Australia with links to international facilities including ISIS (UK) and ILL (France) and contributed to policy formation through his Presidency of AINSE (the Australian Institute of Nuclear Science and Engineering). http://www.ainse.edu.au/__data/assets/pdf_file/0011/41141/whitecitation.pdf
For the past ten years, he has chaired the International Advisory Committee of Japan's J-PARC facilities.

John's current research is in thin films and emulsions, using neutron scattering and other techniques to elucidate basic science of these systems.

Vice President's message

By Prof. Yasuhiko Fujii

Quantum Beam Science Directorate,
Japan Atomic Energy Agency

Small Science at Large Facility

Neutron scattering research is a typical "Small Science at Large Facility". "Small Science" does not imply less important science at all, but science which a relatively small number of researchers or even a single person can carry out. However, it necessitates a "Large Facility" such as reactor and accelerator. In contrast "Large Science" should be conducted by a very large group consisting of several hundred researchers to pursue

their common aim such as discovery of an unknown elementary particle. Experimental high-energy physics is a typical one. A large facility inevitably requires a big money not only for its construction but also for its annual operation. Therefore we are strongly required to give an easy-to-understand presentation about its necessity to the general public, tax payers and government.

In Japan last fall several large facilities in operation or under construction were seriously and publicly reviewed by the new Government through an official televised internet. A serious discussion with too much stress on economic efficiency will result in a serious damage on science. On the other hand, however, such an argument seriously exchanged on a public table made us to learn a lot how to protect our "Small Science at Large Facility". How to plainly explain the necessity of our "Large Facility for Small Science" to the general public must be a global issue. Therefore, our AONSA must take an initiative in quick and successful response to such a review to be demanded at any time by any Government.

Prof. Yasuhiko Fujii

Prof. Fujii's career after leaving Graduate School of Science, Osaka Univ. in 1969 is as follows: 1970-78 Research Associate, Institute for Solid State Physics (ISSP), Tokyo University; 79-82 Associate Physicist, Dept. of Phys., Brookhaven National Laboratory; 83-87 Associate Professor, Faculty of Engineering Science, Osaka University; 88-91 Professor, Institute of Materials Science, Tsukuba University; 92-2003 Professor, ISSP, Tokyo University; 93-2002 Chair, Neutron Scattering Lab. of ISSP; 2001-04 President, The Japanese Society for Neutron Science; 04 Emeritus Professor of Tokyo University; 03-05 Director, Neutron Science Research Center, Japan Atomic Energy Research Institute (JAERI); 05-07 Deputy Director General, Quantum Beam Science Directorate, Japan Atomic Energy Agency (JAEA); 07-present Director General, Quantum Beam Science Directorate, JAEA; 08-present Secretary of C10, IUPAP (Commission on Structure and Dynamics of Condensed Matter). He has been a Japanese Representative for the US-Japan Cooperative Research Program on Neutron Scattering between DOE and MEXT since 1992.
His major research field is neutron and synchrotron radiation x-ray scattering study of condensed matter particularly under high pressure.

Secretary's message

By Prof. Sung-Min Choi

Department of Nuclear and Quantum Engineering, Korea Advanced Institute of Science and Technology

Neutrons Making Differences into a Beautiful Harmony

Whether we like it or not, we live in the world which has many small and large barriers or differences including political and cultural ones. However, we, scientists who try to learn principles of nature and apply those to benefit human life, overcome or try to overcome all these barriers to do our job efficiently and successfully.

As we all know, neutron is one of the most essential tools for science. This makes neutron an excellent vehicle for scientists to get together regardless of whatever barriers or differences they may have. We also know that neutron is a very expensive tool as well. The best way to take full advantage of such expensive neutron is to share it. In that sense, the role of AONSA, which aims to promote neutron science in the Asia-Oceania, is very important.

The Asia-Oceania region has much larger diversity in many ways than European and American counterparts. For AONSA, this can be a big challenge but, I think, it can be a big opportunity as well. We have neutrons! 'Excellent vehicles for scientists to get together regardless of whatever differences they may have'. Neutrons may allow us to put the differences into a beautiful harmony.

In the last two years, AONSA has been set up very successfully thanks to the great efforts of participating colleagues, especially those who served in the AONSA Board. I think we already hear some harmonious sounds. We should continue to increase the sound of harmony and make it more beautiful.

Prof. Sung-Min Choi

Professor Sung-Min Choi studied at Seoul National University for his BS and MS, and received his PhD at MIT in 1998. He was an SANS instrument scientist at the NIST Center for Neutron Research from 1998 to 2001. Since 2001 he has been a faculty member of Department of Nuclear and Quantum Engineering at KAIST and Director of Basic Atomic Energy Research Institute (from 2005) supported by the MEST, Korea. (http://neutron.kaist.ac.kr)

Over the last years, he has served in various positions to promote neutron science in Korea, which include Secretary General of the Korean Neutron Beam Users Association (2003 -), Member of the HANARO Steering Committee (2006 -), Principal Investigator of the 40M SANS instrument development at HANARO (from 2003) and Organizer/Co-organizer of neutron science workshops and schools. He chaired the International Organizing Committee of the 1st AONSA Neutron Summer School (2008) held at KAIST and has been a member of the J-PARC Neutron Science Proposal Review Committee (2008 -).

His recent research activity has been focused on the use of SANS, Neutron Spin-Echo, SAXS and GISAXS techniques to investigate the molecular self-assembling phenomena in soft matter to develop new nanostructured functional materials.

Treasurer's message

By Prof. Wen-Hsien Li
President, Taiwan Neutron Science Society
Director, Center for Neutron Beam Applications, National Central University, Jhongli, Taiwan

Current Activities from TWNSS

Taiwan Neutron Science Society (TWNSS) is a young organization found in early 2010, after a long one-year official registration. As a national society, there are 38 initiators from all over the geological regions of Taiwan when submitted registration. She attracted 62 members when was officially found. The current objective of this young society is to attract more participants.

Although research activity has been very popular in Taiwan science community, nevertheless neutron scattering science has yet gained a relatively low recognition or impact among the communities. One way to broadcast the techniques and sciences behind is through educational workshop.

TWNSS held a three-day workshop, focused this time on condensed matter science, in November 2009 in a recreation Nan-Tou. In this workshop general scattering theory, neutron scattering facilities in the region, science behind diffraction and reflection, and associated data analysis tool and techniques were introduced. It attracts 121 participants. More importantly, it attracts 54 new members to join TWNSS in the end. TWNSS now gathers 119 members, among them scientists, post-doctors, and graduated students are more or less evenly distributed. TWNSS will continue to hold such workshop twice every year, one focused on condensed matter science, the other on soft matter science.

TWNSS will also hold the very first annual Taiwan Neutron Scattering Science Conference (TWNSSC) in this coming June. TWNSSC formats differently from the talk-and-listen style. Opportunities for attendances to speak out their "dream experiments" will be planned and for students to express their needs will be arranged as well. For now 150 participants are expected.

Prof. Wen-Hsien Li

Professor Wen-Hsien Li is a Full Professor of the Physics Department, National Central University, Taiwan. He has been the Director since the Center for Neutron Beam Applications (CNBA) of National Central University was found in 2006. http://www.neutron.ncu.edu.tw

Wen-Hsien graduated from Soochow University, Taiwan with a BSc in physics and from Northeastern University, USA with a PhD in Physics. He has fostered neutron science in National Institute of Standards and Technology (NIST), USA. He contributed to the birth of Taiwan Neutron Science Society (TWNSS) and is now the President of TWNSS. http://www.neutron.ncu.edu.tw/TWNSS/

Wen-Hsien's current research is in quantum nanoparticle and multiferroic, using neutron scattering and other techniques to elucidate superconductivity and magnetism of these systems.

The 8th AINSE/ANBUG Neutron Scattering Symposium, December 2009

The 8th AINSE/ANBUG Neutron Scattering Symposium (AANSS 2009) was held from December 7th to 9th at the Australian Institute of Nuclear Science and Engineering (AINSE), Sydney, Australia. Most attendees were researchers working in Australia, but speakers came from New Zealand, the USA and Germany as well. Three plenary talks, ten invited talks and twenty-eight contributed talks made for a varied program.

Talks covered a very wide range of topics, from 'Myosin Binding Protein C Decorates F-actin: A Small Angle Scattering study' (Cy Jeffries, University of Sydney, Australia) to 'Residual Stress in Turbine Discs and its Effect on Fatigue Crack Growth' (John Thornton, Defence Science and Technology Organisation, Australia). Other talks dealt with functional oxide structures, magnetism, chemical crystallography and neutron instrumentation, particularly in relation to the second round of instruments being constructed by the Bragg Institute at the OPAL reactor.

Over forty posters were presented on an equally broad range of topics. At the close of the conference, awards were presented for best student poster and best student talk. The poster prize was presented to Richard Clements (University of Sydney, Australia) for his poster 'A Neutron and Synchrotron Investigation Of The Electronic Structure Of Lanthanide Zirconates' and the talk prize was awarded to Jimmy Ting (University of Sydney, Australia) for his presentation 'Synthesis and Structural Study of the Transition Metal Doped Rhodium Perovskites'.

The meeting benefited from the support of AINSE, the Australian Neutron Beam User's Group and the Molecular and Materials Structure Network, an Australian Research Council Research Network.Please follow the format and style described in this template. It should not be exceeding one A4 page, including figures. Use font type Times New Roman, with single spaced lines.

Delegates discuss a poster describing Platypus, the polarized neutron time-of-flight reflectometer at the Bragg Institute.

Other News. ANSTO has obtained funding has been obtained to significantly up-grade the Sample-Environment apparatus at OPAL, including a new cryomagnet/dilution refrigerator combination and a high-end gas-handling system. This funding will also include a new purpose-built Neutron Radiography/Tomography/Imaging Station. The cold source at OPAL is now operating and delivering beam to both PLATYPUS reflectometer and QUOKKA small-angle neutron scattering instrument.

(Brendan Kennedy)

Calendar of Major Events

2010

3/8-3/12	**International Collaboration on Advanced Neutron Sources (Grindelwald, Switzerland)**
3/13	**AONSA Board Meeting(Tokyo, Japan)**
4/？	**The 1st AONSA EC Meeting**
6/26-6/30	**American Conference on Neutron Scattering (Ottawa, Canada)**
7/5-7/8	**8th International Workshop on Polarised Neutrons in Condensed Matter Investigations(Delft, Netherlands)**
8/29-9/3	**26th European Crystallographic Meeting(Darmstadt, Germany)**
10/4-10/9	**AONSA Summer School(India)**
10/31-11/3	**10th Conference of the Asian Crystallographic Association (Bussan, Korea)**
11/1-11/2	**The 2nd AONSA EC Meeting(Korea) : tentative**

2011

1/17-1/21	**European Conference on Neutron Scattering (Prague, Czech)**
8/23-8/31	**XXII Congress and General Assembly of the International Union of Crystallography(Madrid, Spain)**
11/？	**AOCNS(Japan)**
	AONSA Summer School(Japan)

2012

12th Conference of the Asian Crystallographic Association(Adelaide, Australia)

2013

7/7-7/11 **10th International Conference on Neutron Scattering (Edinburgh)**

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