

# Nuclear Science and Engineering

VOLUME 182 · NUMBER 3 · MARCH 2016

## Contents

### TECHNICAL PAPERS

- 263** Effects and Modeling of Power History in Thorium-Based Fuels in Pressure-Tube Heavy Water Reactors  
*Blair P. Bromley, Geoffrey W. R. Edwards, Pranavan Sambavalingam*
- 287** Mesh-Free Simulation of Aerosol Evolution  
*Shawn A. Campbell, John Palsmeier, Sudarshan K. Loyalka*
- 297** Higher-Order Chebyshev Rational Approximation Method and Application to Burnup Equations  
*Maria Pusa*
- 319** Hydrodynamically Developing and Fully Developed Laminar Flows in a Semicircular Duct: Analytical and Computational Analyses  
*Sai K. Mylavaram, Xiaodong Sun, Richard N. Christensen*
- 332** SCALE Continuous-Energy Eigenvalue Sensitivity Coefficient Calculations  
*Christopher M. Perfetti, Bradley T. Rearden, William R. Martin*
- 354** Development of a Generalized Perturbation Theory Method for Sensitivity Analysis Using Continuous-Energy Monte Carlo Methods  
*Christopher M. Perfetti, Bradley T. Rearden*
- 369** An Implicit Correlation Method for COMET Core Eigenvalue Uncertainty Analysis  
*Dingkang Zhang, Farzad Rahnema*
- 377** The Use of Nuclear Data as Nuisance Parameters in the Integral Data Assimilation of the PROFIL Experiments  
*E. Privas, P. Archier, C. De Saint Jean, G. Noguere, J. Tommasi*