

2025 Annual Meeting of the Institute of Nuclear Materials Management (INMM 2025)

Washington, DC, USA
24 - 28 August 2025

ISBN: 979-8-3313-3661-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2025) by Institute of Nuclear Materials Management
All rights reserved.

Printed by Curran Associates, Inc. (2026)

For permission requests, please contact Institute of Nuclear Materials Management
at the address below.

Institute of Nuclear Materials Management
One Parkview Plaza
Suite 800
Oakbrook Terrace, IL 60181
USA

Phone: +1-847-686-2236
Fax: +1-847-686-2253

www.inmm.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

NUCLEAR POWER DEVELOPMENT IN KAZAKHSTAN: CHALLENGES AND OPPORTUNITIES IN STRENGTHENING NUCLEAR AND RADIOLOGICAL SECURITY	1
<i>D. Aben</i>	
ASSESSING THE FEASIBILITY AND RISKS OF SMALL MODULAR REACTOR DEPLOYMENT IN SUB-SAHARAN AFRICA: A GEOPOLITICAL AND SECURITY ANALYSIS.....	4
<i>S. Adu, S.A. Birinkorang, Z. Ndum, C. Marianno, M. Yim</i>	
CLOUD SECURITY FOR NUCLEAR SENSOR NETWORK SECURITY	8
<i>N. Agbemava, K. El-Khatib</i>	
MANAGEMENT OF NUCLEAR MATERIALS IN THE HOSPITAL.....	20
<i>V.A. Chiamaka</i>	
A UNIFIED THREE-DIMENSIONAL EXTENDED FRACTIONAL ANALYTICAL SOLUTION FOR RADIOACTIVE AIR POLLUTANTS DISPERSION	21
<i>N/A</i>	
INSIDER THREATS IN THE NUCLEAR INDUSTRY DURING CONFLICT SCENARIOS	22
<i>N/A</i>	
SAFEGUARDS-BY-DESIGN IN PRACTICE: THE UAE’S APPROACH TO DEPLOYMENT OF NGSS AT BARAKAH NUCLEAR POWER PLANT	26
<i>K. Al Shehhi</i>	
THE EVOLUTION OF FANRS INTEGRATED SAFEGUARDS INSPECTION FRAMEWORK	27
<i>A. Al Suwaidi, C. Frears, S. Brion</i>	
SAFEGUARDS ACTIVITY: QUANTIFICATION OF URANIUM IN FUEL PINS FOUND AT THE ZR6 FACILITY USING DIFFERENT HPGE DETECTORS	34
<i>H. Altamimi, P. Kirchknopf</i>	
UTILIZATION OF NEUTRON ACTIVATION ANALYSIS IN SAFEGUARDS FOR NON-PROLIFERATION OF NUCLEAR MATERIALS, A SYNOPSIS STAGE OVERVIEW	35
<i>A. Amponfi</i>	
PERFORMANCE BENCHMARKING OF THE HYBRID MVHG-COMPOSITIONS-MC MODEL AGAINST ITS STOCHASTIC AND DETERMINISTIC PREDECESSORS	45
<i>L. Annadevula, C. Folan, S.K. Aghara</i>	
ADVANCING NUCLEAR SECURITY THROUGH STRATEGIC SOCIAL MEDIA ENGAGEMENT: A CASE STUDY IN BRAZIL	47
<i>C.M. Araujo</i>	
ROLE OF NUCLEAR SECURITY SYSTEMS IN ENHANCING RADIOACTIVE SOURCE SECURITY IN UGANDA	56
<i>A. Ruth</i>	
NUCLEAR AND CYBERSECURITY IN AFRICA: CURRENT AND FUTURE RISKS	59
<i>E.O. Asare, J.A. Bonney</i>	
AI ASSISTANT WITH PREDICTIVE DECISION-MAKING FOR ENHANCING SECURITY AT INDONESIAN NUCLEAR FACILITIES.....	63
<i>U.K.U.S. Asih, H. Riadi</i>	
ASSESSMENT OF PATIENT RADIATION EXPOSURE IN CHEST AND ABDOMEN X-RAY PROCEDURES IN DIRE DAWA, ETHIOPIA	67
<i>N/A</i>	

SPECTRAL FLAVOR OF THE MONTH: A COLLABORATIVE APPROACH FOR ENHANCING EXPERTISE.....	68
<i>M. Iyer, D. Mercer, J. Auxier, B. Jennings</i>	
HANDLING RADIOACTIVE WASTE MADE OF GRAPHITE - CUTTING EDGE WASTE MANAGEMENT TECHNOLOGY	72
<i>N/A</i>	
FRONT LINE DEFENSE AGAINST NUCLEAR AND OTHER RADIOACTIVE MATERIAL OUT OF REGULATORY CONTROL	75
<i>A. Aydinian</i>	
INVESTIGATING MUON TOMOGRAPHY FOR SAFEGUARDING GEOLOGICAL REPOSITORIES	79
<i>L. Thompson, C. Steer, J. Saum, K. Aymanns, I. Niemeyer, M. Mandel, M. Mildebrath, A. Martin</i>	
OPTIMIZATION OF SAMPLE/SPIKE RATIO IN IDMS OF HALEU	83
<i>D.S. Balami, A.M.S. Hernandez</i>	
PASSIVE CONFIRMATION OF HIGH EXPLOSIVES USING NEUTRON CAPTURE GAMMA RAYS.....	87
<i>P. Baldez, K. Weinfurther</i>	
RADIOISOTOPE PRODUCTION FEASIBILITY STUDY FOR THE EVINCI MICROREACTOR	88
<i>A.A. Bashir, M. Flaska</i>	
INITIAL DEVELOPMENTS ON A NON-CONTACT INSPECTION SYSTEM FOR NUCLEAR WASTE STORAGE DRUMS	92
<i>I.C. Batista, A. Cattaneo, C.R. Farrar, F.L. di Scalea</i>	
THE ROLE OF ARTIFICIAL INTELLIGENCE IN INFORMATION ANALYSIS AND NUCLEAR VERIFICATION AT THE IAEA	96
<i>S. Baude, P. Schneeweiss, T. Stojadinovic, K. Sylvester, J. Rissanen</i>	
INSIDER THREAT MITIGATION: HOW TO ETHICALLY HARNESS THE POWER OF AI	100
<i>J.A. Baweja, J. Barr, C.L. Murphy</i>	
DEVELOPMENT OF A CONTINUOUS, UNATTENDED QUALITY CONTROL METHOD FOR A PERMANENTLY INSTALLED HOLDUP MEASUREMENT SYSTEM	104
<i>C. Bayne, J. Ruegsegger, S. Branney</i>	
SUMMARY OF RADIATION PORTAL MONITOR TESTING FOR OPERATIONAL PURPOSES	108
<i>J. Bell, A. Enders, A. Okowita</i>	
ROLE OF CODE OF CONDUCT ON THE SAFETY OF RESEARCH REACTORS IN THE NUCLEAR SAFETY OF HIGH-TEMPERATURE GAS-COOLED RESEARCH REACTORS.....	110
<i>P. Betkowski</i>	
SELF ASSESSMENT OF NUCLEAR SECURITY CULTURE IN MALAYSIAN NUCLEAR AGENCY	111
<i>H. Hassan, N.N.W.M.P. Mohd, K.A.B. Ramli, R.Y.T. Loong, H.B. Salleh, I. Mansor</i>	
MANAGING THE NUCLEAR SECURITY RISKS OF NUCLEAR POWER DEVELOPMENT IN WEST AFRICA.....	115
<i>S.A. Birikorang, Y. Mansung, C. Marianno, M. Fuhrmann</i>	
SPATIO-TEMPORAL CHARACTERIZATION OF AL PLASMAS VIA PLANAR LASER- INDUCED FLUORESCENCE	119
<i>J.I. Borrero-Negron, K.C. Hartig</i>	

COMBINED HRGS-TIMS METHOD FOR URANIUM CONCENTRATION MEASUREMENTS IN SOLUTIONS.....	123
<i>A. Bosko, U. Repinc, S. Bulyha</i>	
PROLIFERATION RESISTANCE EVALUATED OVER VARIOUS GRADES OF ENRICHED URANIUM.....	127
<i>B.D. Boyer</i>	
THE PEDDLING PERIL INDEX VISUALIZATION TOOL	131
<i>S. Burkhard, S. Faragasso</i>	
WOMEN IN NUCLEAR: EXPLORING THE IMPACT OF WOMEN IN NUCLEAR (WIN) CHAPTERS IN AFRICA	134
<i>J. Burniske, M. Man, W. Ndubai, A. Yuego</i>	
THE USE OF RADIOLOGICAL TERRORISM SCENARIOS TO IMPROVE INFORMATION RETENTION AND RECALL OF HOMELAND SECURITY UNDERGRADUATES: AN INSTRUCTOR’S PERSPECTIVE.....	136
<i>D.S. Byrne</i>	
COMPRESSIVE THERMAL NEUTRON IMAGING USING AN MC-15.....	137
<i>B. Cabrera-Palmer, M.R. Marshall, P. Marleau, K.M. Kazkaz</i>	
A SIMPLIFIED METHOD FOR LINE BROADENING OF SIMULATED MICROCALORIMETRY	141
<i>J. Cahill, P. Obasi, C. Wojtowicz, K. Hartig, B. Goddard</i>	
ANALYTIC DISCOVERY VENTURE: ADVENTURE	145
<i>N/A</i>	
GOVERNANCE RESILIENCE IN NUCLEAR SECURITY REGIMES: CLARIFYING THE CONCEPT AND ITS STRATEGIC VALUE	147
<i>S.A. Caskey</i>	
DUAL-ENERGY KNOWN MULTIPLICATION ANALYSIS METHOD FOR PASSIVE NEUTRON COINCIDENCE COUNTING	151
<i>L.A. Castellanos, R. McElroy, T. Whiteside, T. Aucott</i>	
STORAGE AND TRANSPORTATION OF HIGH-ASSAY LOW-ENRICHED URANIUM FUEL PEBBLES WITH VERSA-PAC CONTAINERS	154
<i>C. Celik, R. Elzohery, F. Bostelmann</i>	
TEST OF UAV-BASED SECURITY SOLUTION FOR SMRS AT REMOTE SITES	158
<i>A. Chaudhuri, D. Thompson, J. Carr</i>	
HA-AWCC INSTRUMENTAL RESPONSE DURING THE HOT COMMISSIONING FOR CHARACTERISATION OF U-RESIDUE FROM 99MO PRODUCTION PROCESS IN REPUBLIC OF SOUTH AFRICA	162
<i>R. Chauke, T.M. Leshilo, B.R. Masemola, H.M. Boholo, T.B. Marumo, R.D. McElroy</i>	
EDUCATION AND TRAINING FOR THE CAPACITY BUILDING IN THE NUCLEAR SECURITY REGIME MOROCCO	163
<i>A. Chetaine, O. Kabbach, A. Saidi, T. Bouassa</i>	
IN-SITU MONITORING OF FISSILE MATERIALS IN MOLTEN CHLORIDE FAST REACTORS	164
<i>S. Choi, W. Yang, T. Park, J. Kim, S. Choi</i>	
SAFETY AND SECURITY BY DESIGN EVALUATION FOR SODIUM FAST REACTORS	168
<i>R. Christian, C.P. Chwasz, E. Arthur</i>	

ADVANCED REACTOR SAFEGUARDS AND SECURITY: R&D TO SUPPORT THE NUCLEAR INDUSTRY WITH U.S. DEPLOYMENT	172
<i>B. Cipiti, K. Le Blanc, D. Warner</i>	
INSPIRE-BASED COMPUTER SECURITY INCIDENT RESPONSE COURSE	176
<i>S. Clements, M. Rodriguez, D. Sanner, L. Campbell, M. Hewes, D. Christensen, K. Eldrige, G. Landine</i>	
U.S. DEPARTMENT OF ENERGY SUPPORT TO PARTNER COUNTRIES WITH IMPLEMENTATION OF THE AMENDMENT TO THE CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL	180
<i>J. Conner, M. Man, T. Wright</i>	
A PARAMETRIC STUDY OF NEUTRON SIGNATURES FROM UF6 CYLINDERS	183
<i>R.C. Connick, E. Cockram, M.L. Ruch</i>	
OPEN-FIRE EXPERIMENTS FOR IMPROVED GLOVEBOX SAFETY ANALYSIS	187
<i>W. Cook, J. Kimberly</i>	
SCALING INDUSTRIAL OPERATIONS WITH DATA-CENTRIC AI FOR NUCLEAR MATERIALS MANAGEMENT	191
<i>D. Gural, R. Wright, B. Coppola-Millner</i>	
ASSESSING NUCLEAR ENERGY AND RADIOLOGICAL RISKS: A CASE STUDY OF RADIONUCLIDE DISPERSION FROM POTENTIAL NUCLEAR POWER PLANT ACCIDENTS IN GHANA	195
<i>S.A. Birikorang, S. Dahunsi</i>	
ADVANCES IN CYBERSECURITY BY DESIGN LEVERAGING COMPLEMENTARY FRAMEWORKS OF CIE AND TCA	196
<i>M.T. Rowland, S.L. Eggers, J. deCastro</i>	
POL BADGE: DETECTING INSIDER THREAT ACTIVITIES AS WELL AS DEVIATION FROM WORKPLACE PATTERNS-OF-LIFE (POL) IN NUCLEAR REACTOR FACILITIES USING AFFORDABLE PRIVACY-PRESERVING SMART BADGING	197
<i>D. De, C. Young, J. Baldwin, T. Waddle, T. Stinnett, G.M. Thakur</i>	
DEVELOPING A MACHINE LEARNING-BASED VERIFICATION METHOD FOR SUBCRITICAL NUCLEAR TESTS WITH GAMMA SPECTROSCOPY MEASUREMENTS	201
<i>J.D.T. de Lanversin, J. Li, C. Fichtlscherer, D. She, M. Kutt</i>	
HOW AUSTRALIA DOES IAEA SAFEGUARDS AT URANIUM MINES	205
<i>J.L. Dimech, K. Robertson</i>	
IMPACT OF SILICA ON THE MICROSTRUCTURAL PROPERTIES OF FE12.5CR4.5AL Y ₂ O ₃ ODS ALLOY USING POWDER METALLURGY	208
<i>S. Djuliana, I.W. Ngarayana, M. Meireni</i>	
GUIDANCE ON APPLYING THREAT FOR REGULATORY DESIGN IN PRESCRIPTIVE AND PERFORMANCE-BASED NUCLEAR SECURITY REGULATORY FRAMEWORKS	212
<i>D. Donnelly, M. Man, J. Rivers, J. Sandoval</i>	
HIGH PURITY GERMANIUM DETECTOR NORMALIZATION	217
<i>N. Drumm, M. Donart, C. McCullough</i>	
APPLICABILITY OF PASSIVE NEUTRON NON-DESTRUCTIVE ASSAY TECHNIQUE FOR PU QUANTIFICATION IN MOX FUELS CONTAINING MINOR ACTINIDES	221
<i>A. Eguchi, H. Sagara, N. Mitsuboshi, T. Nagatani</i>	
CHALLENGES OF RADIOLOGICAL SECURITY AMIDST NATIONAL SECURITY ISSUES IN A DEVELOPING NATION - A CASE STUDY OF NIGERIA	223
<i>D. Enivweru</i>	

THE LONG GAME	227
<i>T. Erenstein, N. Woodruff</i>	
QUALIFICATION FOR SAFEGUARDS PURPOSES OF UF6 SAMPLING USING ALUMINA – RESULTS OF THE EVALUATION CAMPAIGN OF ABACC-CRISTALLINI METHOD.....	229
<i>A. Esteban, E. Gautier, L.M da Silva, S.F. Moreno, G. Renha, F. Dias, O.P. de Oliveira, D. Amaraggi, P. Mason, M. Soriano, P. Croatto, E. Zuleger, J. Giaquinto, C. Hexel, T. Vercoouter, E. Paredes-Paredes, H. Isnard, S. Richter</i>	
MULTIMODAL ASSESSMENT OF EMPLOYED AND ACCELERATED CORROSION OF SHORT-TERM NUCLEAR MATERIAL STORAGE CONTAINERS AT LOS ALAMOS NATIONAL LABORATORY.....	239
<i>J. Ferrigno, G. Longoria, J. Newton, J. Davis, T. Karns, D. Rios, M. Moore, S. Lukow, J. Duque, T. Stone, J. Gigax</i>	
BARRIERS TO WOMEN SEEKING NUCLEAR RELATED CAREERS: A SURVEY OF WOMEN IN NUCLEAR	243
<i>L. Fiala, Z. Hooman, J. Harris, M. Kofi</i>	
AUTOMATED TABLE FOR INSPECTION AND SURVEILLANCE	255
<i>B. Fleming, S. Lukow, D. Totty, J. Hafen, J. Ruthstrom, M. Manzanares, J. Gigax</i>	
IMPACT OF INTERNATIONAL COOPERATION ASSISTANCE IN ENHANCING NATIONAL REGULATORY FRAMEWORK ON THE SECURITY OF RADIOACTIVE SOURCES IN CAMEROON.....	259
<i>M. Fokou, M.M. Ndontchueng, M. Fokou</i>	
TEMPERATURE DEPENDENCE OF NOISE IN SILICON PHOTOMULTIPLIERS: A COMPARATIVE STUDY	263
<i>J. Fritchie, A.D. Fulvio</i>	
ADVANCES IN MULTILAYER NETWORK MODELING FOR PRESSING COMPLEX PROBLEMS.....	273
<i>S. Gailliot, A. Williams</i>	
THE COOPERATIVE MONITORING CENTER LOOKS BACK AT 30 YEARS OF SCIENCE DIPLOMACY AND FORWARD TO NEW NONPROLIFERATION STRESSORS.....	274
<i>C. Gale, A. Williams</i>	
EMPOWERING THE NEXT GENERATION: A HIGH SCHOOL CURRICULUM IN NUCLEAR SECURITY	275
<i>F.O. Karakas, K. Garba</i>	
RADIOLOGICAL SECURITY BEYOND BORDERS: POLICY INTEGRATION FOR A SAFER WORLD	281
<i>V. Gergiieva</i>	
INTEGRATION OF TPC MONITORING AND CONTROL "LV" AND "HV" SUBSYSTEMS TO THE MULTI-PURPOSE DETECTOR CONTROL SYSTEM	283
<i>V. Chepurinov, Y. Ghoneim, S. Movchan, S. Sokolova</i>	
NEUTRON RADIATION EFFECTS ON THE RELIABILITY OF THE CYCLONE V FPGA DEVELOPMENT BOARD.....	287
<i>Y. Ghaneim, S. Movchan, I. Chepurchenko, R. Isayev, K. Mikhailov, K. Udovichenko</i>	
DETECTABILITY OF COVERT FISSILE MATERIAL PRODUCTION IN NUCLEAR FUSION REACTORS VIA ANTINEUTRINO EMISSIONS	288
<i>A. Glaser, R.J. Goldston, P. Huber</i>	
AN EDUCATIONAL ISOTOPE PRODUCTION PROGRAM: SYNERGY WITH NUCLEAR SECURITY AND NONPROLIFERATION	292
<i>B. Goddard, J. Rojas, S. Phangikaroon, G. Ndip, N. Kalantarians, S. Queen, C. Phelps</i>	

CURRENT DEVELOPMENTS IN A LOW-COST CONTINUOUS HOLDUP MONITOR FOR DUCTWORK AT NUCLEAR FACILITIES	296
<i>K.C. Goetz, B. Witherspoon, N. Prins, L. Crawford, C. Britton, T. Ruland, P. Gibbs</i>	
CAN COMMERCIAL-SCALE URANIUM ENRICHMENT PLANTS BE SAFEGUARDED?	299
<i>R.J. Goldston</i>	
MULTI-VIEW QUANTITATIVE CODED-APERTURE IMAGING OF SPECIAL NUCLEAR MATERIAL.....	301
<i>R. Sobota, S. Brown, B. Kitchen, K. Ziock, K. Schmitt, J. Daughhetee, D. Goodman</i>	
APPLICATION OF A WATER-BASED LIQUID SCINTILLATOR IN ACTIVE INTERROGATION IMAGING AND SPECTROSCOPY	304
<i>C. Graham, S. Clarke, S. Pozzi, I. Jovanovic</i>	
COMPARISON CALCULATIONS OF SUBCRITICAL LIMITS IN ANSI/ANS-8.1	308
<i>T.M. Greene</i>	
RISKING SAFEGUARDS? THE PITFALLS OF THE BOO FINANCE MODEL	312
<i>I. Grigalashvili</i>	
DEVELOPMENT OF A TABLE-TOP NRTA SYSTEM USING A 252CF NEUTRON SOURCE (2) NEUTRON TIME-OF-FLIGHT DEMONSTRATION USING CD, HF & IN THIN SAMPLES	315
<i>C.J.G. Shouop, H. Tsuchiya</i>	
NUCLEAR FORENSIC DATA ANALYTICS	319
<i>N/A</i>	
IMPLEMENTATION OF CYBER-PHYSICAL BLENDED EXERCISES FOR NUCLEAR POWER.....	324
<i>A.S. Hahn, B.R. Liu</i>	
ASSESSING RADIOLOGICAL SECURITY AWARENESS FOLLOWING THE CS-137 RADIOACTIVE DISPOSAL FAILURE INCIDENT IN INDONESIA	328
<i>C.H. Walid</i>	
INNOVATIVE PROTOTYPE DESIGN FOR CALIBRATING RADIATION DETECTORS FOR SAFETY: DETCAL	331
<i>I. Hammami, L. Ounalli</i>	
INSA - KOREA INSTITUTE OF NUCLEAR NONPROLIFERATION AND CONTROL.....	334
<i>N/A</i>	
CASE STUDY OF RADIATION EMERGENCY IN ARMENIA WITH SIGNIFICANT CONTAMINATION AND RADIOLOGICAL CONSEQUENCES	343
<i>K. Haroyan, Y. Gondakyan, A. Amirjanyan</i>	
NCNRM'S SUCCESS STORY IN RECOVERING AND SECURING MORC IN 2024	344
<i>M.H. Hasim, H. Attan, H.A. Rahman, M.R.F. Rosdi, Z. Othman, M.I.A. Ismail, N.H.M. Nor, M.S.A. Jalil</i>	
UNVEILING THE IMPACT OF COMPUTER TOMOGRAPHY ACQUISITION PARAMETERS ON RADIATION DOSE VARIATION	347
<i>I. Hassab, B. Maroufi, E.M. Chakir</i>	
RADIATION SAFETY IN SUDAN.....	352
<i>A.M.E. Hassan</i>	
PROGRESS ON THE REMOVAL OF SURPLUS PLUTONIUM FROM SOUTH CAROLINA – 25217.....	353
<i>G.M. Maxted, L.R. Adams, B.L. Sims, C.R. Hayes</i>	

ZERO-POWER VIBRATION-SENSING AND DISCRIMINATING MICROFLUIDIC SEALS FOR REAL-TIME CLASSIFICATION OF TAMPERING MODALITIES	359
<i>J.E. Heath, T.A. Dewers, A.R. Poerwoprajitno, S.D. Parker, J.A. Harvey, D.L. Huber, S.N. Giles, A.C. Montoya, G.J. Koenig</i>	
HIGH-ASSAY LOW ENRICHED FUEL (HALEU) CYCLE – NEW VERIFICATION APPROACH NEEDED	363
<i>O. Heinonen</i>	
MCNP ANALYSIS OF DETECTOR ARRAY CONFIGURATIONS FOR HANDHELD NEUTRON IMAGING SYSTEMS	364
<i>W. Heriot, R. Lopez, S. Clarke, S. Pozzi</i>	
A NEW PARADIGM IN RADIATION MONITORING FOR NUCLEAR SECURITY USING DRONES	368
<i>J. Hines, B. Stockwell, N. Burchfield</i>	
RISK ASSESSMENT ON RADIOLOGICAL SECURITY AND THREAT OF NUCLEAR MATERIALS: FUZZY BASED INTELLIGENT APPROACH	370
<i>A. Hossain</i>	
MISSING VOICES DISCOURSE ON NUCLEAR SAFETY AND SECURITY: GENDER PERSPECTIVE IN PAKISTAN’S NUCLEAR SAFETY AND SECURITY CULTURE	374
<i>N/A</i>	
EVALUATION OF REINFORCEMENT MOST VULNERABLE PATH TO ENHANCE PHYSICAL PROTECTION SYSTEM FOR RADIOACTIVE SOURCES IN UNIVERSITAS GADJAH MADA’S NUCLEAR ENGINEERING DEPARTMENT USING A STOCHASTIC APPROACH.....	375
<i>M.C.C. Hutama, N.F. Wardaningrum, H. Riadi</i>	
MANAGING RADIOACTIVE MATERIALS IN SCRAP METAL: CASE STUDIES AND BEST PRACTICES	379
<i>A. Ioannidou, G. Kitis</i>	
NUCLEAR SECURITY JUSTICE FOR MAINTAINING GLOBAL PEACE, STABILITY, AND PROLIFERATION RESISTANCE	382
<i>S. Islam</i>	
STRENGTHENING NUCLEAR SECURITY AGAINST COUNTERFEIT AND FRAUDULENT SUPPLY CHAIN INTRUSIONS	386
<i>N/A</i>	
LIGHTNING TALK SUBMISSION FOR THE 66TH ANNUAL MEETING OF THE INSTITUTE FOR NUCLEAR MATERIALS MANAGEMENT – INMM 2025	389
<i>B. Jeffries, M. Liezers, C. Hilton</i>	
PROSPECTS AND CHALLENGES OF RADIOLOGICAL AND NUCLEAR EMERGENCY MANAGEMENT FOR MEDICAL PHYSICISTS	390
<i>M. Joan, A. Bharti, A. Chougule</i>	
NUCLEAR ENERGY LANDSCAPE IN CENTRAL ASIA AND ITS IMPACT ON REGIONAL SECURITY	392
<i>M. Kalinina-Pohl</i>	
A STUDY ON RADIOISOTOPE IDENTIFICATION ALGORITHMS TO ENHANCE CHARACTERIZATION CAPABILITY OF SPECTROSCOPIC RADIATION PORTAL MONITORS IN DISCRIMINATION OF ILLICIT TRAFFICKING OF NUCLEAR MATERIALS FROM NORMS IN GOODS.....	395
<i>E.C. Karanfil, H. Yucel, B. Saygi</i>	

THE CHALLENGES OF IMPLEMENTING POLICIES AND STRATEGIES FOR SPENT FUEL WASTE MANAGEMENT	401
<i>N/A</i>	
INFLUENCE OF SURFACE FEATURES ON SHOCK WAVE DYNAMICS AND PLASMA PLUME EXPANSION IN LASER ABLATION DETONATION SURROGATE STUDIES	402
<i>W. Kersey, J. Borrero, K. Hartig</i>	
PACKAGING DESIGN FOR SAFE DISMANTLEMENT, TRANSPORT, AND STORAGE OF HIGH-ACTIVITY CO-60 SOURCES FROM A RESEARCH IRRADIATOR IN ARMENIA	405
<i>A. Khachatryan</i>	
NUMERICAL ANALYSIS OF PHOTONUCLEAR ACTIVE INTERROGATION BY 7Li(p,γ)8Be GAMMA-RAYS TRIGGERED BY PROTON ACCELERATOR	406
<i>K. Kiatkongkaew, H. Sagara, T. Katabuchi, C. Ishizuka, K. Tanabe, R. Kunitomo</i>	
EMERGING DISRUPTIVE TECHNOLOGIES: DEVELOPING A FRAMEWORK TO EVALUATE THE RISK LANDSCAPE.....	408
<i>K.W. Kliesner, I. Willhite, A.D. Williams</i>	
TRANSPARENCY IN THE TRANSFER OF NUCLEAR MATERIALS AND FUEL BETWEEN NUCLEAR WEAPON STATES AND PREVENTION OF NUCLEAR ARMS EXPANSION	412
<i>Y. Kobayashi</i>	
CHALLENGES FOR EDUCATION AND LEARNING NEEDS ASSESSMENT IN RADIOLOGICAL SOURCE SECURITY	413
<i>N/A</i>	
CUSTOM EQUIPMENT DEVELOPMENT FOR PROCESSING OF SURPLUS PLUTONIUM.....	417
<i>D. Kremetz, L. Davis, D. Dickehuth, G. Hugh</i>	
MODELING SPONTANEOUS FISSION-DRIVEN ISOTOPIC CHANGE IN SUBCRITICAL NUCLEAR SYSTEMS	421
<i>C. Fichtlscherer, J.D.T. de Lanversin, A. Glaser, M. Kutt</i>	
SHIELD TO CHEAT: NUCLEAR WARHEAD OR RADIOACTIVE MATERIAL IN ABSORBING ENCLOSURES?.....	425
<i>E. Lucke, C. Fichtlscherer, M. Kutt</i>	
ENHANCING RADIOISOTOPE IDENTIFICATION IN GAMMA SPECTRA WITH TRANSFER LEARNING.....	429
<i>P. Lalor</i>	
A MAXIMUM-LIKELIHOOD METHOD FOR QUANTITATIVE 3D SOURCE RECONSTRUCTION	433
<i>A. Laminack, K. Schmitt, J. Daughetee, P. Gibbs, F. Gonzalez, A. Steinhebel, T. Whiteside, K.P. Ziock</i>	
OVERCOMING PSYCHOLOGICAL BARRIERS TO REPORTING IN NUCLEAR SECURITY - ENHANCING BEHAVIOR OBSERVATION PROGRAMS JULY 2025	437
<i>J.E. Landers</i>	
ASNO'S VERIFY PROGRAM - REINVIGORATING AUSTRALIAN SAFEGUARDS RESEARCH & DEVELOPMENT	497
<i>M. Lane, M. Brims</i>	
FEASIBILITY STUDY OF CUMUF EVALUATION METHODS IN FUEL FABRICATION PLANTS.....	499
<i>H. Lee, J. Ryu, J.Y. Choi, H.J. Kim, H.Y. Kim, H.C. Lee</i>	
POSSIBILITY OF RADIATION MONITORING FOR SPENT FUEL PROCESS	503
<i>Y.D. Lee, J. Han</i>	

FLOATING NUCLEAR POWER PLANTS, INTERNATIONAL SAFEGUARDS, AND GEOSPATIAL INFORMATION: CHALLENGES AND FUTURE DIRECTIONS	506
<i>O. LeGrone</i>	
IN ORDER TO ENSURE THAT NUCLEAR ENERGY COULD SERVE OUR HUMAN SOCIETY IN A CONTINUOUS AND SAFE WAY, AND IMPORTANT TASK IS TO EFFECTIVELY MAINTAIN NUCLEAR SECURITY	510
<i>N/A</i>	
IMPACT OF NUCLIDE IMPURITIES ON THE SAFETY AND PROLIFERATION RESISTANCE OF PRODUCING HALEU FROM RE-ENRICHED, REPROCESSED URANIUM	514
<i>E.M. Lisowski, H. Sagara</i>	
PEBBLE-BED AND TRISO-FUELED REACTOR NONPROLIFERATION WORKSHOP AT TEXAS A&M UNIVERSITY	517
<i>G. Long, C. Mathew, K. Ragusa, M. Yim, T. DeGuire</i>	
CHARACTERIZATION OF INTERROGATED HIGHLY ENRICHED URANIUM USING AN ORGANIC GLASS HANDHELD DUAL-PARTICLE IMAGING SYSTEM	519
<i>R. Lopez, J. Hutchinson, S.D. Clarke, S.A. Pozzi</i>	
GENERATING GAMMA RAY SPECTRA FOR USE IN A MACHINE LEARNING METHOD TO DIFFERENTIATE BETWEEN HALEU HEU	523
<i>A. Loumis-Demetrakopoulos, T. Simmons, B. Goddard</i>	
DEVELOPMENT OF A CATEGORY I QUANTITY FOR HIGH-ASSAY LOW-ENRICHED URANIUM	525
<i>E.S. Lyman</i>	
SECURITY LEGAL AND REGULATORY CONSIDERATIONS IN THE CONTRACTING OF NEW POWER PLANTS INCLUDING ADVANCED AND SMALL MODULAR REACTORS FOLLOWING A BUILD-OWN-OPERATE AND BUILD-OWN-OPERATE-TRANSFER MODELS	529
<i>J. Burniske, M. Man, C. Noonan, M. Zineddin</i>	
DIRECT SAMPLING OF SWIPES WITH ULTRAHIGH RESOLUTION MS: ISOTOPIC ANALYSIS WITHOUT DIGESTIONS OR SEPARATIONS	532
<i>R.K. Marcus, S. Shrestha, C. Stouffer, B.W. Ticknor, B.T. Manard</i>	
PANEL DISCUSSION ON RADIOLOGICAL SECURITY WORK FORCE DEVELOPMENT: SUPPORTING WOMEN EXPERTS	536
<i>M. Kalinina-Pohl, K. Hirsch, C. Araujo, J. Auda, O. Martin, J. Harris</i>	
AGE DATING OF URANIUM MATERIAL AS A NUCLEAR FORENSIC SIGNATURE	538
<i>M. Mathuthu, T.G. Kupi</i>	
TACKLING THE WASTE MANAGEMENT CONUNDRUM: THE CASE FOR DIRECT DISPOSAL	542
<i>R. Matzkin-Bridger, S. Brown, S. Roecker</i>	
TRANSPORT SECURITY OF RADIOACTIVE MATERIALS: FROM KENYA TO THE EAST AFRICAN COMMUNITY AND BEYOND	546
<i>E. Mayaka</i>	
UNCERTAINTY OF ²³⁹ PU HOLDUP MEASUREMENTS IN GLOVEBOXES	548
<i>K. McKay, R. Winkler, W. Charlton, S. Landsberger</i>	
U.S. POLICY AND TECHNICAL OPTIONS FOR ENCOURAGING NONPROLIFERATION- FRIENDLY SNPP FUEL CHOICE	552
<i>A.G. Means</i>	

INVESTIGATIONS OF NATURAL RADIOACTIVITY LEVELS AND ASSESSMENT OF RADIOLOGICAL HAZARD OF TEA SAMPLES COLLECTED FROM LOCAL MARKET IN ETHIOPIA.....	555
<i>T.S. Mekonnen, T.T. Deressu</i>	
RADIOLOGICAL EMERGENCY RESPONSE PREPAREDNESS FOR RADIOACTIVE MATERIAL TRANSPORT SECURITY INCIDENTS AND ACCIDENTS.....	558
<i>A. Meliana, M.K.A.B. Ramli</i>	
INSEN: A PIVOTAL ROLE IN NUCLEAR SECURITY EDUCATION	560
<i>W.A. Metwally, C. Ford, M.S. Islam, J. Nikolov, Z. Homan, T. Thatha</i>	
DESIGNING EFFECTIVE AND INCLUSIVE DISCUSSIONS IN VIRTUAL ENVIRONMENTS	563
<i>C. Mitchell</i>	
SUDAN’S NUCLEAR SECURITY REGIME STATUS	566
<i>N/A</i>	
THE 21ST CENTURY MECHANISM FOR SAFE PACKAGING AND SECURITY ENHANCED TRANSPORTATION OF RADIOACTIVE AND NUCLEAR SOURCE IN NIGERIA: RESEARCH, RETROSPECT AND REVIEW	568
<i>D.A. Morakinyo, V. Ekpo, I.O. Olusanmi, M. Ime, A.S. Olaoluwa, M. Adeola</i>	
IMPLEMENTING RESPONSIBLE AI FRAMEWORKS	590
<i>C. Murphy, J. Barr, R. Coles, B. Jefferson, R. Stewart</i>	
NUCLEAR SECURITY IN MOZAMBIQUE: A FOCUS ON DETECTION ARCHITECTURE, TERRORISM, AND THE ROLE OF THE NATIONAL ATOMIC ENERGY AGENCY	594
<i>R.M. Mussica</i>	
SECURITY SCENARIO DESIGN FOR NUCLEAR FACILITIES USING LARGE LANGUAGE MODELS	598
<i>N/A</i>	
GENERIC CASE STUDY: RECOMMENDATION OF RADIOLOGICAL EMERGENCIES FOR NUCLEAR SECURITY EVENT IN HYPOTHETICAL RADIATION FACILITY DURING TRANSPORTATION	600
<i>N.M. Nawwar</i>	
ENHANCEMENT SECURITY REGIME FOR TRANSPORT SEALED RADIOACTIVE SOURCES IN EGYPT	606
<i>N.M. Nawwar, Y.E. Tawfik</i>	
RADIANT-LLM: RETRIEVAL-AUGMENTED DOMAIN INTELLIGENT LLM FRAMEWORK FOR SAFE, SECURE, AND SAFEGUARDED DESIGN OF ADVANCED NUCLEAR REACTOR TECHNOLOGIES	617
<i>Z.N. Ndum, J. Tao, J. Ford, Y. Mansung, Y. Liu</i>	
INEQUITIES BETWEEN SECURITY INFRASTRUCTURE AND PERFORMANCE INCREASES	621
<i>J.P. Nelms, J. Orfield, A. Powledge, J. Chavez, R. Kafka</i>	
CRAFTING A SELF-ASSESSMENT FRAMEWORK FOR ONGOING EVALUATION OF INSIDER THREAT MITIGATION PROGRAMS	629
<i>C. Noonan, M. Dunning</i>	
ENHANCING PREPAREDNESS AND INTEROPERABILITY: LESSONS FROM A MULTI-SECTORAL SIMULATION EXERCISE IN NIGERIA	632
<i>C.D. Nzeh, A.M. Edike, I.M. Ndupu</i>	
SENTRY-SECURE IN THE FIELD – A READOUT OF FOUR YEARS IN PRODUCTION	634
<i>P. O’Connell, B. Gorton, E. Gonzalez, N. Lopez, J. Wise, R. Faris, Z. Hildebrand</i>	

THE ROLE OF VERIFICATION MECHANISMS IN STRENGTHENING NUCLEAR NON- PROLIFERATION AND DISARMAMENT	637
<i>M.Q. Odumanye, E. Akorita</i>	
AN OVERVIEW OF NIGERIA'S BILATERAL COLLABORATION WITH THE U.S. DEPARTMENT OF ENERGY'S NATIONAL NUCLEAR SECURITY ADMINISTRATION (NNSA) OFFICE OF RADIOLOGICAL SECURITY (ORS)	638
<i>E. Ofoegbu</i>	
THREATS POSED BY UNMANNED AIRCRAFT SYSTEMS TO NUCLEAR FACILITIES AND POSSIBLE COUNTER MEASURES.....	639
<i>K. Osei-Akoto</i>	
EVALUATING THE EFFECTIVENESS OF PHYSICAL PROTECTION SYSTEMS IN SMALL MODULAR REACTORS: A MULTI-PATH APPROACH.....	640
<i>M. Ozkutuk</i>	
AUTOMATION OF A PORTABLE RADIATION DETECTOR FOR NUCLEAR SAFETY AND SECURITY	642
<i>A.A.N. Regalado, R. Pali</i>	
SURVEY OF RADIATION LEVELS AT AMITY UNIVERSITY, NOIDA, UTTAR PRADESH, INDIA.....	643
<i>N. Pandey, A. Datta, A. Goel</i>	
ADVANCING GLOVEBOX OPERATIONS: LESSONS AND INNOVATIONS IN ROBOTICS AND AUTOMATION TECHNOLOGIES	652
<i>J. Parkhurst</i>	
HIGH RESOLUTION SYNCHROTRON STUDIES OF ACTINIDE CONTAINING SINGLE PARTICLES	655
<i>D. Piedmont, M. Topsakal, R. Bergin, L. Shultz-Johnson, S. Tazik, C. Barrett, D. Hornback, S.K. Gill</i>	
A SIMPLE FISSILE MATERIAL CUT-OFF TREATY	656
<i>P. Podvig</i>	
USES OF MACHINE LEARNING AND AUGMENTED REALITY FOR NUCLEAR NONPROLIFERATION AND SAFEGUARDS APPLICATIONS.....	660
<i>S.A. Pozzi, A.J. Jinia, S.D. Clarke, R. Lopez, D. Garg, O. Pakari</i>	
A STUDY ON THE IMPORTANCE OF REPLACEMENT OF HIGH ACTIVITY CS-137 SOURCE BLOOD IRRADIATORS BY MV-PHOTON BEAM LINACS IN FUTURE TO REDUCE THE RISKS IN VIEW OF RADIOLOGICAL SECURITY	664
<i>H. Yucel, E.C. Karanfil, H.Y. Alan</i>	
REMOTE DETECTION CAPABILITIES DEVELOPMENT FOR NUCLEAR MATERIAL MANAGEMENT	671
<i>C. Ramos, J. Navarro</i>	
SAFEGUARDS BY DESIGN FOR ADVANCED REACTORS	674
<i>A.C. Trahan, P. Rance</i>	
EFFECTIVE PRACTICES TO ENHANCE STUDENT ENGAGEMENT WITHIN THE NUCLEAR SCIENCE AND ENGINEERING PROGRAM AT OREGON STATE UNIVERSITY	678
<i>L. Ranjbar</i>	
DESYRE - TRUSTED EXPERTS IN COUNTER-SMUGGLING AND RADIATION DETECTION.....	682
<i>K. Richtarechova</i>	

DEVELOPMENT OF TRISO FUEL FABRICATION SAFEGUARDS MODELING IN NUCLEAR MATERIAL ACCOUNTING	684
<i>T. Rivas, R. Pulido, N. Shoman</i>	
DGS EXPERIMENTS USING THE JAEA/ISCN FISSION SIGNATURE ASSAY INSTRUMENT	688
<i>D.C. Rodriguez, S. Akamatsu, S. Suzuki</i>	
PROTECTING AGAINST INSIDER THREATS FROM DOMESTIC VIOLENT EXTREMISTS	692
<i>N. Roth, M. Bunn</i>	
DESIGN STUDY OF FIXED-DETECTOR MONITORING OF HOLDUP IN DUCTWORK	696
<i>T. Ruland, K.C. Goetz, B. Witherspoon, N. Prins, L. Crawford, C. Britton, P. Gibbs</i>	
BURN-UP CHARACTERISTIC AND PROLIFERATION RESISTANCE OF URANIUM AND PLUTONIUM IN MULTI-RECYCLING OF HALEU	698
<i>M. Saito, M. Kawashima, T. Iwamoto</i>	
DEVELOPMENT OF AN OPEN SOURCE SPONTANEOUS FISSION SOURCE FILE GENERATION FOR MULTIPLICITY COUNTING MONTE CARLO SIMULATIONS	700
<i>M. Saliba, A. Pautz, O. Pakari</i>	
SHIELDED RADIOACTIVE MATERIAL ACTIVE INTERROGATION: ADDITIONAL TECHNIQUE TO CONSOLIDATE NON-INTRUSIVE INSPECTION TECHNOLOGY	704
<i>N.S. Abubakar, T. Muhammad</i>	
THE ATOM: A SOLUTION FOR THE FIGHT AGAINST CLIMATE CHANGE	705
<i>B.R. Sanoussi, T. Tchangole, O. Benjelloun</i>	
MODELING OF THE VENDETA ARRAY FOR SPONTANEOUS FISSION MEASUREMENTS OF PU-240	709
<i>E.A. Schneider, S.D. Clarke, M.J. Devlin, J. Taieb, S.A. Pozzi</i>	
DEVELOPMENT OF THE 2HS ADVANCED NOTICE MOCK-CA EXERCISE	714
<i>M. Sekine, M. Shiyemaya, S. Kai, H. Sukegawa, R. Motokawa, A. Kato, T. Obata, M. Murray, H.S. Sam, Y. Mootome, S. Victor, T. Hayakawa, N. Noro, N. Inoue</i>	
MEASUREMENT STRATEGIES FOR NUCLEAR MATERIAL HOLDUP IN LIQUID-FUELED MOLTEN SALT REACTORS WITH CIRCULATING FUEL	715
<i>M.D. Shah, S.S. Chirayath, K.C. Goetz, S.K. Smith</i>	
MATERIAL AT RISK (MAR) & TARGET WORKING INVENTORY (TWI) AT Y-12 NSC.....	719
<i>B. Nettle</i>	
DIFFERENTIATING DRIVER NUCLIDES IN FLUID-FUELED MOLTEN SALT REACTORS VIA FISSION PRODUCT GAMMA SPECTROSCOPY	723
<i>J. Shurie, B. Goddard</i>	
MODELING OF VARIOUS DETECTORS WITH URANIUM SOURCES FOR NONPROLIFERATION APPLICATIONS	727
<i>T. Simmons, A. Loumis, B. Goddard</i>	
EMERGING TERRORIST GROUPS IN NIGERIA: EXAMINING THE ACTIVITIES OF LAKURAWA AND THE IMPLICATIONS FOR THE SECURITY AND SAFEGUARDS OF NUCLEAR AND RADIOLOGICAL MATERIALS.....	731
<i>J. Simon, Y.V. Ibrahim, A. Asuku, S. Bello</i>	
EXPLORING THE FUTURE: RECOMMENDATIONS ON EMERGING LEGAL ISSUES RELATED TO THE USE OF ROBOTS FOR IAEA SAFEGUARDS	734
<i>C. Siserman-Gray, C. Mathews, O. Elkhamri, J. Burniske, L. Groves, S. Stevenson</i>	

STRENGTHENING THE FUTURE OF THE INTERNATIONAL NUCLEAR SAFEGUARDS REGIME IN A DISRUPTIVE WORLD: DEVELOPING RESILIENT STATE AUTHORITIES AND ADAPTIVE REGULATORY FRAMEWORKS.....	747
<i>C. Siserman-Gray, O. Elkhamri</i>	
GENERALIZABILITY OF MACHINE LEARNING MODELS FOR GAMMA SPECTROSCOPY ANALYSIS OF URANIUM ENRICHMENT.....	759
<i>C. Soto, M. Gemmill, Y. Cui, S. Zia, I. Garishvili, G. Nutter, B. Goddard, A. Loumis, T. Simmons</i>	
GAMMA SPECTROSCOPY PERFORMANCE FOR IRRADIATED SOLID-FORM TRISO FUEL.....	763
<i>E. Stark, M. Croce, M. Carpenter, S. Dede, C. Goetz, C. Gray, J. Harp, J. Hu, C. Mathew, R. McElroy, D. McNeel, R. Schoenemann, K. Schreiber, S. Weidenbenner</i>	
UTILIZING MULTIPHYSICS MODELING AND MACHINE LEARNING TO DISCERN DIVERSION SCENARIOS IN A GENERIC MOLTEN SALT FAST REACTOR	767
<i>S. Walker, R. Stewart, O. Dim, E. Ryan, C. Soto, R. de Oliveira, P. Bajpai, C. Lu</i>	
EUROPEAN REGIONAL FOCUS GROUP ON NUCLEAR SECURITY DURING DECOMMISSIONING SUMMARY REPORT	768
<i>N/A</i>	
SAFEGUARDS CONSIDERATIONS FOR COATED PARTICLE FUEL FABRICATION FACILITIES.....	803
<i>R. Suh, S. Martinson, L. Boldon, A. Breshears, I. Therios</i>	
OPTIMIZED PHOTONIC CRYSTALS FOR IMPROVED LIGHT COLLECTION FROM INORGANIC SCINTILLATORS	807
<i>S. Surani, R. Samulyak, F. Scurti, D.E. Wolfe, M. Flaska</i>	
PROGRESS MADE IN THE DEVELOPMENT OF STATE-LEVEL SAFEGUARDS APPROACHES	811
<i>M. Aparo, K. Sylvester</i>	
NUCLEAR MATERIAL ACCOUNTANCY (NMA) BY DESIGN - INTEGRATING NMA IN 3S CONCEPT.....	820
<i>L. Begley, A. Tabatabai, A. Zeigler, S. Konecni, J. Rubenstone</i>	
AUTOMATED INSPECTION OF CRITICALITY CONTROL OVERPACKS FOR SURPLUS PLUTONIUM DISPOSITION	822
<i>C. Kudrna, N. Spivey, M. Tomlin, M. Brown, C. Hooper</i>	
FLEXIBILITY IN MEETING PATH COVERAGE GOALS	824
<i>A.C. Trahan, A. Vincze, P. Rance, K. Sylvester</i>	
REGIONAL COOPERATION ON NUCLEAR SECURITY IN SOUTHEAST ASIA	828
<i>J.C. Trajano</i>	
DEVELOPMENT OF A TABLE-TOP NRTA SYSTEM USING A 252CF NEUTRON SOURCE	834
<i>H. Tsuchiya, C.J.G. Shouop</i>	
A CASE STUDY OF 3S INTERFACES IN A GENERATION IV ADVANCED MODULAR REACTOR	838
<i>B.M. van der Ende, L. Ammirabile, L.Y. Cheng, C. Chwasz, B.B. Cipiti, G.G.M. Cojazzi, D. Hummel, G. Renda, R. Stewart, G. Strydom</i>	
DESIGN GOALS AND STUDY FOR THE CONVERSION OF AN EXISTING CF-252 SHUFFLER TO A PULSED D-D NEUTRON GENERATOR BASED SYSTEM	842
<i>N/A</i>	

EVALUATING GAMMA AND NEUTRON SPECTRA AND MULTIPLICITIES OF ²⁴² PU SPONTANEOUS FISSION	844
<i>M. Wetzel, A. Hecht, M. Devlin, J. O'Donnell</i>	
CRITICAL THINKING, CAPSTONES, & CAREER ENHANCEMENT: INSIGHTS & FEEDBACK FROM THE NONPROLIFERATION MENTORSHIP PROGRAM AT SANDIA NATIONAL LABORATORIES	848
<i>A.D. Williams, A.H. Mohagheghi, A.A. Goodman</i>	
SAFEGUARDING NAVAL NUCLEAR PROPULSION: ADDRESSING NON-PROLIFERATION CHALLENGES IN THE AUKUS AGREEMENT	852
<i>D. Williams</i>	
THE DEVELOPMENT OF A HIGHER-FIDELITY MONTE CARLO SIMULATION MODEL FOR USED FUEL CLASSIFICATION OF ADVANCED REACTORS	855
<i>C.A. Wojtowicz, J. Cahill, B. Goddard, K.C. Hartig</i>	
DEVELOPMENT OF GENETIC ALGORITHM-BASED METHODOLOGY FOR OPTIMIZING MATERIAL BALANCE PERIOD COMBINATIONS IN NEAR REAL TIME ACCOUNTANCY SYSTEM FOR BULK HANDLING FACILITY	858
<i>B.H. Won, J.A. Jung</i>	
SYSTEMS-BASED APPROACH TO VERIFICATION IN DISARMAMENT UNDER THE TPNW.....	862
<i>N. Yanikomer, I. Niemeyer</i>	
CAMEROONIAN EXPERIENCE IN STRENGTHENING HUMAN RESOURCES IN NUCLEAR SECURITY	866
<i>A.Y. Nguiffo, M.M. Ndontcheung, H.J. Nzouatcha</i>	
IMPLEMENTATION APPROACHES OF RADIOLOGICAL SECURITY AND NUCLEAR SAFEGUARDS IN MADAGASCAR	870
<i>N/A</i>	
SECURITY OF RADIOACTIVE SOURCES IN MADAGASCAR: ACHIEVEMENTS AND CHALLENGES.....	871
<i>M. Zafimanjato, J.L.R. Zafimanjato</i>	
ADDRESSING THE CHALLENGE OF ABANDONED NUCLEAR DENSITY GAUGES IN THE DENAKIL DEPRESSION.....	872
<i>E. Tilahun</i>	
NUCLEAR CYBERSECURITY EDUCATION USING ASHERAH AND ARCADE SIMULATION ENVIRONMENTS	875
<i>M. Zerphy, G. Meyers, J. Beamer, R. Dunbar, K. Myatt</i>	
DEVELOPMENT OF CHINA'S NUCLEAR WARHEAD MINIATURIZATION AND ITS STRATEGIC IMPLICATIONS	879
<i>H. Zhang</i>	
THE IMPACT OF CULTURAL VALUES AND ORGANIZATIONAL PROCESSES ON NUCLEAR SECURITY OPERATIONS.....	881
<i>M. Zineddin, F.S. Alnaqbi</i>	
FOSTERING NUCLEAR SECURITY CULTURE THROUGH EFFECTIVE LEADERSHIP: AN OPERATIONAL PERSPECTIVE.....	885
<i>M. Zineddin, F.S. Alnaqbi</i>	

Author Index