



# AMERICAN NUCLEAR SOCIETY

## REACTOR PHYSICS DIVISION



### Message from the Incoming Chair

By Jeff Bradfute

The Reactor Physics Division continues to be one of the strongest technical divisions in ANS as determined by various measures, including excellent national meeting participation, well-attended and organized topical meetings, a very active standards program, a high profile award program, and a highly-sought-after scholarship. These activities and others, however, do not happen on their own, but through the efforts of members.

In particular, I would like to recognize the work of our outgoing Chair, Dr. Farzad Rahnema (Georgia Tech), and our outgoing Executive Committee Members. I would also like to thank the chairs of the standing committees, as listed on the next to last page of this newsletter, for their hard work in leading their respective committees. Congratulations also to Dr. Benoit Forget (MIT) who was elected as incoming secretary and to the newly elected Executive Committee Members.

Our division enjoys particularly strong technical programs at our national meetings thanks to the leadership of our Technical Program Chair, Dr. Bojan Petrovic, and our Technical Program Committee (who are listed on the last page of the newsletter). In addition to our standing technical sessions, Bojan and his committee work very hard to support special sessions on topics of current interest to the reactor physics community. More information is provided later in this newsletter. I am confident that all of these sessions will be very interesting and I encourage those attending the national meetings to participate. I also encourage you to forward ideas and proposals for future special sessions to Bojan and volunteer to serve as a session organizer.

Included in this newsletter are several updates on both past and upcoming technical conferences co-sponsored by RPD. First is a summary by Konstantin Foskolos on the very successful PHYSOR 2008 conference that was recently held in Interlaken, Switzerland. Also included are updates on the upcoming Advances in Nuclear Fuel

Management (ANFM-IV) conference in April 2009 in Hilton Head, SC; the 2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics in Saratoga Springs, NY in May 2009; and PHYSOR 2010 in May, 2010 in Pittsburgh, PA. Please plan to contribute papers and attend these conferences!

RPD continues to remain active in ANS Standards development thanks to the Leadership of Dr. Dimitrios Cokinos (BNL). We can always use qualified members from a diverse set of organizations to participate in the development of these standards. Please contact Dimitrios if you are interested.

It should be clear now, that the members of our division are responsible for the success that we have had. Please be among the active members of our division by participating in the activities of our division. For those attending the winter ANS meeting in November, I invite you to attend the governance meetings on Sunday afternoon to contribute to the discussion of the future of our division. I welcome any comments or suggestions. Please feel free to e-mail or call me to discuss your ideas.

### 2008 Ballot News

Congratulations to our new 2008-2009 officers and executive committee members! They started their positions in June 2008 (just after the ANS annual meeting) and will hold them until after the June 2009 meeting in Atlanta. The new Executive Committee members will hold their positions until June 2011.

Chair:	Jeff Bradfute
Vice-Chair/Chair-Elect:	Bob St. Clair
Treasurer:	Ivan Maldonado
Secretary:	Benoit Forget

Executive Committee:	Germina Ilas
	Ron Ellis
	Eleodor Nichita

## **Program Committee News**

*By Bojan Petrovic*

### **ANS 2007 Annual Meeting, Boston, MA**

The 2007 Annual Meeting was held in Boston, MA, June 24-28, 2007. A total of 48 papers were presented covering 6 topics arranged in 8 sessions, plus one panel session. In addition to the three standing sessions (Reactor Physics General – 7 papers; Reactor Analysis Methods – 7 papers; and Reactor Physics Design, Validation and Operating Experience – 6 papers), Bob StClair (Duke Power) organized a panel session on Current Topics for Reactor Engineers. Areas of panel focus included planning power maneuvers, precluding fuel clad failures, and power suppression strategies. Moreover, three special sessions have been organized: The Physics of Plutonium and MOX-Fueled Cores (organizer Paul Edelmann – 3 papers), New Perspectives on Validation and Verification for Reactor Physics Analysis (organizer Mark DeHart – 4 papers), and Recycling of Transuranics in Advanced Fuel Cycle Systems (organizer Pavel Hejzlar). This last session (co-sponsored by the FCWMD) had a particularly strong response, with three sub-sessions and 19 papers presented. All sessions and the panel were well attended.

#### ***Best Paper Award (ANS 2007 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 2007 Annual Meeting. A panel of judges attended the presentations, and selected the paper entitled “SIMULATE-3K Explicit Fuel Pin Modeling in RIAs” by G. Grandi and K. Smith (Studsvik Scandpower) to receive the award. Congratulations to the authors, and thanks to the judges! Our compliments also go to the runner-up papers, “Improved Load Follow in IRIS through MSHIM” by F. Franceschini and B. Petrovic (Westinghouse); “Comparison of Tube-in-Duct and Pin Fuel for S-CO<sub>2</sub> Cooled Fast Reactor Applications” by C.S. Handwerk, M.J. Driscoll and P. Hejzlar (MIT); “Graphite Thermal Neutron Scattering including Coherent 1-Phonon Effects” by I.I. Al-Qasir and A.I. Hawari (NCSU).

### **ANS 2007 Winter Meeting, Washington, DC**

The 2007 Annual Meeting took place in Washington, D.C., November 11-15, 2007. Always a popular location, it resulted in 60 papers covering 7 topics arranged in 11 sessions. In addition to the three standing sessions (Reactor Physics General –

7 papers; Reactor Analysis Methods – 7 papers in 2 sessions; and Reactor Physics Design, Validation and Operating Experience – 12 papers in 2 sessions), four special sessions were organized: Design and Evaluation of Advanced Burner Reactors (organizers Taek K. Kim and Won-sik Yang – 12 papers in 2 sessions), LWR Automatic Core Design Optimization (organizer Albert Gu – 4 papers), Advanced Methods, Codes, and Benchmarking of the NURESIM Core Physics European Simulation Platform (organizer Jose Aragones – 7 papers) and Latest Lattice Physics/Core Simulation Methods for Reactor Analysis (organizer Akio Yamamoto – 11 papers in 2 sessions). Our Division also co-sponsored three sessions: Transport Methods General (MCD primary organizing Division), Computational Methods for Time-Dependent Transport (MCD) and Recent Developments in Fuel Cycle Modeling and Systems Analysis (FCWMD). This was the largest number of RPD papers at the Annual/Winter meetings in recent memory, unlikely to be exceeded soon.

#### ***Best Paper Award (ANS 2007 Winter 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 2007 Winter Meeting. A panel of judges attended the presentations, and selected the paper entitled “Combining In-Core-Detector Readings with Diffusion in Eigenvalue Flux Calculations for CANDU Reactors” by Eleodor Nichita (University of Ontario) and Benjamin Rouben (AECL/Consultant) to receive the award. Congratulations to the authors, and thanks to the judges! Our compliments also go to the runner-up papers, “Implementation of Generalized Coarse-Mesh Rebalance in NEWTRNX for Acceleration of Parallel Block-Jacobi Transport” by Kevin Clarno (ORNL) and “CASMO-5 ENDF/B-VII R0 Comparison to B&W Criticals Series 1810” by Joel Rhodes, Kord Smith, Deokjung Lee and Zhiwen Xu (Studsvik Scandpower).

### **ANS 2008 Summer Meeting, Anaheim, CA**

The 2008 Annual Meeting was held in Anaheim, CA, June 24-28, 2007. A total of 36 papers were presented covering 5 topics arranged in 6 sessions, plus one panel session. In addition to the three standing sessions (Reactor Physics General – 14 papers in 2 sessions; Reactor Analysis Methods – 6 papers; and, Reactor Physics Design, Validation and Operating Experience – 7 papers), Andrew Nicholson (Dominion) organized a panel session on Core Design Development: Current Issues and

Their Impacts, which was well received. Moreover, two special sessions have been organized: Advancements in Multi-Physics Reactor Simulation (organizers Kevin Clarno and Hany Abdel-Khalik – 5 papers) and ENDF/B-VII.0 and JEFF-3.1: Introduction and Validation (organizers Mike Zerkle and Ken Kozier – 4 papers). Our Division also co-sponsored two sessions, Transport Methods: General (MCD primary organizing Division) and Monte Carlo Burnup/Transmutation-Tutorial (RPSD). All sessions were well attended.

#### ***Best Paper Award (ANS 2008 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 2008 Annual Meeting. A panel of judges selected the paper “Combined Erbia and IFBA fuel for the IRIS Reactor” by Fausto Franceschini (Westinghouse) and Bojan Petrovic (Georgia Institute of Technology) to receive the award. Congratulations to the authors, and thanks to the judges! Our compliments also go to the runner-up papers: “High-Order Spatio-Temporal Coupling of Radiation-Diffusion and Heat Conduction using Jacobian-Free Newton Krylov Discontinuous Galerkin Method” by Hyeon Kae Park, Robert Nourgaliev, Vincent Mousseau, Richard Martineau and Dana Knoll (INL), and Cassiano de Oliveira (Univ. of New Mexico); and “Analysis of Godiva-IV Delayed-Critical Experiments” by Russ Mosteller (LANL).

#### **ANS 2008 Winter Meeting, Reno, NV**

Please plan to attend the upcoming ANS 2008 Winter Meeting, and RPD sessions in particular. We expect to have a total of 38 papers in 7 sessions. In addition to our standing sessions (Reactor Physics General – 7 papers, Reactor Analysis Methods – 14 papers in 2 sessions, and Reactor Physics Design, Validation and Operating Experience – 7 papers), three special sessions are planned, including one panel: BWR Stability (organizer Albert Gu – 6 papers), Use of Coupled 3D Transport Theory and Depletion Methods in Reactor Physics (organizer Mark DeHart – 4 papers), International Collaboration in Reactor Physics and Engineering Technology Education (panel organizers: Pavel Tsvetkov and Ivan Maldonado).

#### **ANS 2009 Annual Meeting, Atlanta, GA**

Get ready! Submission of summaries will be possible starting November 1, with a deadline of January 9. 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, Recent Progress and Applications of Resonance Calculation Methods). Reviewers will be needed as well. If you would like to be added to the RPD list of reviewers please send your request to Bojan Petrovic at: [Bojan.Petrovic@gatech.edu](mailto:Bojan.Petrovic@gatech.edu).

#### **Special Sessions at Upcoming ANS Meetings**

Please consider organizing a special session at one of the upcoming ANS meetings. The time to propose sessions for the 2009 Winter Meeting is now (i.e., by the 2008 Winter Meeting in Reno, November 2008). Timely special sessions 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. We 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’08 in Interlaken, Switzerland – Reactor Physics under the Alps**

*By Konstantin Foskolos, Organizing Chair*

There was a big crowd at the pier of Interlaken East in the afternoon of September 14, 2008. More than 550 reactor physicists and engineers from 35 countries were queuing to board the “Lötschberg.” A two-hour cruise on the lake of Brienz with the almost 100-years old steam boat marked the opening of PHYSOR’08, the international Conference on Reactor Physics, which this year took place between September 14 and 19 in Interlaken under the motto: “Nuclear Energy – a sustainable resource.”

The Paul Scherrer Institute and the Swiss Nuclear Society had won the bid in autumn 2005 for organizing PHYSOR in 2008 – a year that coincides with PSI’s 20th anniversary and the 50th anniversary of the SNS. During the three years leading up to the conference, a team of more than 20 people from PSI’s Nuclear Energy and Safety Research Department worked hard to prepare for this event in the wonderful frame of the Casino

Kursaal Interlaken. And these efforts were rewarded.

At the opening session under the Chairmanship of the President of the Federal Institute of Technology ETH Zurich, Ralph Eichler and the President of swissnuclear, Peter Hirt, several speakers – among them the Director of the Swiss Federal Office of Energy, the Director of the EU Joint Research Center, the Director of the Japanese Institute for Applied Energy and the Vice-Director for Nuclear Programs at INL – illustrated the world-wide future perspectives of nuclear energy and related nuclear research in the light of tightening climate and energy supply problems.

During the four Conference days, all aspects of reactor physics – from the newest computational methods and experiments, over issues of coupling neutronics with thermal-hydraulics and materials development, up to the safety of Generation IV fuel cycles – were discussed in plenary sessions and over 60 parallel and poster sessions. The high number of young participants – more than 80 graduate and doctoral students from all over the world – was outstanding and refreshing. The Conference was framed by two workshops on Advances and Challenges of Monte Carlo Methods and on Reactors for Actinide Management. And on the last day of the Conference the participants had the opportunity to select among three technical visits: to PSI, to CERN or to the Grimsel Rock Laboratory of the Nagra.

The PHYSOR'08 participants were delighted by both the scientific contents and the perfect organization. And when, after the second day the clouds lifted and the fresh snow cover of the Jungfrau became visible, the success was complete! The people left Interlaken with a nice feeling after a full and enriching week hoping to see each other again at PHYSOR 2010 in Pittsburgh, USA.

#### **Advances in Nuclear Fuel Management (ANFM-IV) – Hilton Head, SC, April 12 – 15, 2009**

*By Ivan Maldonado & Atul Karve, TPC Co-Chairs*



A picture is worth a thousand words. However, before you can enjoy the fourth ANFM meeting to be held in beautiful Hilton Head Island, SC, we need you to submit your 1000 words (reduced-length paper) first! The current deadline for submittal of reduced-length papers is coming up in October 31, 2008. We plan to keep the website open and extend the deadline for additional submittals (up to a point) to provide the opportunity to a few of you who might be procrastinating with your submittals. But, to guarantee you a spot in this conference please act sooner than later. Visit [www.anfm2009.org](http://www.anfm2009.org) for updates and instructions and review the call for papers attached to this newsletter.

#### **2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics - Saratoga Springs, NY May 3 – 7, 2009**

The next Mathematics and Computation topical meeting will take place May 3-7, 2009 at the Saratoga Hilton Hotel in Saratoga Springs, NY. While the original deadline for 1500-word summaries has passed, any summaries received before October 31 will be guaranteed a place in the paper review. We will do our best to accommodate summaries received after October 31, but can make no guarantees. The conference registration portion of the website will become active in January.

There will be a meeting of the topical meeting Technical Program Committee at the 2008 ANS Winter Meeting in Reno, Nevada. It will be held Monday, November 10 at 1:30 pm in the same room as the Current Issues in Computational Methods Roundtable. The Roundtable will follow at 2:30 pm. Check the final Reno conference program for the room name.

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

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

by all segments of the nuclear industry: vendors, utilities, DOE laboratories and universities.

We expect the reactor physics and mechanical engineers communities to get involved and organize special as well as normal sessions. For this purpose, a meeting will be held during the annual ANS meeting in Reno (Nevada, USA) on Sunday, November 9, 2008 from 12:00 p.m. to 1:00 p.m. in the Ruby 1 room. You are encouraged to come with your proposals for any special session that you want to suggest to the PHYSOR 2010 organizing committee. The title of the session, the responsible persons and a brief description of the session is what is required as a proposal. You can also e-mail us your proposal using our website (see below).

PHYSOR 2010 committee is still looking for sponsorship by local and international organizations (scientific societies, companies, universities, research labs ...). If your organization wishes to sponsor PHYSOR 2010, please don't hesitate to contact us.

Important deadlines for the conference are: September 2009, submission of full papers; December 2009, Author notification of acceptance; February 2010, final paper deadline; March 2010, early registration deadline.

If you would like to contribute or help with the technical program, please visit the conference web site (<http://physor2010.org>) where all information and contacts are posted.

### **Wigner Award**

*By Dimitri Cokinos*

Nominations for the 2009 Wigner Award are being sought at this time. The Wigner Award is one of the most prestigious awards of the Society. Nominations for persons who have made significant contributions toward the advancement of the field of Reactor Physics may be made using the appropriate form posted on the ANS website (Honors and Awards) and submitted to the ANS Headquarters. The deadline for applications is April 1st. The candidate need not be a member of the Society or a U.S. citizen.

The Reactor Physics Division is now providing the opportunity for the recipients of the Wigner Award to present a paper in a special lecture series in which the recipient's work is highlighted and discussed by the Wigner honoree and other

contributors. The lectures are embedded in one of the Reactor Physics sessions at the Winter Meeting.

### **Reactor Physics Standards News**

*By Dimitri Cokinos*

Standard ANS-19.3, "Determination of Steady-State Neutron Reaction Rate Distributions and Reactivity of Nuclear Power Reactors" was issued in 2005. The Working Group has already started planning the revision of this standard. The revision will include a number of updates are planned and the Appendix will be expanded.

Standard ANS 19.3.4 "The Determination of Thermal Energy Deposition Rates in Nuclear Reactors" was issued in 2002. Currently there is no Working Group. D. Cokinos volunteered to chair the WG of this standard so that a revision may be initiated in a timely manner.

ANS 19.4 "A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification" Similar to ANS-19.3.4, D. Cokinos will temporarily chair the Working Group

ANS 19.6.1 "Reload Startup Physics Tests for PWRs" This standard is in the process of being revised. A draft for ANS 19 review is expected to be ready by the end of 2008.

ANS 19.11 "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Water Moderated Power Reactors" Standard under revision. A draft of the revision will be distributed for ANS 19 review.

ANS 5.1 "Decay Heat Power in LWRs" The working group is investigating possible revisions.

ANS 19.10 "Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals." This standard has already been submitted for review and approval by the Consensus Committee, N-17.

ANS 19.12 "Nuclear Data for Radioisotope Production Calculations for Medical and Other Applications" The PINS form has been approved. Measurements will be reviewed and recommended values for the thermal cross section and resonance integral of selected nuclides will be included in the standard. The newly constituted Working Group has already begun working on the standard.

## RPD Financial Report

By Bob StClair

Contrary to the current economic conditions in the U.S. and many countries throughout the world, the Reactor Physics Division is enjoying a very healthy balance sheet. As the enclosed abbreviated table shows, our end of year balance is projected to be \$27,893! This is the result of 1) continued low operating expenses for RPD, 2) excellent participation in ANS national meetings by RPD members and the associated support provided from ANS Headquarters, 3) a self-sustaining scholarship fund and, 4) an increase in membership allocation from \$1 to \$2 for every member of RPD. To top things off, we also experienced an increase in membership going from 1651 to 1717 members!

Budget Funds	
Current Year Member Alloc.	3434
Carry Forward, Prior Year	29059
Other Budget Funds	0
Total Budget Funds	32493

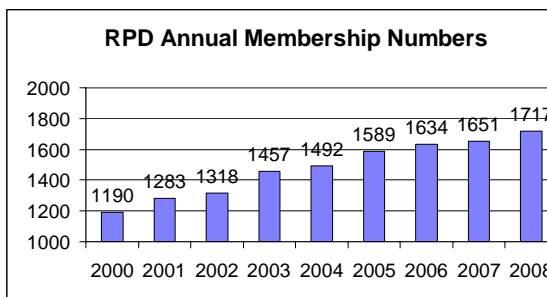
Budget Expenses	
Newsletters	0
Awards, Plaques	100
National Meeting Costs	0
Division Officers Expense	0
Student Support	4500
Scholarship/NEED Funding	0
Other Expenses	0
Total Expenses	4600

Excess (Deficiency) of	27893
Budget Funds over Expense	

Those of you who don't keep up with RPD's Executive Committee meetings may be asking what we are doing with the additional funds we are receiving. The most significant changes have been to provide financial support for potential future members of RPD. Specifically, in addition to the existing graduate scholarship we will begin awarding an undergraduate scholarship from the Henry/Greebler Scholarship funds and we have increased our support of student travel to the national ANS meetings. Other changes under consideration would provide benefits more directly to members of RPD. These include supporting electronic availability of ANS publications and upgrading the RPD website to improve its accessibility and maintain it current. As always, your input is highly valued and participation at RPD Executive Committee meetings is encouraged!

### Membership by the Numbers

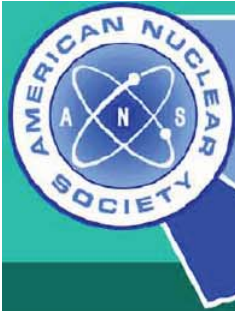
The figure below illustrates the steady growth experienced by our division. Since the year 2000, our membership has grown by 44%.



### Reactor Physics Division Website

<http://rpd.ans.org>

Announcements  
Bylaws, Charter, Goals  
Meeting Minutes  
Newsletters



Conference web site [anfm2009.org](http://anfm2009.org)

# ANFM IV

Hilton Head Island, SC

April 12-15, 2009

## Advances in Nuclear Fuel Management IV

*Addressing a broad spectrum of front-end nuclear fuel management activities, within the context of reactor physics and fuel cycle economics.*

### Projected Technical Sessions

Generation-IV Design Concepts  
Reactor-Based Plutonium Disposition  
High enrichment >5wt% UO<sub>2</sub> studies  
Extended Fuel Cycles and Economic Analysis  
Fuel and Core Design Based On Thorium Cycles  
Innovative Core Loading Strategies and Methods  
Error quantification of core simulation capabilities  
Utilities Experience In Reload Design and Licensing  
Research Reactor Topics – fuel management practices  
Nuclear data needs to enhance core simulation fidelity  
Experiences and Advances In On-Line Core Monitoring  
Validation of Core Analysis Tools for Fuel Management  
Advanced Fuel Assembly and Burnable Absorber Designs  
Addressing Practical Design Constraints On Fuel Management  
Advanced fuel management and multi-dimensional burnup analysis  
Management, Design, and Operation Issues of Advanced Reactor Fuels  
Monte Carlo based Depletion and Full Core Analysis: New Developments and Issues  
Utilization of zero power physics tests and core follow data to enhance core simulation fidelity  
And many more (See conference Web site [anfm2009.org](http://anfm2009.org))

### Important Dates

#### Call for Papers:

May 1, 2008

#### Summaries Due:

Oct. 31, 2008

#### Final Papers Due:

Feb. 13, 2009

### Projected Panel Discussions

Zero Ten - Zero fuel leakers by 2010  
Adequacy of Methods for Nuclear Fuel Management  
World Perspective On Nuclear Fuel Management Needs

Additional details at the conference Web Site: <http://anfm2009.org/>

## ANS Reactor Physics Division Executive Committee

2008 - 2009 REACTOR PHYSICS DIVISION OFFICERS		
<b>INCOMING CHAIR</b>		<b>VICE CHAIR/CHAIR ELECT</b>
Mr. Jeffrey L. Bradfute, P.E. Westinghouse Electric Company Nuclear Fuel Business Unit 5801 Bluff Road Columbia, SC 29250 Telephone: 803-647-2080 Fax: 803-695-3971 E-Mail: bradfujl@westinghouse.com		Mr. Robert R. St. Clair Duke Energy PO Box 1006 Mail Code EC08G Charlotte, NC 28201-1006 Telephone: 704-382-6820 Fax: 704-382-7852 E-Mail: brstclair@duke-energy.com
<b>TREASURER</b>		<b>SECRETARY</b>
Dr. G. Ivan Maldonado University of Tennessee 311 Pasqua Engineering Knoxville, TN 37996-2300 Telephone: 865-974-7562 Fax: 865-974-0668 E-Mail: ivan.maldonado@utk.edu		Dr. Benoit Forget Massachusetts Institute of Technology 77 Massachusetts Ave, Room 24-214 Cambridge, MA 02139 Telephone: 617-253-1655 E-Mail: bforget@mit.edu
EXECUTIVE COMMITTEE		
2009	2010	2011
Dr. Kenneth S. Kozier Atomic Energy of Canada Ltd Chalk River Laboratories Stn. E3 Chalk River Ontario K0J 1J0, CANADA Telephone: 613-584-881x5059 E-Mail: kozierk@aecl.ca	Mr. Paul G. Edelmann, P. E. 545 Navajo Road Los Alamos, NM 87544-2625 Telephone: 505-667-2938 Fax: 505-665-2897 E-Mail: edelmann@lanl.gov	Dr. Germina Ilas Oak Ridge National Laboratory PO Box 2008 MS 6172 Oak Ridge, TN 37831-6172 Telephone: 865-241-4672 E-Mail: ilasg@ornl.gov
Dr. Michael Todosow Brookhaven National Lab. Bldg. 475B 12 S. Upton Road PO Box 5000 Upton, NY 11973-5000 Telephone: 631-344-2445 Fax: 631-344-7650 E-Mail: todosowm@bnl.gov	Mr. Simone Santandrea 143 Avenue du General Leclerc 78220 Viroflay, FRANCE Telephone: 003301308178 Fax: 003301163089630 E-Mail: simone.santandrea@cea.fr	Dr. Eleodor M. Nichita University of Ontario Inst. of Tech Schl of Energy Systems and Nucl. Sci. 2000 Simcoe Street North Oshawa, Ontario L1H 7K4, CANADA Telephone: 905-721-8668x2968 Fax: 905-721-3046 E-Mail: eleodor.nichita@uoit.ca
Dr. Pavel Hejzlar Massachusetts Inst. of Tech. 77 Massachusetts Ave Bldg. 24 Rm. 215 Cambridge, MA 02139 Telephone: 481-777-1732 Fax: 617-258-8863	Mr. Keith J. Drudy Westinghouse Electric Company Nuclear Fuel Business Unit P.O Box 355 Pittsburgh, PA 15230-0355 Telephone: 412-374-5841 Fax: 412-374-2284 E-Mail: drudyk@westinghouse.com	Dr. Ronald J. Ellis 1153 Oak Haven Rd. Knoxville, TN 37932 Telephone: 865-574-6107 Fax: 865-574-9619 E-Mail: ellisrj@ornl.gov
	Dr. Kostadin N. Ivanov Penn State University 206 Reber Building State College, PA 16803-3453 Telephone: 814-865-0040 Fax: 814-865-8499 E-Mail: Kni1@psu.edu	
PROGRAM	STANDARDS/HONORS&AWARDS	SCHOLARSHIP/GOALS&MEMBERSHIP
Dr. Bojan Petrovic Georgia Institute of Technology G.W. Woodruff School Nuclear & Radiological Engineering Atlanta, GA 30332-0405 Telephone: 404-894-8173 Fax: 404-894-8496 E-Mail: bojan.petrovic@gatech.edu	Dr. Dimitrios Cokinos Brookhaven National Laboratory Building 130 Upton, NY 11973-5000 Telephone: 516-344-2146 Fax: 516-344-3957 E-Mail: cokinos@bnl.gov	Dr. Jess Gehin Oak Ridge National Laboratory 2218 Brighton Farms Blvd. Knoxville, TN 37932-1400 Telephone: 865-576-5093 Fax: 865-574-9619 E-Mail: gehinjc@ornl.gov
IMMEDIATE PAST CHAIR	PAST-PAST CHAIR	
Dr. Farzad Rahnama Naz Consulting LLC 8640 Sentinae Chase Dr Roswell, GA 30076-4468 Telephone: 404-451-4686 Fax: 770-557-5211 E-Mail: farzad@nazconsulting.com	Dr. Benjamin Rouben Atomic Energy of Canada, Limited Sheridan Science and Technology Park Mississauga, Ontario CANADA Telephone: 905-823-9060 Fax: 905-822-0567 E-Mail: roubenb@aecl.ca	



## ANS Reactor Physics Division Program Committee

### Chair

**Prof. Bojan Petrovic**  
 Georgia Institute of Technology  
 Nuclear & Radiological Engineering / Medical Physics  
 Programs  
 George W. Woodruff School  
 771 Ferst Dr. NW  
 Atlanta GA 30332-0405  
 Phone: (404) 894-8173, Fax: (404) 894-8496  
 Email: [Bojan.Petrovic@gatech.edu](mailto:Bojan.Petrovic@gatech.edu)

### Alternate

**Dr. G. Ivan Maldonado, Associate Professor**  
 Department of Nuclear Engineering  
 University of Tennessee  
 311 Pasqua Engineering  
 Knoxville, TN 37996-2300  
 Phone: (865) 974-7562  
 Fax: (865) 974-0668  
 Email: [Ivan.Maldonado@utk.edu](mailto:Ivan.Maldonado@utk.edu)

2006/2009	2007/2010	2008/2011
<p><b>Mark D. DeHart, Ph.D.</b>                      Reactor Analysis Group, Nuclear                      Science and Technology Division                      Oak Ridge National Laboratory                      Phone: (865) 576-3468                      Fax: (865)                      E-mail : <a href="mailto:dehartmd@ornl.gov">dehartmd@ornl.gov</a></p>	<p><b>Dr. Fausto Franceschini, Senior                      Engineer</b>                      Westinghouse Electric Company, LLC                      Science and Technology Department                      1344 Beulah Road                      Pittsburgh, PA 15235-5083                      Phone: (412) 374-4461, (412) 256-1250                      Fax: (412) 256-2444                      Email: <a href="mailto:FranceF@westinghouse.com">FranceF@westinghouse.com</a></p>	<p><b>Dr. Benoit Forget, Assistant Professor</b>                      Massachusetts Institute of Technology                      77 Massachusetts Ave.                      Room 24-214                      Cambridge, MA 02139                      Phone: (617) 253-1655                      Email: <a href="mailto:bforget@mit.edu">bforget@mit.edu</a></p>
<p><b>Dr. Young S. Ham</b>                      Lawrence Livermore National Lab                      Chemical Biology &amp; Nuclear Science                      P.O. Box 808, L-235                      Livermore, CA 94551                      Phone: (925) 423-2474                      Fax: (925) 422-3570                      Email: <a href="mailto:ham4@LLNL.GOV">ham4@LLNL.GOV</a></p>	<p><b>Ugur Mertuyrek</b>                      Global Nuclear Fuel                      P.O. Box 780, M/C F12                      Wilmington, NC 28402                      Phone:                      Fax:                      Email: <a href="mailto:ugur.mertuyrek@gnf.com">ugur.mertuyrek@gnf.com</a></p>	<p><b>Dr. Hansem Joo, Fellow Engineer</b>                      Bettis Atomic Power Laboratory                      Reactor Technology                      PO Box 79                      West Mifflin, PA 15122-0079                      Phone: (412) 476-5242                      Fax: (412)476-6305                      Email: <a href="mailto:joo@bettis.gov">joo@bettis.gov</a></p>
<p><b>Dr. Albert G. Gu</b>                      AREVA NP Inc                      2101 Horn Rapids Rd.                      Richland, WA 99352                      Phone: (509) 375-8509                      Fax: (509) 375-8402                      Email: <a href="mailto:Albert.Gu@areva.com">Albert.Gu@areva.com</a></p>	<p><b>Andrew H. Nicholson</b>                      Lead Nuclear Core Designer                      Nuclear Analysis and Fuel Department                      Dominion                      5000 Dominion Blvd                      Glen Allen, VA 23060                      Phone: (804) 273-2261                      Fax:                      Email: <a href="mailto:Andrew.Nicholson@dom.com">Andrew.Nicholson@dom.com</a></p>	<p><b>Dr. Deokjung Lee</b>                      Studsvik Scandpower, Inc.                      504 Shoup Avenue, Suite 201                      Idaho Falls, ID 83402                      Phone: (208) 522 9854                      Email:  <a href="mailto:Deokjung.Lee@studsvikscandpower.com">Deokjung.Lee@studsvikscandpower.com</a></p>
<p><b>Szelim Kong</b>                      Bechtel Bettis, Inc.                      Bettis Atomic Power Laboratory                      PO Box 79                      West Mifflin, PA 15122-0079                      Phone: (412) 476-5945                      Fax:                      Email: <a href="mailto:szelim@comcast.net">szelim@comcast.net</a></p>	<p><b>David W. Nigg, D.Eng. PE</b>                      Manager, Reactor and Nuclear Physics                      Idaho National Laboratory                      P.O. Box 1626, MS 3860                      Idaho Falls, Idaho, 83415-3860                      Phone: (208) 526-7627                      Fax: (208) 526-2930                      Email: <a href="mailto:David.Nigg@inl.gov">David.Nigg@inl.gov</a></p>	<p><b>Dr. Mohamed Ouisloumen</b>                      Westinghouse Electric Company                      Nuclear Fuel Business Unit                      P.O. Box 355                      Pittsburgh, PA 15230-0355                      Phone: (412) 374-5841                      Fax: (412) 374-2284                      Email: <a href="mailto:ouislom@westinghouse.com">ouislom@westinghouse.com</a></p>
<p><b>Dr. Ronald J. Ellis</b>                      Nuclear Science and Technology                      Div                      Oak Ridge National Laboratory                      P.O. Box 2008, 1 Bethel Valley                      Road                      Oak Ridge, TN 37831-6172                      Phone: (865)574-6107                      Fax: (865)574-9619                      Email: <a href="mailto:ellisrj@ornl.gov">ellisrj@ornl.gov</a></p>	<p><b>Dr. Pavel V. Tsvetkov, Assistant                      Professor</b>                      Texas A&amp;M University                      Department of Nuclear Engineering                      129 Zachry Engineering Center                      3133 TAMU                      College Station, TX, 77843-3133                      Phone: (979) 845-7078                      Fax: (979) 845-6443                      Email: <a href="mailto:tsvetkov@tamu.edu">tsvetkov@tamu.edu</a></p>	<p><b>Prof. Dubravko Pevec</b>                      University of Zagreb                      Department of Applied Physics                      Unska 3                      10000 Zagreb, Croatia                      Phone : +385-1-6129-667                      Fax : +385-1-6129-605                      Email: <a href="mailto:Dubravko.Pevec@fer.hr">Dubravko.Pevec@fer.hr</a></p>
<p><b>Dr. Michael Scott McKinley</b>                      Defense and Nuclear Technologies                      Lawrence Livermore National Lab                      L-95 LLNL, 7000 East Ave.                      Livermore, CA 94551                      Phone: (925) 424-2738                      Fax: (925) 424-6163                      Email: <a href="mailto:mckinley9@llnl.gov">mckinley9@llnl.gov</a></p>	<p><b>Dr. Akio Yamamoto, Associate                      Professor</b>                      Department of Material, Physics and                      Energy Engineering                      Graduate School of Engineering, Nagoya                      University                      Furo-cho, Chikusa-ku, Nagoya-shi, 464-                      8603, Japan                      Phone: +81-52-789-5121                      Fax: +81-52-789-3608                      Email: <a href="mailto:a-yamamoto@nucl.nagoya-u.ac.jp">a-yamamoto@nucl.nagoya-u.ac.jp</a></p>	<p><b>Dr. Zhaopeng Zhong</b>                      Argonne National Laboratory                      9700 South Cass Ave.                      Argonne, IL 60439-4814                      Email: <a href="mailto:zzhong@anl.gov">zzhong@anl.gov</a></p>