

# NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 92, NUMBER 2, FEBRUARY 1986

## CONTENTS

### TECHNICAL PAPERS

- |     |   |  |
|-----|---|--|
| 179 | Projected Discrete Ordinates Methods for Numerical Transport Problems   | <i>Edward W. Larsen</i>                          |
| 186 | Nonlinear Diffusion Synthetic Acceleration Difference Schemes for Radiative Transfer Applications                         | <i>Bradley A. Clark</i>                          |
| 192 | Augmented Weighted-Diamond Form of the Linear-Nodal Scheme for Cartesian Coordinate Systems                               | <i>Wallace F. Walters</i>                        |
| 197 | Discontinuous Finite Element Method for Solving the Two-Dimensional Neutron Transport Equation on Lagrangian Meshes       | <i>G. Samba</i>                                  |
| 204 | Finite Element Formulations of Nodal Schemes for Neutron Diffusion and Transport Problems                                 | <i>E. Del Valle, J. P. Hennart,<br/>D. Meade</i> |
| 212 | The $DC_N-S_N$ Hybrid Method for Neutron Transport Calculations in $(r-z)$ Geometry                                       | <i>Yoichi Watanabe,<br/>Charles W. Maynard</i>   |
| 218 | Linear Discontinuous Finite Elements for Phase-Space Multidimensional Transport Calculations                              | <i>M. Mordant</i>                                |
| 228 | Use of Multidimensional Transport Methodology on Nuclear Logging Problems   | <i>John J. Ullo</i>                              |
| 240 | Interface Current Method for Cluster Geometry   | <i>G. Marleau, A. Hébert</i>                     |
| 247 | A Transport Multicell Method for Two-Dimensional Lattices of Hexagonal Cells  | <i>Richard Sanchez</i>                           |
| 255 | Refinement of the Substructure Method for Integral Transport Calculations   | <i>Žarko Stankovski</i>                          |
| 261 | A Generalization of the Livolant-Jeanpierre Theory for Resonance Absorption Calculation                                   | <i>P. Reuss</i>                                  |
| 267 | Internal Interface Perturbations: Calculational Method Using the Eigenvalue Implicit Expansion of the Conditioned Problem | <i>J. Porta, J. Y. Doriath,<br/>B. Martinet</i>  |
| 272 | Solution of the One-Group Time-Dependent Neutron Transport Equation in an Infinite Medium by Polynomial Reconstruction    | <i>B. D. Ganapol</i>                             |

(Continued)

VOLUME 92, NUMBER 2, FEBRUARY 1986

## CONTENTS

(Continued)

- |     |  |  |
|-----|--|--|
| 280 | Monte Carlo Techniques for Analyzing Deep-Penetration Problems       | <i>S. N. Cramer, J. Gonnord,<br/>J. S. Hendricks</i>                         |
| 289 | Review of Monte Carlo Techniques for Analyzing Reactor Perturbations | <i>H. Rief, E. M. Gelbard,<br/>R. W. Schaefer, K. S. Smith</i>               |
| 298 | Vectorization of the KENO-IV Code                                    | <i>Kiyoshi Asai, Kenji Higuchi,<br/>Jun-ichi Katakura,<br/>Yutaka Kurita</i> |
| 308 | Thermal-Hydraulic Methods in Fast Reactor Safety                     | <i>David P. Weber,<br/>Laural L. Briggs</i>                                  |
| 330 | On Trial Functions in the Nested Element Method                      | <i>D. V. Altiparmakov</i>  |

## COMPUTER CODE ABSTRACTS

- |     |  |   |
|-----|--|---|
| 338 | The Integrated TIGER Series (ITS) of Coupled Electron/Photon Monte Carlo Transport Codes | <i>J. A. Halbleib,<br/>T. A. Mehlhorn</i> |
| 339 | TEMPS  | <i>B. D. Ganapol</i>                      |