



AMERICAN NUCLEAR SOCIETY

REACTOR PHYSICS DIVISION



Message from the Incoming Chair

By *Bob St. Clair*

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I'm happy to share that the Reactor Physics Division (RPD) technical program continues to be among the strongest in ANS and our membership continues to grow. This is the direct result of the efforts of many individuals who actively participate and support the goals of RPD. During the past year RPD has enjoyed a great deal of success including the highly-attended ANFM-IV meeting at Hilton Head, great representation at the National ANS meetings, selection of both the Wigner and Henry-Greebler award winners, progress on national standards development, a solid financial plan, and a new Division website (under development at <http://rpd.ans.org>). Throughout this newsletter you'll find updates on many of these topics from the individuals who worked to make them a success.

With the continued growth of nuclear power internationally, and in time domestically, the role of ANS continues to grow. In that light, I encourage all of you to consider how you might continue and/or expand your contributions to RPD. This could be in the form of technical contributions (papers, presentations), participation on governance and/or organizing committees, developing/updating standards, or simply attending RPD activities. As a member of a utility I find it somewhat disheartening to observe the level of participation by utility members in RPD activities, even though we represent a significant portion of RPD's membership. I do recognize the current economic challenges can make it difficult to participate. However, I am soliciting ideas from our utility members for what would make ANS more valuable and what it would take to gain your participation. Please feel free to email me at robert.stclair@duke-energy.com with your ideas.

I would be remiss if I failed to recognize our outgoing members of both the Executive and Program Committees, particularly our outgoing Executive Committee Chair Jeff Bradfute. I

would also like to thank the current and incoming members of these committees, as well as many other volunteers in RPD for their willingness to commit their time and effort. Finally, I would like to congratulate and welcome Dr. Alireza Haghghat as the new Secretary of RPD.

Program Committee News

By *Fausto Franceschini*

(francef@westinghouse.com)

ANS 2009 Annual Meeting, Atlanta, GA

The 2009 Annual Meeting was held in Georgia, GA, (June 14-18). A total of 42 papers were presented in 5 sessions.

In addition to our standing sessions (Reactor Physics General – 6 papers, Reactor Analysis Methods – 9 papers and Reactor Physics Design, Validation and Operating Experience – 6 papers), two special sessions were organized: Advances in Small and Medium Sized Reactor Designs (organizers Youssef Shatilla and Pavel Hejzlar – garnering 16 papers!), and Recent Progress and Applications of Resonance Calculation Methods (organizer: Akio Yamamoto – 5 papers).

Best Paper Award (ANS 2009 Annual Meeting)

Based on the scores provided during the paper review process, selection was narrowed down to four papers to be considered for the RPD Best Paper Award at the ANS 2009 Annual Meeting. A panel of judges attended the presentations, and selected the paper entitled “A New Framework of Resonance Calculation Method based on the sub-group Method” by Akio Yamamoto, Hiroki Koike and Yoshihiro Yaman (Nagoya University). Congratulations to the authors and appreciation to the judges!

ANS 2009 Winter Meeting, Washington, DC

Please plan to attend the upcoming ANS 2009 Winter Meeting in Washington D.C. (November 15-19), and the RPD sessions in particular. We have a total of 41 papers in 5 sessions plus one

panel: Experiences with International Collaborations in Nuclear Engineering Research and Educational Exchanges (organizers: Ivan Maldonado and Pavel Tsvetkov). In addition to our standing sessions (Reactor Physics General – 14 papers in 2 sessions, Reactor Analysis Methods – 7 papers, including a lecture from Prof. Edward Larsen, winner of the Wigner Award, and Reactor Physics Design, Validation and Operating Experience – 8 papers), we will have two special sessions, Fuel Isotopic Benchmarks and Applications to Code Validation (organizers Ian Gauld and Mark DeHart - 5 papers) and Validation of Advanced Depletion Approaches for High-Temperature Gas-Cooled Reactor (organizer: Mark DeHart - 7 papers). Thanks and congratulations to the session and panel organizers for their usual effort.

ANS 2010 Annual Meeting, San Diego, CA

Get ready! Submission of summaries has already started, with a deadline of January 8. There will be a number of RPD sessions that you may consider submitting to, including our standing sessions (Reactor Physics General, Reactor Analysis Methods, and Reactor Physics Design, Validation and Operating Experience) and special sessions (Advances in Small and Medium Sized Reactor Designs and Advances in Reactor Core Analysis Methods to Meet the Challenges of Next-Generation and Advanced NPP Design). The meeting will also feature the panel Current Issues in LWR Core Design and Reactor Engineering Support.

Reviewers will be greatly appreciated. If you would like to be added to the RPD list of reviewers please send your request to Fausto Franceschini at: francef@westinghouse.com.

Special Sessions at Upcoming ANS Meetings

Please consider organizing a special session or panel at one of the upcoming ANS meetings, such as the 2010 ANS Winter Meeting in Las Vegas. Timely special sessions and panels on topics of interest to academia and industry, with good quality contributions, have kept RPD one of the most active and relevant divisions.

Participation in Program Committee Activities

The success of our division is due to active involvement of its members. I would like to encourage you to continue to contribute by submitting technical papers, organizing special sessions, reviewing papers, chairing sessions, and

as members of the Program Committee and RPD governance in general.

PHYSOR 2010 “Advances in Reactor Physics to Power the Nuclear Renaissance” – Pittsburgh, PA May 9 – 14, 2010

By Fausto Franceschini, Organizing Committee

The next PHYSOR Topical Meeting will be held in Pittsburgh the week of May 9-14, 2010. In light of the nuclear renaissance, PHYSOR 2010 aims to provide a platform for international experts to exchange ideas and latest developments in reactor physics and related nuclear technologies. This conference is sponsored by the American Nuclear Society (ANS) Reactor Physics Division and cosponsored by the ANS Mathematics and Computation Division and the American Society of Mechanical Engineers (ASME).

The conference has opened for paper submissions in September. The deadline for paper submission has been extended through November 30, 2009 and no further extension is planned. Note that authors are required to submit Full Papers. A selection of the best papers will be published in a special issue of the journal Nuclear Science and Engineering

The link to paper submission, up to date information on the conference and the technical program can be found at the conference website: <http://physor2010.org>. Looking forward to seeing you in Pittsburgh for PHYSOR 2010!

Request for Proposals for 2012 RPD Topical Meeting, PHYSOR 2012

By Fausto Franceschini

The Reactor Physics Division is planning to sponsor a Topical Meeting in 2012. This will be the next in the series of Reactor Physics biennial topical meetings and we are looking for a local section to host the meeting.

The most recent PHYSOR topical meeting was held in September 2008 in Interlaken, Switzerland and the next PHYSOR is scheduled for May 2010 in Pittsburgh, PA (USA). According to the established pattern, the location of PHYSOR 2012 is scheduled to be in North America. The PHYSOR topical meetings have a history of providing excellent programs and attracting papers

of high quality content, with a strong domestic and international participation.

ANS local sections interested in hosting this meeting are invited to notify me of their intention at their earliest convenience. All interested Sections are required to make a formal presentation to the Reactor Physics Program Committee at the next Annual National Meeting, to be held in San Diego, CA, on Sunday, June 13, 2010. Interested Sections are encouraged to review the ANS Topical Meeting Manual, which is available at <http://www.ans.org/meetings/tmm/> or can be requested from the ANS Headquarters.

Finally, I wish to remind you not to underestimate the amount of effort and planning that needs to be invested from the inception into preparing a proposal with good chances of being a successful one.

Please feel free to contact me with any questions regarding the RPD topical meetings, the selection process and associated criteria.

Honors & Awards

*By Dimitrios Cokinos
(cokinos@bnl.gov)*

The Honors & Awards Committee unanimously selected Professor Edward Larsen, of the University of Michigan, to be the 2009 winner of the ***Eugene P. Wigner Reactor Physicist Award***. Prof. Larsen has made outstanding contributions of numerical and analytical methods to reactor physics and transport theory applications, including asymptotic analyses linking transport and diffusion theories and as applied to stochastic media, variance reduction techniques for Monte Carlo methods and for exceptional leadership in nuclear engineering education.

Prof. Larsen will deliver the Wigner Lecture on Tuesday morning during the technical session on Reactor Analysis Methods. His topic will be "*Asymptotic Analysis in Nuclear Reactor Theory*". The Wigner plaque will be presented to Prof. Larsen during the Tuesday Honors and Awards Luncheon.

The Reactor Physics Division's Honors and Awards Committee wishes to congratulate Prof. Larsen for his outstanding accomplishments.

Reactor Physics Standards

*By Dimitrios Cokinos
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ANSI/ANS-19.10, "Standard for Calculating Pressure Vessel and Reactor Internals Neutron Fluence" has been released as an American National Standard. Revisions are nearing completion for three ANSI/ANS standards: ANSI/ANS-19.1, "Nuclear Data for Reactor Design Calculations; ANSI/ANS-19.3, "American National Standard for Steady-State Neutronics Methods for Power-Reactor Analysis" and ANSI/ANS-19.6.1, "Reload Startup Physics Tests for PWRs".

ANS-19, the Reactor Physics Standards Committee, seeks qualified people for the various working groups within the committee. Activities encompass all major areas in reactor physics. Interested persons can contact Ms. Pat Schroeder at pschroeder@ans.org by sending a brief statement of interests.

2009-10 Reactor Physics Division Officers

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(Updated for the 2009 ANS Winter meeting, Washington DC)**

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