Nuclear 2010

The 3rd International Conference on Sustainable Development through Nuclear Research and Education

May 26-28, 2010
Piteşti, România

CONFERENCE PRELIMINARY PROGRAM

May 26, 2010

May 26, 2010

08:30 – 09:30	**Registration**
09:30 – 09:50	**Opening Ceremony**

PLENARY SESSION — Room A

09:50 – 10:20	Academician *Romanian Academy*	To be provided
10:20 – 10:50	Serban Valeca *University from Pitesti- Romania*	The future challenges: Globalization, Energy or Environment?
10:50 – 11:20	**Coffee break**	
11:20 – 11:50	Christophe Davies *European Commission*	30 years of research into radioactive waste management and disposal - Euratom perspective
11:50 – 12:20	Claire Mays *Symlog - France*	Stepwise Decision Making for LILW Management: A Model European Process
12:20 – 12:45	Books Launch	
12:45 – 14:00	**Lunch**	

May 26, 2010

Session I.1&I.2 — Room B

Chairman: ***Co-chairman:***

Nuclear Reactors & Nuclear Safety

14:00 – 14:15	ENEA, *Italy*	C. Artioli, G. Grasso, C. Petrovich	Innovative Reactor Core: Potentialities And Design
14:15 – 14:30	ENEA, *Italy*	G. Glinatsis	On the Management of Minor Actinides from Sub-Critical to Critical Reactors
14:30 – 14:45	ICN Pitesti, *Romania*	D. Gugiu, C. Petrovich, C. Artioli	Preliminary Dose Estimations for a Lead Fast Reactor
14:45 – 15:00	ICN Pitesti, *Romania*	A. Catana, I. Turcu, I. Prisecaru	CFD Analysis of Multiphase Coolant Flow through Fuel Rod Bundles in Advanced Pressure Tube Nuclear Reactors
15:00 – 15:15	ICN Pitesti, *Romania*	I. Prodea, I. Visan, M. Gruia	WLUP Burnable Absorber Isotopic Influence on Coolant Void Reactivity in an ACR Lattice
15:15 – 15:30	ICN Pitesti, *Romania*	M. Mladin, D. Mladin	Calculations of Steady-State and Reactivity Insertion Transients in a Research Reactor Simulating PWR
15:30 – 15:45	ICN Pitesti, *Romania*	A. Rizoiu	Application of ASTEC v2.0 Integral Code on International Standard Problems (ISP-31, ISP-36 and ISP-46)
15:45 – 16:15	**Coffee break**		

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Session II.1 — Room D

Chairman: ***Co-chairman:***

Radioactive Waste Management

14:00 – 14:15	LANL *SUA*	I. Witkowski, J. Whitworth, M. Pearson, A. Cuthbertson	Off-Site Source Recovery Project and Its Mission in the World
14:15 – 14:30	Al-Mukhtar University, El-Beida, *Libya*	F. A. Ikraiam, T. A. Mohamed, M. K. Alfakhar, A. I. Ali	Investigating the Possibility of Using Phenol-Formaldehyde Polymer as a Nuclear Gamma Ray Shield
14:30 – 14:45	AN&DR *Romania*	M. Dinca	National Provisions for Decommissioning and Managing Radioactive Waste from Decommissioning
14:45 – 15:00	IFIN – HH *Romania*	M. Dragusin, R. Deju, V. Popa, I. Iorga	Decommissioning of the Nuclear Research Reactor VVR-S Magurele-Bucharest Romania
15:00 – 15:15	INFLPR *Romania*	F. Scarlat, R. Minea, A. Scarisoreanu, E. Badita, E. Mitru, E. Sima, M. Dumitrascu	On the Laser - Proton Accelerator Parameters for the Nuclear Waste Transmutation
15:15 – 15:30	ICN Pitesti, *Romania*	C. Bucur, M. Dragomir, M. Olteanu, M. Pavelescu	Iodine Sorption on Loess and Clay Samples
15:30 – 15:45	ICN Pitesti, *Romania*	L. C. Dinu, G. Androne, C.G. Lazar, O. Ichim, R. Nita, M. Mincu, D. Anghel, A. Benga	Determination of the U-23x/Gamma Scaling Factors for Radioactive Waste Produced in the Post-Irradiation Examination Laboratory of INR Pitesti
15:45 - 16:00	ICN Pitesti, *Romania*	G. Vieru, V. Nistor, A. Vasile	Testing of Radioactive Material Packages in Romania (SCN Pitesti)
16:00 – 16:15	**Coffee break**		

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Round Table — Room A

Chairman: ***Co-chairman:***

Transparency Versus Confidentiality: Aspects of Aarhus Convention Implementation in Nuclear Field

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PLENARY SESSION — Room A

09:00 – 09:30	Frank Carre *CEA France*	The French Strategy for Generation IV
09:30 – 10:00	Edward Bennett *COG - Canada*	The Role of COG in Fuel Channel Life Management
10:00 – 10:30	Vasile Radu *ICN Pitesti,Romania*	Stochastic Approach of Thermal Fatigue Crack Growth in Mixing Tee Piping System from NPP
10:30 – 11:00	**Coffee break**	
11:00 – 11:20	Tony Wickham *Technology Consultancy, UK*	IAEA International Knowledge Base on Nuclear Graphite
11:20 – 11:40	Petr Moulis *Research Centre Rez Ltd, Czech Republic*	SUSEN Project – New Challenge for European Research
11:40 – 12:00	Ashraf Elsayed Mohamed Mohamed *Egypt*	Egyptian Nuclear Activities at Research Reactors, Laboratories, and Uranium Production (independent review)
12:00 – 12:20	Gheorghe Ionita *ICSI Rm. Valcea - Romania*	Characteristics and Vunerabilities of Human Resources in Nuclear Field
12:20 – 12:40	Cornelia Valache *Cernavoda NPP - Romania*	Elements and Strategies of Knowledge Management at Cernavoda NPP
12:40 – 13:00	Madalina Tronea *University of Bucharest - Romania*	Regulatory Assessment of Safety Culture in Nuclear Organisations - Current Trends and Challenges
13:00 – 14:00	**Lunch**	

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Session I.3 — Room B

Chairman: ***Co-chairman:***

Nuclear Technology and Materials

14:00 – 14:15	AECL, *Canada*	A. Celovsky	Benefits of Material Surveillance: A CANDU Perspective
14:15 – 14:30	ICN Pitesti, *Romania*	D. Ohai	Materials Research and Development for Inovative Nuclear Installations
14:30 – 14:45	ICN Pitesti, *Romania*	M. Rădulescu, D.Stefănescu, L.Popa, S.Mogosan	Water Chemistry Impact on the Deposits Formation on Secondary Circuit
14:45 – 15:00	Babes-Bolyai University, Cluj, *Romania*	D. Ciurchea	The Bain Strain Issue in the Phase Transformation of Zirconium
15:00 – 15:15	ICN Pitesti, *Romania*	M. Fulger, M. Mihalache, L. Velciu, S. Florea	Oxidation Behaviour of an Austenitic SS and a Ni-Based Alloy in Supercritical Water Conditions
15:15 – 15:30	ICN Pitesti, *Romania*	V. Ionescu	Investigation of the Zr-2,5%Nb Alloy Structure by Ultrasonic Spectral Analysis
15:30 – 15:45	ICSI Rm. Valcea *Romania*	A. Stefanescu, N. Bidica, A. Bornea, I. Stefanescu	Experimental Procedures for Subtracting the Isobaric Contribution and for Calibrating the GSD 320 Quadrupole Mass Spectrometer Used to Analyze Hydrogen Isotopes Gas Mixtures
15:45 - 16:00	ICN Pitesti, *Romania*	M. Parvan, O. Uţă, M. Mincu, I. Man	Upgrading of SCN Hot Cell Laboratory by New Equipments for Microanalysis and Mechanical Testing Sample Preparation
16:00 – 16:15	**Coffee break**		

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Session II.2 & II.3 — Room D

Chairman: ***Co-chairman:***

Radioprotection and Air, Water and Soil Protection

14:00 – 14:20	CNE Cernavoda, *Romania*	I. Popescu, C. Chitu	Professionally Exposed Workers' Internal Dosimetry for Gamma Emitting Radionuclides at Cernavoda NPP
14:20 – 14:40	CNE Cernavoda, *Romania*	C. Chitu	Management of Occupational Exposure at Cernavoda NPP
14:40 – 15:00	ICN Pitesti, *Romania*	C. Dulama, Al. Toma, R. Dobrin, M. Valeca	Rapid Radiological Characterization Method Based on the Use of Dose Coefficients
15:00 – 15:20	ICSI Valcea, *Romania*	M. Constantinescu, D. Elena, F. Bucura	Air Quality Monitoring with Specified Analyzers
15:20 – 15:40	ICN Pitesti, *Romania*	C. Talpalariu, J. Talpalariu, C. Matei, L. Ioan, O. Popescu	New Tecnologies in Solid-State Radiation Detectors for Nuclear Safety Active Personal Dosimetry and Radiations Source Tracking
15:40 – 16:15	**Coffee break**		

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Round Table — Room A

Chairman: Maria Roth ***Co-chairman:***

Educational Offer and Career Opportunities in Nuclear

May 28, 2010

May 28, 2010

09:30 – 12:00	**Technical visit – TRIGA reactor and Hot Cells facility**
13:30 – 15:30	**Lunch at Vila Florica, Stefanesti**
15:30 – 16:00	**Travel to Pitesti**

POSTERS SESSIONS

Session I – NUCLEAR ENERGY – May 26

Nuclear Safety

P1	M. Sallah[a], C. A. Margeanu[b] [a] *Mansoura University, Egypt* [b] *ICN Pitesti, Romania*	Stochastic Time-Dependent Neutron Transport in Participating Semi-Infinite Media with Refractive-Index-Dependent Boundary
P2	M.Ţenescu, M. Bîgu, I. P.Niţă *CITON Romania*	Redesign of Emergency Wayer Supply Sistem By-Pass Line from Cernavodă NPP Unit 1 and 2 using Self Regulating Valves
P3	D. Mladin, M. Mladin, I. Prisecaru *ICN Pitesti, Romania*	Comparing Failure Rates from Different Research Reactors Including Romanian TRIGA SSR Reactor
P4	C. Doca, L. Doca *ICN Pitesti, Romania*	A Mathematical Approach of the "Self-Disintegration" Experimental Data
P5	M. Serbanel, C. Diaconu *ICN Pitesti, Romania*	The Thermalhydraulic Behaviour of a CANDU Channel During a Channel Flow Blockage Accident
P6	M. Farcasiu, I. Prisecaru *ICN Pitesti, Romania*	Qualitative Analysis of the Man-Organization System in Accident Conditions for Nuclear Installation
P7	M. Apostol, M. Constantin, A. Leca *ICN Pitesti, Romania*	The Influence of User Effect in Quality Assurance of Accident Analyses
P8	I. Dumitrescu, D. Ohai, T. Meleg, M. Mihalache, D. Benga *ICN Pitesti, Romania*	Microstructure Modification of Uranium Dioxide Fuel Pellets in Accident Conditions
P9	M. Constantin, M. Apostol, A. Constantin *ICN Pitesti, Romania*	Source Term Formation in CANDU Severe Accidents
P10	A. Constantin *ICN Pitesti, Romania*	Sensitivity Study on Fission Products Chemistry in a CANDU Severe Accident

Nuclear Reactors

P11	S. Gujiu, G. Campean *CITON Romania*	The PHWR CANDU 6 Project from Unit 2 from Cernavoda against the European Utilities Requirements (Eur)
P12	L. Ciufu, R. Mateescu, M. Vlad, M. Popescu *CITON Romania*	CITON Solutions for Introducing Distributed Control System in Nuclear Steam Supply Systems at Cernavodă NPP
P13	I. Patrulescu *ICN Pitesti, Romania*	Calculation of Spert Reactor Benchmarks Using 3D Diffusion Code DIREN
P14	V. Balaceanu, M. Pavelescu, L. Aioanei *ICN Pitesti, Romania*	Hyperfine 3D Neutronic Calculations in CANDU Supercells
P15	I. E. Visan *ICN Pitesti, Romania*	Analysis on Specific Nuclear Data for Reactor Physics Computations Apllied to CANDU Reactor Using Thorium-Based Fuels
P16	C. A. Margeanu *ICN Pitesti, Romania*	Evaluation of Radiological Impact Due to Direct Exposure to a Radiological Dispersal Device Using Spent Fuel Assembly
P17	I. Prodea, A. Catană *ICN Pitesti, Romania*	Fuel Rod Bundles Proposed for Advanced Pressure Tube Nuclear Reactors
P18	C. Aioanei *ICN Pitesti, Romania*	Comparative Results for Benchmark Test Problems in CANDU Lattices
P19	M. Dragan, S. Valeca *ICN Pitesti, Romania*	The Checking of the Adjustment of Valves-Important Part in Ensuring the Safety of Under Pressure Nuclear Equipment
P20	E.M. Ana, S. Valeca, M. Preda *ICN Pitesti, Romania*	TRIGA SSR 14MW Data Acquisition and Monitoring System

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Session II – ENVIRONMENTAL PROTECTION – May 26

Radioactive Waste Management

P21	E. A. Petre, C. E. Manea (Diaconescu), M. Valeca *University from Pitesti, Romania*	Determination of Radionuclides Concentration from a Sample of Liquid Radioactive Waste
P22	S. Valeca, M. Valeca, M. Ioan, D. Nastase *ICN Pitesti, Romania*	Comparative Analysis Concerning the Components of the Cost Between Carbon Capture and Storage and Spent Nuclear Fuel Disposal
P23	O. Arhire *Technical Construction University, Bucharest, Romania*	Review of Liquid Radioactive Waste Management
P24	G. Vieru, V. Nistor, R. Mihaiu *ICN Pitesti, Romania*	Quality Assurance Requirements in the Testing of Packages to Be Used for Safe Transportation of RAM
P25	G. Barariu, R. C. Georgescu, F. Sociu, R. Toma, C. Bucur *CITON Romania*	Radioactive Waste Management Methodology Development for Waste Generated by Nuclear Facilities Decommissioning Applicable to CANDU - 600 Nuclear Power Plant
P26	M. Iordache, M. Dianu, I. V. Popescu *ICN Pitesti, Romania*	Activity Evaluation of ^{60}CO, ^{137}CS, ^{152}EU, ^{154}EU, ^{14}C and Total ß in Graphite from Thermal Column of Romanian TRIGA Research Reactor
P27	L. Bujoreanu, I.V.Popescu, D. Bujoreanu, M. Olteanu *ICN Pitesti, Romania*	Method for Separation and Measurement of Nickel-63 in Radioactive Waste
P28	G.C.Lazăr ,G.Androne, M.Tătărăscu, M.Mincu, L.C.Dinu, A.Benga *ICN Pitesti, Romania*	Method of Alpha Emitters Determination from Solid Radioactive Waste Resulted in The Post-Irradiation Examination Process
P29	S. Stoica, O. Popescu, C. Ichim, C. Bucur *ICN Pitesti, Romania*	Lysimeter Station for Saligny Site

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Session I – NUCLEAR ENERGY – May 27

Nuclear Technology and Materials

P30	H. Klebba, T.Wickland, L. Anderson *Nuclear Filter Technology USA*	New Generation Nuclear Material Container
P31	S. Gherghinescu *ICSI Rm. Valcea, Romania*	Multilayer Insulation for Cryogenic Equipment of Nuclear Facilities
P32	I. Piciorea *ICSI Rm. Valcea, Romania*	Estimation of Measurement Uncertainties using Within-Laboratory Validation and Quality Control Data
P33	S. Mogosan *ICN Pitesti, Romania*	Some Methods of Analysis and Diagnosis of Corroded Components from Nuclear Power Plant
P34	I. Pirvan *ICN Pitesti, Romania*	Impacts of Cooling Water Quality on Operational Safety of Water Cooled Components from CANDU Reactor Primary System
P35	D. Bărbos, A.F. Bucşă, C. Păunoiu *ICN Pitesti, Romania*	Determination of Elemental Concentration in Standards Stainless Steel by K_0-Standardization Neutron Activation Analysis
P36	I. Ionita, V. Florescu *ICN Pitesti, Romania*	Improved Self-Control System for the DR1 High Resolution Focusing Neutron Crystal Diffractometer Operation
P37	S. Ionescu, O. Uta *ICN Pitesti, Romania*	Mechanical Tests on Hydrided Fuel Sheath Samples
P38	R. Niţă, O. Uţă, M. Pârvan, M. Mincu *ICN Pitesti, Romania*	Performance Evaluation of Two CANDU Fuel Elements Tested in the TRIGA Reactor
P39	M. Dragomir, D.Ohai, I. Dumitrescu, I. Furtuna *ICN Pitesti, Romania*	ICP-oaTOFMS Utilisation to Determine the Isotopic Abundance of Gd in Gadolinium Nitrat
P40	M. Tunaru, L. Velciu, A.Voicu *ICN Pitesti, Romania*	Microbiologically Influenced Corrosion of Carbon Steel in the Presence of Acid-Producing Bacteria
P41	L. Velciu, L. Popa, M. Mihalache, V. Ionescu, A. Nitu, S. Dragomir *ICN Pitesti, Romania*	Analysis of Some Materials Used in the Steam Generator after Corrosion Tests

	P42	M. Lazar, P. Popescu *ICN Pitesti, Romania*	Behaviour Analysis to Corrosion of the Weldings from Aluminum Alloys
	P43	L. Dumitrache, I. Furtună, D. Doanţă, M. Deaconu *ICN Pitesti, Romania*	Implementing an Experimental Method for Nuclear Materials Characterization
	P44	D. Stefanescu, M. Radulescu S. Mogosan *ICN Pitesti, Romania*	A Review Considering Long Time Ageing of CANDU Containment Buildings
	P45	V. Gheorghe, S. Orasanu *ICN Pitesti, Romania*	Determining the Degree of Processing Glossy Convex Surface by Optical Interferometry
	P46	G. Gheorghe, I. Man, M. Pârvan *ICN Pitesti, Romania*	CANDU Fuel Sheath Integrity Assessment and Oxide Layer Thickness Determination by EDDY Current Technique
	P47	D. Puiu, T. Gyongyosi, E. Dinu *ICN Pitesti, Romania*	Evaluation of Degradation Due to Ageing of the Power Cable with PVC Insulation and Jacket. Development of the Indentation Test
	P48	M.Tăcică, M. Abrudeanu *ICN Pitesti, Romania*	The Influence of Hydrogen Absorbtion to the Mechanical and Microstructural Properties of Zircaloy-4 Sheathing
	P49	M. Deaconu, T. Meleg, L. Dumitrache, C. Ducu *ICN Pitesti, Romania*	Experimental Study on the ZrCo-System and its Application to Hydrogen Isotopes Storage
	P50	J. Talpalariu, C. Matei, O. Popescu *ICN Pitesti, Romania*	Telepositional Portable Real Time Radiation Monitoring System
	P51	G. Florescu, C. Agapi, A. Popa, V. Panaitescu, I. B. Florescu *ICN Pitesti, Romania*	Actual Methods for On-Line Pipeline Systems Evaluation
	P52	D. Gugiu, C. Roth, A. Ghinescu *ICN Pitesti, Romania*	Gamma Ray Auto Absorption Correction Evaluation Methodology
	P53	T. Gyongyosi, V. N. Panaitescu *ICN Pitesti, Romania*	Technological Facilities Designed for Experimental Characterization of the Plug-Defective Tube Joint
	P54	D. Lucan, M. Fulger, D. Astefanesei *ICN Pitesti, Romania*	Research Experience with the Secondary Side Corrosion of CANDU Steam Generators
	P55	I. Pîrvu, S. Valeca, A. Pulpa, M. Stoica *ICN Pitesti, Romania*	Ageing of Electronic Equipments Used in Cernavoda NPP
	P56	L. Popa, M. Radulescu, L. Velciu, M. Ionita *ICN Pitesti, Romania*	The Utilization of Some Methods for the Caracterization of SnO_2 Nanoparticles
	P57	T. Gyongyosi, S. Valeca, V. N. Panaitescu *ICN Pitesti, Romania*	Initiation and Development of Technological Facilities Useful Horizontal Large Diameter Plugging Pipes
	P58	T.Meleg, I.Dumitrescu *ICN Pitesti, Romania*	Specific Heat and Heat Capacity Measurements on Oxidized Zy-4
	P59	T.Meleg, D. Ohai, C.Ducu, M.Abrudeanu *ICN Pitesti, Romania*	The Damped Oscillator Model for the Post-Transition Oxidation Kinetics of Zircaloy-4 Fuel Cladding

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Session II – ENVIRONMENTAL PROTECTION – May 27

Radioprotection & Air, Water and Soil Protection

P60	E. Bobric, I. Popescu, V. Simionov *CNE Cernavoda, Romania*	Public Doses Due to Tritium Emissions from Cernavoda NPP
P61	V. Simionov, A. Cojanu, S. Murgoci, G. Zulchefil, C. Chitu *CNE Cernavoda, Romania*	Radiation Monitoring Systems Network at Cernavoda NPP: Present (Unit 2) and Future Extension (to Unit 1)
P62	T. Ivana, Gh. Epure *FCN Pitesti*	Individual Radiological Monitoring for Exposed Personnel at Nuclear Fuel Plant Pitesti
P63	V. Olaru, T. Ivana, G. Epure *FCN Pitesti, Romania*	Implementation of Integrated Safeguards at Nuclear Fuel Plant Piteşti Romania
P64	I. Faurescu, A. Feru, C. Varlam, D. Faurescu, I. Vagner, D. Bogdan *ICSI Rm. Valcea, Romania*	Use of C-14 and Environmental Isotopes to Estimate Aquifer Recharge Conditions
P65	E. David, J. S. Cho, I. Iordache *ICSI Rm. Valcea, Romania*	Soil and Water Contamination with Aromatics Compounds and Their Effect on Environment
P66	R. Vremera, D. Costinel, R.E. Ionete, C. Jong Soo *ICSI Rm. Valcea, Romania*	Isotopic Fingerprinting of Bradisor Reservoir from Rm.Valcea, Romania
P67	D.Florescu, G. Saros, C. Sandru, R. Ionete *ICSI Rm. Valcea, Romania*	Chemical Aspects of Soil Sediments from Turceni Industrial Area

P68	I. Geana, A. Iordache, R. Ionete *ICSI Rm. Valcea, Romania*	Evaluating Heavy Metal Contents in Soils Using Microwave Digestion Method and ICP-MS technique
P69	F. Scarlat, R. Minea, A. Scarisoreanu, E. Badita, E. Mitru, E. Sima, M. Dumitrascu *INFLPR Romania*	Secondary Standard Dosimetry Laboratory at INFLPR
P70	M. Valeca, D.Udrescu, M. Ticea, A. Ciurduc-Todoran *ICN Pitesti, Romania*	Using Clean Technology to Treat Waste Water for Environmental Protection
P71	R. I. Dobrin, M. Pavelescu, C. N. Dulam, Al. Toma *ICN Pitesti, Romania*	Evaluation of Counting Efficiency for Beta Ray Emitters in LSC
P72	M. G. Tatarascu, M. Valeca, A. Ciurduc-Todoran, M. Constantin *ICN Pitesti, Romania*	MS Access Databases as Tool for the Management of the Chemicals Used in the Post-Irradiation Examination Laboratory of INR Pitesti
P73	D. Onofrei, N. Braniste, S. Valeca *ICN Pitesti, Romania*	Lack of Information Born Monsters

Session III – SUSTAINABLE DEVELOPMENT – May 27

Strategies in Energy

P74	G. Popescu, S. Gherghinescu, M.Vacaru *ICSI Rm. Valcea, Romania*	Risk Theory in Reengineering & Cost Reduction
P75	G. Florescu, V. Panaitescu *ICN Pitesti, Romania*	Actual Technological Trend in NPP's Systems Development
P76	M. Cojan *ICN Pitesti, Romania*	Generation III Reactors – The Nuclear Renaissance

Education, Continuous Formation and Knowledge Transfer

P77	E. Scott de Martinville, K. Ben Ouaghrem, U. Erven, M. Maqua, Z. Kříž, S. Rimkevicius *IRSN France*	ENSTTI An European Institute for Training and Tutoring in Nuclear Safety

International Partnership for a Sustainable Development

P78	I. Ioan, C. J. Soo, D. Elena, C.Diana, V. Raluca *ICSI Rm. Valcea, Romania*	The Investigation, Remediation and Monitoring of Soil and Groundwater Contaminated Sites; Romanian-Korean Mutual Training and Collaboration Action

Research Infrastructures

P79	A. Dinu *ICN Pitesti, Romania*	Performing Analysis Methodology of Degradation by Corrosion Mechanisms and the Preventive Actions of the Negative Effects in the NPP Circuits with Direct Impact in the Long-Term Development
P80	C. Roth, D. Dobrea, C.Truta, D. Gugiu, D.Barbos, L. Aioanei, M. Preda, A. Datcu, V. Pitigoi *ICN Pitesti, Romania*	Innovative Contributions on the Experimental Infrastructure Development
P81	I. Vasa, C. Roth, M. Constantin *ICN Pitesti, Romania*	ADRIANA – Initiative and Network Arrangeament for Research Infrastructure

ICN Piteşti - SHORT HISTORY

1970

At the request of Romanian Government a mission of IAEA experts in Romania favorably advised the necessity of a technological research organization.

1971

Under the name, *Institute for Nuclear Technologies* (ITN) the institute was founded, with the main purpose to provide scientific and technological support for the Romanian Nuclear Program.

1977

Research laboratories are commissioned on the new premises in Pitesti-Colibasi, 130 km NW of Bucharest, Romania. The Institute assignments are enlarged being nominated as general designer of Cernavoda NPP nuclear part. Its name is now changed into *Institute for Nuclear Power Reactors* (IRNE).

1978

Requirements for Q.A. in reactor operation was established, also first Q.A. manual accepted by Nuclear Authority. Today Q.A. is broadely implemented in operation of nuclear installations, manufacturing of products, services and in research activities.

1979

On November 18, the first criticality is attained at the TRIGA Materials Testing Reactor, built on the IRNE site.

1980

Commissioning of the Pilot Plant for fabrication of CANDU-type fuel elements.

1984

Commissioning of the Post-Irradiation Examination Laboratory (LEPI).
Commissioning of the Endurance Test Rig for fuel bundles at the Out-of-Pile Testing Dept.

1985

Starting of CANDU fuel bundles fabrication in SPEC (Plant for Fuel Elements Production).

1989

With the arrival of the F/M Heads #4 and #5 intended for Cernavoda Unit 2 NPP, the F/M head test stand is commissioned.

1990

Incorporated in the National Authority for Electric Power (RENEL), IRNE becomes the *Institute for Nuclear Research* (ICN).

1992

The Department for Fuel Elements Production separates from the Institute and becomes distinct unit within RENEL under the name of Nuclear Fuel Factory (FCN).

1994

The Institute specialists take an active part in the commissioning of Cernavoda NPP - Unit 1.

1996

On April 16, the first criticality is attained at Cernavoda Unit 1, directly involving reactor physics specialists from ICN.

1998

The ICN is transferred under the supervision of the Romanian Authority for Nuclear Activities (RAAN), as an affiliate branch.

a c c e s p l a n

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