Nuclear Science and Engineering

VOLUME 199 · NUMBER 9 · SEPTEMBER 2025

Contents

RESEARCH ARTICLES

- **1365** Two-Step Monte Carlo Calculation Method for Sensitivity Coefficients of Reactor Period with Respect to Kinetics Parameters *Toshihiro Yamamoto, Hiroki Sakamoto*
- **1376** Moment Asymptotics for the Neutron Transport Equation *Eric Dumonteil, Emma Horton, Andreas E. Kyprianou, Andrea Zoia*
- **1391** Performance Improvement of Weight Window Method by Incorporating DXTRAN Zhanpeng Huang, Yunki Jo, Qingming He, Liangzhi Cao, Hongchun Wu, Deokjung Lee
- 1406 Mass Yield Distribution in the Quasi-Mono-Energetic Neutron-Induced Fission of ²³⁸U H. Naik, Meghna Karkera, Vibha Vansola, Santhi Sheela Yeraguntla, Mayur Mehta, S. V. Suryanarayana, R. Makwana, S. C. Sharma
- 1425 CFD Investigations to Understand Thermal Performance of Helically Rifled Heat Transfer Enhancements in Molten Salt Applications James R. Vulcanoff, Ryan P. McGuire, Lane B. Carasik
- 1441 Experimental Study of Transient Behavior of a Passive Air-Cooled Containment System Relevant to Advanced Nuclear Reactor *Yogesh R. Pawar, A. K. Nayak, A. K. Dureja, P. P. Kulkarni*
- 1458 Characterization of Pipe Wall Vibration and Acoustic Radiation Induced by Leakage Jet Impingement Yu Jiang, Genshan Jiang, Xinlu Liu, Jianhao Sun
- 1473 A Practical Comparison of Data-Driven Prognostics Methods for Energy Systems Ark O. Ifeanyi, Jamie B. Coble
- 1492 CANDU Station Blackout D-PSA with RAVEN and TRACE Software Nikolai Vododokhov, Kendall Erlandson, David R. Novog
- **1512** Crack-Tip Constraint Analysis of the Dissimilar Metal-Welded Joint and Constraint Match with Test Specimens *Lingyan Zhao, Bin Yang, Yuchun Sun*

-continued

(SANS)

Contents continued

VOLUME 199 · NUMBER 9 · SEPTEMBER 2025

- **1528** Caustic Neutralization and Precipitation of Acidic Dissolved Simulated Stainless Steel-Clad Plutonium and Plutonium/Uranium Nuclear Fuel *M. S. Mills, J. M. Gogolski, T. S. Rudisill*
- **1546** Introduction, Investigation, and Experimental Validation of a Novel Passive Neutron Spectrometer Zachary T. Condon, Daniel Siefman, Paul Maggi, Paige Witter, Richard Vasques