

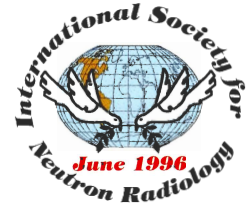


International NR Newsletter No. 2, June 1998

International Society for Neutron Radiology



The Sixth World Conference on Neutron Radiography



Osaka, Japan, May 17-21, 1999

Hotel Nikko Kansai Airport

SPONSORS (Tentative)

**International Society for Neutron Radiology (ISNR)
Atomic Society of Japan (AESJ)
Japan Atomic Energy Research Institute (JAERI)**

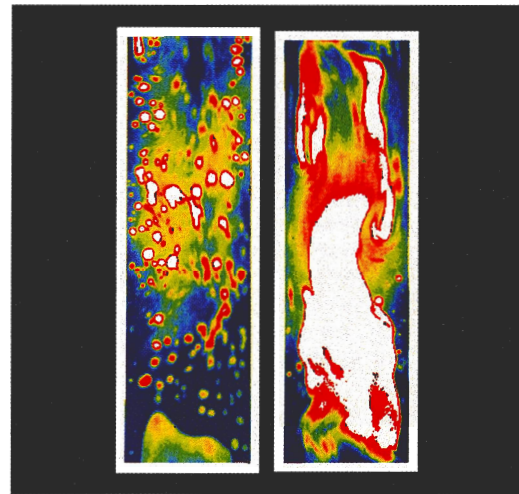
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Vice Chairman: John T. Lindsay
Vice Chairman: John P. Barton
Technical Chairman: Yutaka Murata
Program Chairman: Hisao Kobayashi
Executive Chairman: Shigenori Fujine**

TOPICS

- 1) Introductory Reviews
- 2) Neutron Sources
- 3) Detectors
- 4) Imaging Technology
- 5) Image Processing
- 6) Applications
- 7) Computed Tomography
- 8) System Characterization and Standards
- 9) Miscellaneous Technology Advances



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CIRCULATION

This newsletter is being mailed to all who participated at WCNR-4 & 5 and ITMNRSDC-2 & 3. Please pass copies to others or they can write to be added to the distribution list or the member's list of the international society (address at end).

INTERNATIONAL SOCIETY FOR NEUTRON RADIOLOGY (ISNR)

Minutes of the Meeting of the Board, Luzern, March 18, 1998 written by J.J. Rant

The Board members of the ISNR convened during the 3rd International Topical Meeting on Neutron Radiography at Luzern, Continental Park Hotel under the convener and chairmanship of the ISNR president Prof. K. Kanda.

Present members of the board:

K. Kanda (president), J. Lindsay (vice-president), S. Fujine (deputy president), J. Rant (secretary), M. Balaskó, J. Brenizer, C.O. Fischer, E. Lehmann, V. Mikerov, H. Kobayashi.

Invited observers: J. Barton (USA), K. Viswanathan (India) (only present to offer the proposal of Indian to host WCNR-7).

Absent: P. Chirco, S. Cluzeau, R. Lanza, H.U. Mast, Y. Murata.

Agenda:

1. Information about the forthcoming WCNR-6, distributed material: List of ISNR members+addresses (to be corrected)
2. Proposal of Indian observer to host WCNR-7 after Osaka
3. Issue of forthcoming ITMNR and WCNR conferences
4. Varia: substitution of S. Cluzeau (France) by G. Bayon (France)

Ad. 1: Present members agreed with the proposed scope and planned organisation of the WCNR-6. It was agreed that the Proceedings will be issued by Gordon and Breach and in the up to well established form and appearance. The papers will be reviewed by the members of the board. The list and addresses of regular members will be updated and issued in a electronic form (J. Rant will take care). A membership application form will be prepared and placed also on the WEB site of ISNR (S. Fujine).

Ad. 2+3: The proposal of K. Viswanathan was taken into account and afterwards in the absence of Viswanathan discussed throughly. The proposal was to host the WCNR-7 in 2002 in Bombay and the tentative time of the conference should be first week in December, 2002. The following decisions were taken:

- 1) The proposal of Indian observer to host the WCNR-7 has been agreed to be justified in view of the present policy of the ISNR to have the WCNR in countries where there is strong activity in NR. India at present seems to have strong activity in the field. Also up to present, 6 WCNRs were equally distributed between the USA, Europe and Japan.
- 2) The USA as potential candidate for the WCNR-7 understands this position and USA members were interested more to organize the ITMNR-4 in 2001 than the

WCNR-7 in 2002.

- 3) However, there were some doubts about the financial possibilities of Indian organiser to carry out this demanding task, also if one takes into account rather scarce appearance of Indian delegates past WCNR (5 altogether) conferences since 1981.
- 4) The Indian organiser should invite delegation of ISNR (president, vice president) to India, to meet relevant authorities of Indian government and to visit institutions, which will enable to persuade ISNR about the feasibility and capabilities of the tentative organiser appointed by India to carry out the conference and issue the Proceedings according to the standards of quality and appearance set with past 5 Proceedings. This visit should take well in advance of the WCNR-6.
- 5) The ISNR will monitor the progress in the organisation of the WCNR-7 and in the case of some unpredictable problems USA is prepared to host the WCNR-7 if required and at least one year time to prepare.
- 6) As according to the Constitution of ISNR the presidency of ISNR should go to the organiser of the next WCNR the members were of the opinion that due to the past very low activity of Indian delegates at all 5 WCNRs this rule might not be appropriate and that election of the new board and new president should avoid the change of presidency to India. However India might have his representative in the board after the Osaka conference. The election procedure and list of candidates of new board and of new president should be performed well in advance of the Osaka conference and the elections should take place at the last day of the WCNR-7.
- 7) The board members will correspond among each other by electronic mail to prepare the meeting of the board in Osaka.

Ad. 4: The present members agreed with the proposal (J. Rant) that G. Bayon might be a good substitute for S. Cluzeau and he has to be contacted to approve.

After the information of Indian observer about the decisions the meeting was closed. The members of the meeting and observers are expressing their appreciation of the invitation of the ISNR president to take part at the dinner.

3rd INTERNATIONAL TOPICAL MEETING ON NEUTRON RADIOGRAPHY (ITMNR-3)

Summary Report of the 3rd International Topical Meeting on Neutron Radiography (ITMNR-3)

E. Lehmann, Paul Scherrer Institut, Switzerland

(http://www1.psi.ch/www_sinq_hn/SINQ/neutral/ITMNR3_conf.html)

During March 16th~19th Lucerne was the scientific centre of researchers active in neutron radiography and related fields in neutron research. The ITMNR-3 conference attracted 83 specialists from 17 countries located in 5 continents. Beside the participants (22) of the hosting country, the largest delegations arrived from Japan (15) and North America

(12+3).

This series of meetings is dated in such a manner to lie between the World Conference on Neutron Radiography. The next (6th) will be held in 1999 in Osaka (Japan), chaired by Prof. K. Kanda (Kyoto University).

The subtitle of the meeting was "New detectors, imaging techniques and applications", following modern trends in these fields. During the three days 33 papers were orally presented. This relative compressed program was completed by a poster session containing 15 posters. The present state of the art in developments of neutron radiography detectors (imaging plates, scintillators, camera based systems and semiconductors) was described by several contributions. First experiences and quantitative tests with new systems were presented by several participants.

The connecting link between detectors, the investigated objects and processes is given by the specific imaging technique including tools for post-processing. This topic was discussed during two sessions of the meeting. The third aspect of the meeting - new applications - was illustrated during two other sessions, where a wide range from biology to aerospace was presented. New methods for quantitative determinations of material distributions were described by several interesting papers.

At March 18th, during an excursion to the Paul Scherrer Institut the new spallation neutron source SINQ and new implemented experimental facilities were visited. The radiography station NEUTRA was observed by the international community with great interest.

The organizers are thanking all persons involved in organisation and successful performance of this meeting, in particular the lectures for their value presentations. The papers will be published in a special issue of "Nuclear Instruments & Methods in Physics Research, Section A" by Elsevier Science B.V. after reviewing.

The continuation of this conference is planned in 2001 as ITMNR-4 with the subtitle "Quantification in Neutron Radiography and Gauging". It will be organized by the American community in responsibility of Dr. J. Lindsay.

Numbers of Participants 83 and Papers 48;
Switzerland: 22, 6(2), Japan: 15, 19(5), USA: 12, 8(2), Germany: 9, 3(1), France: 5, 2(1), UK: 4, 1(1), Canada: 3, 2, Hungary: 3, 2(1), Slovenia: 2,2(1), Austria: 1, 0, Brazil: 1, 1(1), Czech: 1, 0, India: 1, 1, Russia: 1, 1, South Africa: 1, 0, Sweden: 1, 0, The Netherlands: 1, 0. (poster)

THE SIXTH WORLD CONFERENCE ON NEUTRON RADIOGRAPHY (WCNR-6)

THE Sixth World Conference on Neutron Radiography (WCNR-6) is planned to be held at the Hotel Nikko Kansai Air Port in Osaka, Japan, May 17-21, 1999. The First Circular will be mailed in July, 1998.

If there are any requests and comments, please contact the conference secretary, S. Fujine.

WORKSHOPS:

- 1) Standards and Dimensional Measurements
- 2) New Detectors and Advanced Imaging Methods
- 3) Neutron Radiography Collaboration in Asia

PANEL DISCUSSION:

Future of Neutron Radiography Research

CONFERENCE FEES:

Registration Fee (including one copy of the Proceedings)

Member: ¥60,000

Student: ¥30,000

Honorary Member*: ¥30,000

(*Those who are more than 64 years old, have already retired from work and are conceded by the Conference Committee)

Banquet (May 20)

Member: ¥5,000

Accompany Person: ¥3,000

Welcome Party (May 17) Free

OPTIONAL TOURS:

Himeji Castle Full Day Tour (May 18)

Koyasan Full Day Tour (May 19)

Nara Full Day Tour (May 20)

Kyoto Full Day Tour (May 21)

Post-Conference Tour (May 22-25) for Hiroshima Area

TIMETABLE and DEADLINES:

July, 1998 : 1st Circular

September 31, 1998 : Preregistration, Titles of papers

December, 1998 : 2nd Circular

January, 1999 : Abstracts

March, 1999 : Full Papers, Hotel Reservation and Registration Fee

April, 1999 : Final Announcement

PROCEEDINGS OF WCNR-5

The proceedings of the WCNR-5 with 120 participants from 19 countries in a handy hard cover volume with over 800 pages contain 105 contributions from this very successful conference, a set of accompanying texts and addresses of all participants to enable continued contacts. Proceedings of WCNR-5 costs at DM 300,-(+DM 8,80 for shipping).

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6th ENRWG MEETING

6th ENRWG meeting will be organised in Praha, Czech Republic on November 30 - December 1, 1998 following 29th Anniversary Czech NDT conference and exhibition with international participation (for example, 210 participants including 25 foreigners attended with 25 companies for NDT exhibition participated in 1997), which will take place in Praha

on November 25-27, 1998. CRM (Coordinated Research Meeting) of IAEA on NDT and ISI of Research Reactors is also scheduled in Praha for November 23-26, 1998.

All ENRW6 members and guests are invited to submit their papers and to participate to Czech NDT conference. It will give an opportunity to meet experts from other NDT fields and enjoy Praha in a week time as well. (Conference Language: Czech, English) Chairman and host of ENRW6 meeting and IAEA meeting is Dr. Frantisek Peterka, senior consultant of ATG (Advanced Technology Group) Praha.

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JRR-3M NR ANNUAL MEETING

The annual meeting on research and application using JRR-3M neutron radiography facility was held from February 18 to 19, 1998, at Tokai Research Establishment of Japan Energy Research Institute. 14 research reports were presented by Prof. H. Kobayashi, K. Mochiki, M. Matsubayashi and other workers. Although most of the reports belong to the field of mechanical engineering, for example visualization of two-phase flows in a heat exchanger, reports on new techniques for neutron radiography were also presented as well as application in other fields. (Dr. M. Kamata's report)

Mr. M. Matsubayashi of JAERI wrote to editor about this meeting;

14 reports were presented and 28 researchers (including 10 people of JAERI) participated at this meeting organized by JAERI and the University of Tokyo, Research Center for Nuclear Science and Technology.

RESEARCH COMMITTEE ON NR IN JAPAN

The 55th meeting, organized by Radiation Application Development Association, was held at the JAERI meeting room in Tokyo on 19 November, 1997. At this meeting K. Saito of Toshiba Corp. gave a lecture about J-type X-ray image intensifier. At the 56th meeting, 28 January, 1998, Prof. H. Kobayashi gave a lecture about Present Status and Trials for Standardization on Neutron Radiography. At the 57th meeting on 20, May, 1998, Dr. M. Oda lectured his thesis. The 58th meeting is planned on 31, August, 1998.

THE SECOND SPECIALISTS' MEETING ON NEUTRON RADIOGRAPHY TECHNIQUES AND APPLICATIONS

2nd Specialists' Meeting on Neutron Radiography Techniques and Applications will be held at KURRI (Research Reactor Institute, Kyoto University) in November, 1998. 1st meeting was held in November, 1991. The Proceedings of the 1st meeting was published as KURRI-TR-359 (ISSN 0287-9808)(in Japanese) in March, 1992. 1st circular with call for

papers will be mailed to the Japanese members in September, 1998.

CONGRATUATIONS ON GREAT WORKS !

MASAHIRO ODA, Nagoya University, passed the final exam for the doctor's degree of engineering in December, 1997. Congratulations on winning the doctorate ! The title of his thesis is " Study on Neutron Imaging Techniques and Processing for Developing Quantitative Neutron Radiography " in Japanese. He works from April, 1997 for Non-Destructive Inspection Co. Ltd. in Osaka.

HELENA PLEINERT, PSI, Switzerland, won also the doctorate recently.

Apology from editor:

Editors must apologize to the author for using the figure of IP-ND characteristics of input-to-output in page 5 of the last letter without author's permission. The figure, supplied by Dr. N. Niimura of JAERI, was used from the catalog of BAS-ND, Fujifilm I&I-Imaging & Information.

Please send the registration form for membership enclosed, and your business card to the editor in Japan to make a perfect member's list of International Society for Neutron Radiology, including e-mail address and home page address if available, and also your passport-size photograph.

Any news about neutron radiography in your countries is cordially welcomed. Please send them to editors. And also editors save one page of this letter for an Introduction of NR Facilities. Please send the introduction of your facility with photos, figures, and radiographs and research activities to editors.

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International Society for Neutron Radiology

(REGISTRATION for Membership)



(Please type or print)

(First name) (Middle name) (Surname)

Prof./Dr./Mr./Ms.

(Company/Organization/Institute/Title)

(Full Business Address/Mailing Address)

(Phone/Fax/E-mail Address)

- Please send further information
 I am not interested in Membership of ISNR

(Please send your business card in English and photograph. It is not necessary, if you have already sent it to us.)

(To Japanese Member:
(国内のみ追加事項、日本語で記入して下さい)

氏 名 ()
所属機関名 ()
所属機関住所 (〒)

電話、ファックス、E-mail

(可能ならば、名刺を添付して下さい)

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International Society for Neutron Radiology

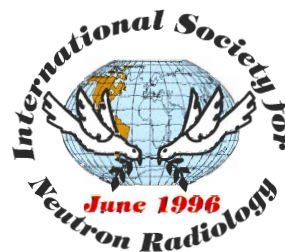
CONSTITUTION

Name:

International Society for Neutron Radiology

Purposes:

World Conference on Neutron Radiography
NR Newsletter
NR Directory
Electronic Communication - Client/Server
Other, as may be proposed and voted.



Membership:

All interested attendees to WCNR. All others whose application form is submitted by mail and approved by the "Board".

be from the country with most papers at the present WCNR, no more than 2 may be from the next country in terms of papers, and no more than 1 elected person shall be from each other country.

Fees:

No fees for membership. Costs such as conference organization, and mailing will be covered by volunteers.

The Board (function)

- Shall replace the provisional steering committee.
- Shall serve until close of next WCNR and meet the day before that WCNR.
- Shall organize and supervise the next general election.
- Shall motion and vote on changes to constitution (2/3 majority).
- Shall motion and vote on other specific proposals (simple majority).

General Election:

A general election to elect the Board and also to elect the Officers shall be held amongst those members present on the closing day of each WCNR.

Operation of Constitution:

This constitution has become operational since June, 1996.

The Officers:

- Shall consist of President, Vice President and Secretary.
- Shall serve until the close of next WCNR.
- Shall be Board Members.

President:

The president shall be responsible for and ensure satisfactory organization of the next WCNR (WCNR N+1). The President shall chair the Board and shall preside over WCNR N+1. Immediately after election the President shall appoint a deputy with whom to work together in preparing the next WCNR.

Vice President:

- Shall be from a different geographical region and shall assist in identifying candidates for election to President at WCNR N+1 in order to host WCNR N+2. Note, however, that because of the long 6 or 8 year interval likely before WCNR N+2 the elected Vice President is not automatically President Elect for WCNR N+2.

Officers (1996.6-1999.5):

President: Keiji Kanda (Japan)
Deputy President: Shigenori Fujine (Japan)
Vice President: John T. Lindsay (USA)
Secretary: Joze J. Rant (Slovenia)
Board: Márton Balaskó (Hungary)
Jack S. Brenizer (USA)
Piero Chirco (Italy)
Guy Bayon (France)
Carl-Otto Fischer (Germany)
Hisao Kobayashi (Japan)
Richard Lanza (USA)
Eberhard H. Lehmann (Switzerland)
Hans-Ulrich Mast (Germany)
Vitali Mikerov (Russia)
Yutaka Murata/Koh-ichi Mochiki (Japan)

The Board (composition)

- Shall consist of up to 12 persons, plus the 3 officers. From the 12 one shall be the President of the present WCNR (or appointed by that person), and one shall be appointed by the President elected to host the next WCNR. For the remaining 10 who are elected, no more than 3 may

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