

FOREWORD

SPECIAL ISSUE ON THE INTERNATIONAL TOPICAL MEETING ON REACTOR PHYSICS PHYSOR 2012

Guest Editor

GERMINA ILAS
Oak Ridge National Laboratory

This special issue of *Nuclear Technology* features selected papers from the American Nuclear Society (ANS) 2012 International Topical Meeting on Reactor Physics (PHYSOR 2012), which was hosted by the Oak Ridge/Knoxville Local Section of the ANS in Knoxville, Tennessee, in April 2012. The theme of this meeting was “Linking Research, Industry, and Education.” Jess Gehin from Oak Ridge National Laboratory (ORNL) and Ivan Maldonado from the University of Tennessee served as general chairs, and Ron Ellis from ORNL was the technical chair of the conference.

PHYSOR 2012 was a successful international conference. Approximately half of the 491 participants were affiliated with various international organizations, and the other participants were from the United States. The conference provided a fruitful forum for exchanging ideas over a breadth of topics including advances in reactor analysis methods, fuel and reactor core designs, fuel cycle physics, reactor materials, multiphysics simulations, reactor kinetics, safety analysis, and education in reactor physics.

Long before the paper submission deadline, the PHYSOR 2012 organizing committee planned to pursue the publication of relevant PHYSOR 2012 papers in special issues in two ANS journals, *Nuclear Science and Engineering* (NSE) and *Nuclear Technology* (NT). In this effort, the committee had the full cooperation of the Editors of these two journals, who generously provided their support in planning and organizing these special issues. A total of 375 papers were accepted for presentation at PHYSOR 2012 and for inclusion in the conference proceedings from the 445 papers that were received and underwent review. Based solely on the PHYSOR 2012 reviewers’ recommendations for journal publication and reviewers’ scores for the papers, as available from the full paper review process, the PHYSOR 2012 organizing committee selected a number of papers that were submitted to the NSE and NT Editors for consideration.

After the PHYSOR 2012 meeting was concluded, 30 authors were invited to submit their papers to *Nuclear Technology* for consideration. For those authors who accepted the invitation, an additional review of their submitted papers was performed by two reviewers chosen by the Editor, in accordance with the journal’s normal peer review process.

We hope that this special issue will constitute a valuable reference to support research and development activities of nuclear scientists and engineers as well as to provide a beneficial source of information for the in-training of a future generation of professionals in the field. We wish to express our deepest gratitude to reviewers for their outstanding effort and to extend special thanks to the Editor of *Nuclear Technology*, Dr. Nicholas Tsoulfanidis, for his generous support in making this special issue possible.