

# FOREWORD

## SPECIAL ISSUE ON THE 18TH TOPICAL MEETING OF THE ANS RADIATION PROTECTION AND SHIELDING DIVISION (RPSD 2014)

*Guest Editors*

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The 18th Topical Meeting of the American Nuclear Society's Radiation Protection and Shielding Division (RPSD 2014) was held in Knoxville, Tennessee, on September 14–18, 2014. In total 106 technical papers were presented at RPSD 2014. This special issue of *Nuclear Technology* contains a sampling of the best papers from RPSD 2014, which have been expanded to full-length, peer-reviewed papers.

The technical program of RPSD 2014 was broken into four broad tracks—Health Physics, Medical Physics, Radiation Transport Methods and Nuclear Data, and Shielding and Radiation Protection Applications—and the papers in this special issue represent submissions from each of these tracks. These papers cover topics from radiation protection in space and measuring secondary particle production from charged particles seen in the space environment to Monte Carlo simulations of background radiation and analog simulations of neutron detectors. Two topics that have recently formed a unique synergy, and which were well represented at RPSD 2014, are hybrid radiation transport methods and radiation transport analyses of fusion facilities. Hybrid radiation transport methods are pushing the boundaries of deep-penetration shielding analyses with detailed Monte Carlo simulations, which are needed for large facilities like ITER. This synergy is clearly illustrated by a few of the papers in this special issue.

On behalf of all the RPSD 2014 organizers—Larry Townsend, General Chair; Irina Popova, Assistant General Chair; and Ahmad Ibrahim, Publications Chair—we would like to thank everyone that attended RPSD 2014 and made it such a success. We would also like to particularly thank the members of the Technical Program Committee who helped review summaries submitted to the meeting and full-length papers for this special issue of *Nuclear Technology*.