

NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 83, NUMBER 1, JANUARY 1983

CONTENTS

TECHNICAL PAPERS

- | | | |
|-----|---|---|
| 1 | Gravity-Driven Flow and Heat Transfer in a Spent Nuclear Fuel Storage Pool | <i>Rodney R. Gay</i> |
| 13 | Neutron Emission Cross Sections at 25.7 MeV: ^{51}V , ^{56}Fe , ^{65}Cu , ^{93}Nb , and ^{209}Bi | <i>A. Marcinkowski,
R. W. Finlay,
G. Randers-Pehrson,
C. E. Brient, R. Kurup,
S. Mellema, A. Meigooni,
R. Tailor.</i> |
| 22 | Measurement of the ^{241}Am Neutron Fission Cross Section | <i>J. W. T. Dabbs,
C. H. Johnson,
C. E. Bemis, Jr.</i> |
| 37 | Correction of Multigroup Cross Sections for Resolved Resonance Interference in Mixed Absorbers | <i>M. L. Williams</i> |
| 50 | Critical Experiments on Gadolinium Poisoned Cluster-Type Fuel Assemblies in Heavy Water Lattices | <i>Toshio Wakabayashi,
Isao Minatsuki</i> |
| 63 | Inverse Problem Calculations for Multigroup Diffusion Theory | <i>R. Sanchez,
N. J. McCormick</i> |
| 72 | Perturbation Theory in the Diffusion Approximation | <i>G. C. Pomraning</i> |
| 75 | Ordinary and Generalized Eigenvectors of Low-Order S_n -Diamond-Difference Transport Operators | <i>W. L. Filippone,
R. Conversano</i> |
| 90 | On Numerical Solutions of Transport Problems in the Diffusion Limit | <i>Edward W. Larsen</i> |
| 100 | Solving the Uncommon Nuclear Reactor Core Neutronics Problems | <i>D. R. Vondy,
T. B. Fowler</i> |

(Continued)

VOLUME 83, NUMBER 1, JANUARY 1983

CONTENTS

(Continued)

- | | | |
|-----|--|---|
| 112 | Adjoint Sensitivity Analysis of Extremum-Type Responses in Reactor Safety | <i>D. G. Cacuci,
P. J. Maudlin,
C. V. Parks</i> |
| 136 | Optimal Control for Xenon Spatial Oscillations in Load Follow of a Nuclear Reactor | <i>Nam Zin Cho,
Lawrence M. Grossman</i> |
| 149 | The Influence of Energy Group Structure and Nonlinearities on the Calculation of Xenon-Induced Flux Oscillations | <i>J. D. Teachman,
R. J. Onega</i> |
| 162 | Estimates of Neutron-Induced Radionuclide Populations | <i>George Patrick Lasche</i> |

TECHNICAL NOTES

- | | | |
|-----|--|--|
| 174 | Resolved Resonance Parameters for ^{238}U from 4 to 6 keV | <i>D. K. Olsen,
P. S. Meszaros</i> |
|-----|--|--|

BOOK REVIEWS

- | | | |
|-----|---|-----------------------|
| 182 | Nuclear Energy (2nd ed.), Raymond L. Murray | <i>Hugh F. Henry</i> |
| 182 | Introduction to Metallurgical Thermodynamics (2nd ed.), D. R. Gaskell | <i>David O. Welch</i> |

CORRIGENDUM

- | | | |
|-----|---|--|
| 183 | Approximations to Neutron Escape Probability and Dancoff Correction | <i>Y. A. Chao,
M. B. Yarbrough,
A. S. Martinez</i> |
|-----|---|--|

- 184 ANNOUNCEMENT OF CURRENT PUBLICATIONS