



# PROGRAM

## International Symposium for Nuclear Energy

OCTOBER 1-4, 2017 |  
INTERCONTINENTAL HOTEL |  
BUCHAREST, ROMANIA

### ORGANIZERS



EUROPEAN NUCLEAR SOCIETY

### PARTNERS



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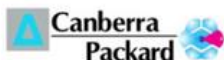
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## **KEY TOPICS**

- Policies and strategies in nuclear energy
- New and existing projects proving the benefits of nuclear energy
- Safe and sustainable nuclear energy power
- Environmental assessment in nuclear energy & Transposition of new basic safety standards in radiological protection
- Safe spent fuel and radioactive waste management and decommissioning
- Knowledge transfer challenges & Transparency and stakeholders involvement
- Environmental protection & Safe back end fuel cycle

## **LANGUAGE**

The official language of the Symposium will be English.

## **PRESENTATIONS**

Oral presentations are limited to 15 minutes. Authors are kindly asked to present their papers in 10 minutes to allow 5 minutes for discussions. Overhead projectors will be available.

## **POSTERS**

The recommended poster size is A0 (118.8cm x 84.0 cm).

The posters will be available to participants during the entire day – Poster Session 1 on 2nd October, 2017 and Poster Session 2 on 3rd October 2017.

Poster authors are kindly requested to be at their posters for discussion with interested participants during the relevant poster session (coffee breaks), as indicated in the conference programme.

## **Purica PRIZE**

Purica Prize will be awarded on **2<sup>nd</sup> October 2017**.

## **Questions**

If you have a question during Q&A time, please rise your hand and wait for the chairperson to address you. It would be helpful if you could announce yourself by name and organization before asking your question.

## **Lunch and Dinner Coupons**

Lunches and the Dinner are included in the scheduled program. Presentation of your lunch coupon will be required to access the lunch restaurant. They are inserted in your badge.

## **Welcome Cocktail**

Full tax registrants and key speakers invited by AREN will attend the Welcome Cocktail at Hotel Intercontinental – Sala Opera, on Sunday 1<sup>st</sup> October 2017.

## **POST SYMPOSIUM TOURS**

The participants can select one technical visit to one of the following 3 major nuclear sites in Romania:

- Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH)
- Institute for Nuclear Research Pitesti (RATEN ICN Pitesti)
- Nuclear Fuel Plant (FCN Pitesti)

**Thank you for attending SIEN 2017!**

## Sunday, 1st October 2017

## Sala OPERA

19:00 – 21:00 Registration & Welcome Cocktail

## Monday, 2nd October 2017

## Sala RONDA

08:00 – 09:00 Registration

09:00 – 10:30 Opening Ceremony

10:30 – 11:00 Poster Session 1 with Coffee & Tea

11:00 – 12:30 **PLENARY SESSION 1**

### *Policies and strategies in nuclear energy*

Chairman: Romeo URJAN/ AREN Co-Chairman: Ioan ROTARU/ ROMATOM

Roger SCHÈNE  
*European Nuclear Society*

Long Term Operation of Nuclear Power  
Plants: Challenges and Potential

Henri PAILLERE  
OECD/NEA

Future of Nuclear Energy, challenges and  
opportunities

Yves DESBAZEILLE  
*FORATOM*

Addressing the challenges of nuclear  
sector in Europe - An Industry  
Perspective

Sorina NEDA  
European Supply Agency

Nuclear Fuel Supply Security in the  
European Union

12:30 – 13:30 Lunch

**13:30 - 15:30**
**PLENARY SESSION 2**
***New and existing projects proving the benefits of nuclear energy***

Chairman: Romeo URJAN/ AREN Co-Chairman: Teodor CHIRICA/ROMATOM

Cosmin GHITA

*SNN, Romania*

Keeping nuclear competitive in a rapidly changing market: current and future challenges

Nicolae Victor ZAMFIR

*IFIN-HH, Romania*

The Extreme Light Infrastructure - Nuclear Physics (ELI-NP) Project - Implementation status and perspectives

Dennis THOMPSON

*AECOM, United Kingdom*

National challenges require national solutions: The power of an aligned nuclear waste policy

Alexandru TOMA

*RATEN ICN Pitesti, Romania*

ALFRED Project: A stepwise approach towards improved sustainability of nuclear power

Michael KRAUSE

*SNC-Lavalin Nuclear Inc.*
*CANDU Energy Inc, Canada*

SNC-Lavalin &amp; CANDU Technology: New opportunities for growth and collaboration

Adrian COJANU

*CNE Cernavoda, Romania*

B. PHILLIPS, S. FATA,

G. FOUNTAIN, B. NANGIA

*Amec Foster Wheeler, Canada*

Organizing for Cernavoda-1 retube and refurbishment

**15:30 – 16:00**
**Poster Session 1 with Coffee & Tea**
**16:00 – 18:00**
**PLENARY SESSION 3**
***Safe and sustainable nuclear energy power***

Chairman: Madalina TRONEA/ CNCAN Co-Chairman: Adrian JELEV/ SNN

Madalina TRONEA, C. CIUREA,

E. DINCA

*CNCAN Romania*

Regulatory approaches for sustainable nuclear safety

Alexandra TUDOR,  
*Cernavoda NPP, Romania*

Operating experience program at  
Cernavoda NPP

Adrian RIZEA, R. M. FAKO,  
V. IONESCU  
*RATEN CITON, Romania*

Revisiting a strategic resource: Romanian  
heavy water inventory

Jin Young CHOI, J. J. LEE, Y. J.  
CHO  
*Korea Institute of Nuclear  
Safety*

MELCOR and CFD assessment on THAI  
HD-12 and HD-22 experiments for  
hydrogen combustion

Sung Joong KIM  
*Hanyang University, Republic of  
Korea*

Dan SERBANESCU  
*Romanian Academy*

Safety paradigm changes and major  
accidents in nuclear power plants

Iulian ARION  
*Cernavoda NPP, Romania*

Cernavoda NPP response to Fukushima  
event

**19:30 – 22:00 Symposium Dinner**

## **Tuesday, 3rd October 2017**

## **Sala RONDA**

**08:00 – 09:00 Business Breakfast**

***New and existing projects proving the benefits of nuclear energy:  
Perspectives from the Canadian nuclear industry***

*Organized in partnership: Embassy of Canada to Romania, Bulgaria and the  
Republic of Moldova and AREN*

### **Attending companies:**

- *Amec Foster Wheeler: "Amec Foster Wheeler's Capabilities for supporting CANDU Technology in Romania"*
- *MDA Corporation: "MDA – From Space to Nuclear"*
- *SNC Lavalin: "SNC-Lavalin: Overview & Capabilities"*

**09:00 – 10:30 KEY NOTES**

Moderator: Veronica ANDREI/ AREN

 Monika SKRZECZKOWSKA  
*IAEA, Austria*

IAEA activities for supporting safe radioactive waste and spent fuel management

 Dennis THOMPSON  
*AECOM, United Kingdom*

Turning an industry upside down: an in-depth look at how the Low Level Waste National Programme changed an industry

 Cristina MAY, A. DUMITRESCU  
*National Institute of Public Health, Romania*

Survey of the population health status in the vicinity of nuclear facilities

**10:30 – 11:00 Poster Session 2 with Coffee & Tea**
**11:00 – 12:30 PLENARY SESSION 4**
*Environmental assessment in nuclear energy & Transposition of new basic safety standards in radiological protection*

Chairman: Daniela CASARU/ CNCAN Co-Chairman: Vasile SIMIONOV/ SRRP

 Anca APREUTESEI  
*Ministry of Environment, Romania*

Nuclear energy and environment assessment in Romania

 Daniela DOGARU  
*CNCAN, Romania*

Transposition of basic safety standards for protection against the dangers arising from exposure to ionizing radiation into Romanian regulatory framework

 Petre MIN  
*CNCAN, Romania*

Aspects of new improvements in the national emergency preparedness and response system

 Jean-Rene JOURDAIN,  
 F. BLARDAT  
*IRSN, France*

Implementation of new BSS in radiological protection in France: current status, challenges and perspectives

**12:30 – 13:30 Lunch**

**13:30 – 15:30 PLENARY SESSION 5**
***Safe spent fuel and radioactive waste management and decommissioning***

Chairman: Alice DIMA/ ANDR      Co-Chairman: Veronica ANDREI/ AREN

Alice DIMA, M. SAFTIUC

*ANDR Romania*

F. GLODEANU, B. MILLER,

S. PATRASCOIU

*AMEC Foster Wheeler Nuclear  
RO, Romania*

 Technical issues in updating the  
radioactive waste and spent fuel  
management national strategy

Ioana Elisabeta DAIAN, A. E.

NEDELUCU, N. A. STAFIE,

*Cernavoda NPP, Romania*

 CERNAVODA NPP Radioactive Waste  
Management Program

Victor MOISA

*MATE-FIN, Romania*

 Aspects on radioactive waste  
management and radiation monitoring  
performed for a CANDU NPP in Europe

Felicia DRAGOLICI, E. NEACSU,

G. DOGARU

*IFIN-HH, Romania*

 Premises for complete radioactive waste  
services at IFIN-HH

Rodica NICOLAE, R. M. FAKO

*RATEN CITON, Romania*

 Romanian deep geological repository –  
between political decision, regulatory  
needs and technical constraints

**15:30 – 16:00 Poster Session 2 with Coffee & Tea**
**16:00 – 16:45 PLENARY SESSION 6**
***Knowledge transfer challenges & Transparency and stakeholders  
involvement***

Chairman: Cristina BUCUR

Win ROMANIA

Co – Chairman: Mihaela STIOPOL

ROMATOM

Raluca-Andreea NEDELUCU

*Cernavoda NPP, Romania*

 Knowledge transfer and retention  
challenges at Cernavoda NPP

Florin GLODEANU, B. MILLER,

S. PATRASCOIU

*AMEC Foster Wheeler Nuclear  
RO, Romania*

 Transparency and participation in  
radioactive waste management



Gabriel Lazaro Pavel, D.Moraru

*University Politehnica of  
Bucharest, Faculty of Power  
Engineering*

Steps in building careers at University  
Politehnica of Bucharest

**16:45 – 17:00** Closing and Remarks

## **WORKSHOP ROMATOM**

**Sala OPERA**

**11:00 – 15:30** Workshop on hot issues paradigm in process-based IMS

## **WORKSHOP AREN YOUNG GENERATION**

**Sala BOLERO**

**14:00 – 16:00** Professional Development

## **Wednesday, 4th October 2017**

### **Departure from Intercontinental Hotel**

**08:00 – 17:00**

Technical visits in 3 major Romanian nuclear sites

The participants can select one technical visit to one of the following 3 major nuclear sites in Romania:

- **Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH)**  
<https://www.nipne.ro/>
- **Institute for Nuclear Research Pitesti (RATEN ICN Pitesti)**  
<http://www.nuclear.ro/en/index.php>
- **Nuclear Fuel Plant (FCN Pitesti)**  
<http://www.nuclearelectrica.ro/fcn/>

**Monday, 2nd October 2017**
**POSTER SESSION 1**

<b>S1 – P1</b>	R. NEACȘA, A. RIZOIU <i>RATEN ICN Pitesti, Romania</i> I. PRISECARU <i>Politehnica University Bucharest, Romania</i>	Using natural uranium equivalent fuel in CANDU reactors
<b>S1 – P2</b>	M. MIHALACHE, I. Dumitrescu <i>RATEN ICN Pitesti, Romania</i>	ROHID: A tool for evaluation of hydrogen ingress in pressure tube
<b>S1 – P3</b>	I. NITA <i>RATEN CITON, Romania</i>	Modeling of raw water system in purpose of analyze the flow rate distribution to spent fuel bay coolers from Cernavoda Unit 1
<b>S1 – P4</b>	I. ZABET, M. BIGU, I. NITA <i>RATEN- CITON, Romania</i> G. TARLEA <i>TUCEB, Romania</i> V. LEMORT <i>Laboratory of Thermodynamics, ULg, Liege, Belgium</i>	Mathematical model of a multi-tube helical heat exchanger working with different refrigerants
<b>S1 – P5</b>	V. OLARU, V. IONESCU, D. IONESCU, A. NITU, A. ION, F. VOICU <i>RATEN ICN Pitesti, Romania</i>	Fatigue testing on Zircaloy-4 tubes type SEU-43 at 300°C
<b>S1 – P6</b>	Ș.I. SPIRIDON, E.I. IONETE, Gh. IONITA, B.F. MONEA <i>ICSI Rm. Valcea, Romania</i>	Analysis of sorption/desorption processes of protium and deuterium for different types of titanium beds
<b>S1 – P7</b>	I. STEFAN, L. STEFAN, C. BUCUR, M. VIJULIE, O. BALTEANU, C. MORARU, N. SOFILCA <i>ICSI Rm. Valcea, Romania</i>	Computer based measurement and control of cryogenic distillation (CD) system
<b>S1 – P8</b>	G. IONITA, S. IONUTA, C. BUCUR, C. CIORTEA, A. SOARE, A. MARINOIU, I. STEFANESCU <i>ICSI Rm. Valcea, Romania</i>	Characterization of COMPAK C-P 001 mixed catalytic packing for heavy water detritiation

**Tuesday, 3rd October 2017**
**POSTER SESSION 2**

<b>S2 – P1</b>	E. SIMION, A. GHERASIM, D.DAVID <i>ANPM, Romania</i> I. CHIOSILA <i>SRRP, Romania</i>	Environmental radioactivity monitoring aspects in Romania
<b>S2 – P2</b>	P. MIN <i>CNCAN Romania</i> D. SERBANESCU <i>CRIFST, Romanian Academy</i>	Systematic approach on human and organizational factors in the nuclear power plants emergency management
<b>S2 – P3</b>	C. TUDORAN Zeta Co., Romania	Improved training approaches for complex organizational systems
<b>S2 – P4</b>	S. ZAHAROV, C. BUCUR, I POPESCU, V SIMIONOV <i>Cernavoda NPP, Romania</i>	Intercomparison exercises for organically bound tritium (OBT) analysis in environmental samples
<b>S2 – P5</b>	I. PARASCHIV, C. BUCUR, M. OLTEANU <i>RATEN ICN Pitesti, Romania</i>	Estimation of <sup>14</sup> C release from Saligny radioactive waste repository in the post- operational period and its effects on the population and the environment
<b>S2 – P6</b>	A. TURNEA, D. M.DOGARU, C. VIRTOPEANU <i>CNCAN, Romania</i>	Improvement of the regulatory framework in the field of decommissioning and natural sources
<b>S2 – P7</b>	C. VIRTOPEANU, D. DOGARU, A. TURNEA <i>CNCAN, Romania</i>	Improvement of the regulatory framework in the field of predisposal and disposal of radioactive waste
<b>S2 – P8</b>	A. BARBU <i>Nuclear Fuel Plant, Romania</i>	Immobilization of liquid radioactive organic waste in polymer matrices (Review)
<b>S2 – P9</b>	C. GHITA <i>AREN, Romania</i>	Innovation and creativity in the scientific and technical research
<b>S2 – P10</b>	B. CORBESCU, T. GYONGYOSI, D. PUIU, <i>RATEN ICN Pitesti, Romania</i> V.N. PANAITESCU, <i>Politehnica University of                      Bucharest, Romania</i>	Calculus estimation of the time and liquid nitrogen quantity required to isolate a horizontal high diameter pipe-line

## CONNECTED EVENT

### **GREAT Nuclear Energy Summit**

**Bucharest, Romania**

**3-5 October 2017**

*Department for Trade and Investment – UK will be organizing the GREAT Nuclear Energy Summit in Bucharest, a trade delegation of British companies to Romania.*

*On 4<sup>th</sup> October 2017, a networking reception will be organized at the British Ambassador's Residence providing an excellent opportunity to broaden the contacts.*

*Invitations will be provided to the organizations participating at SIEN 2017 by the organizer of the networking reception in due time.*