

International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle:

*Exploration, Mining,
Production, Supply and
Demand, Economics and
Environmental Issues*

**25–29 June 2018
Vienna, Austria**

PROGRAMME



IAEA
International Atomic Energy Agency

**URAM
2018**

Organized by the



In cooperation with the



OECD Nuclear Energy
Agency (NEA)



World Nuclear
Association (WNA)



United Nations Economic
Commission for Europe
(UNECE)

**International Symposium on
Uranium Raw Material for the
Nuclear Fuel Cycle: Exploration,
Mining, Production, Supply and
Demand, Economics and
Environmental Issues (URAM-2018)**

Organized by the

**International Atomic Energy Agency
(IAEA)**

**25-29 JUNE 2018
Vienna, Austria**

Programme

Background

Adequate services, expertise and modern technologies are needed to ensure a sustainable supply of uranium raw materials to fuel both operating and future nuclear power reactors. Effective regulation, sound environmental management, training and education are required to minimize the impact of uranium mining and production and to contribute to public acceptance of the global nuclear industry in general.

In 2005, 2009 and 2014, the International Atomic Energy Agency (IAEA) hosted the International Symposia on Uranium Production and Raw Materials for the Nuclear Fuel Cycle at its Headquarters in Vienna, Austria, to discuss all aspects of uranium raw materials for the uranium fuel cycle to ensure the long-term sustainability of a nuclear power programme.

In response to a challenging economic environment, the industry is currently seeking new and innovative ways to improve efficiencies in producing uranium. Since 2016 the long term median forecast envisages the growth of nuclear power worldwide, thereby leading to an eventual increase in uranium demand and in turn the price of uranium. In the last few years uranium supply has exceeded consumption, leading to historically low spot prices for uranium oxide. This has resulted in decreased exploration activity as well as in some mines being placed in care and maintenance. Looking forward, secondary uranium supplies are expected to dwindle. This, combined with the exhaustion of some active uranium mines, requires that the uranium resource base and global production capacity be further advanced in order to meet current and future demands. The current oversupply could potentially lead to undersupply in the medium to long term. Due to long lead times from discovery to production, the re-evaluation of uranium resources is required now.

Registration

Please register your attendance at the Registration Desk at the entrance of the M Building.

The Registration Desk and the Symposium Secretariat in MOE68 will be staffed throughout the symposium and our colleagues there will be happy to assist you.

Poster Presentations

Poster presentations will be held in the Poster Exhibition area located in the M Building: outside of Board Room A (2nd Floor). Each poster presenter has been assigned to the afternoon of Wednesday, 27 June 2018. Poster presenters are kindly requested to bring a hard copy of their poster to the Poster Exhibition area on Tuesday, 26 June 2018 if possible, or before 09:00 hrs on the day of their assigned presentation on 27 June 2018. Poster presenters will affix their posters on the board bearing their assigned paper number. Posters will remain on display for the rest of the week of the symposium, and may be removed after the symposium on Friday afternoon after 12:20 hrs.

Discussions

All sessions will be recorded. Anyone who wishes to take the floor, e.g. during question periods, should first wait to be identified by the Chairperson, then speak into the nearest microphone and begin their question or comment by stating their name, country and organization. Participants are asked to be as concise as possible.

Internet Access

Wireless internet access is available throughout the M Building and no password is needed.

Two computer corners are located on the ground floor of the M Building.

Bank and Post Office

Banking Services and a post office are located on the first floor of the C Building.

Symposium:

President: Michel Cuney, France
Vice-Chair: Olga Gorbatenko, Kazakhstan

IAEA Secretariat:

Scientific Secretaries: Peter Woods
Martin Fairclough
Brett Moldovan

Administrative Support: Zsuzsanna Zohori
Polina Berezina
Oleksandra Valter

Symposium Organizer: Julie Zellinger

Rapporteurs: Adrienne Hanly

Location of the Symposium:

International Atomic Energy Agency
Vienna International Centre (VIC)
M-Building
Board Room A & M3
Wagramer Strasse 5
A-1400 Vienna, Austria

Working Language: English

Programme Committee

Z. Li	China
M. Cuney	France
C. Polak	France
P. Woods	IAEA
M. Fairclough	IAEA
B. Moldovan	IAEA
C. K. Asnani	India
O. Gorbatenko	Kazakhstan
L. Grancea	OECD – NEA
A. Boytsov	Russian Federation
H. Tulsidas	UNECE
S. Hall	USA
O. Skorlyakova	WNA

MOBILE CONFERENCE APPLICATION

(for smart phones and tablets)

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Participants are encouraged to download the conference application (App) **IAEA Conferences and Meetings** available at Google Play and the iTunes Store. The QR codes above will take you right there.

Once you have installed the App simply select this conference.

The App allows you to:

- put together your own schedule and view up-to-date programme information;
- view ppt presentations of those speakers who have permitted their release, after the presentation;
- interact with other participants using the App;
- submit questions/comments during the sessions.

If you wish to do so, toward the end of the symposium, please provide us with your feedback using the evaluation form available on the App.

If you have questions or require assistance on the App please contact the Symposium Registration Desk.

TIMETABLE

Monday, 25 June 2018

08:00–10:00	Registration	M- Building Registration Desk
10:00–12:40	Opening Session	Board Room A
12:40–14:00	<i>Lunch Break</i>	
14:00–15:20	Track 2: Uranium Markets	Board Room A
14:00–15:40	Track 8: Uranium from Unconventional Resources	Conference Room M3
15:40–16:00	<i>Coffee / Tea Break</i>	
16:00–17:00	Track 1: Nuclear Power and Associated Modern Energy Markets	Board Room A
16:00–17:40	Track 3: Applied Geology & Geometallurgy or Uranium and Associated Metals	Conference Room M3
17:40	<i>Welcome Reception until 20:00</i>	

Tuesday, 26 June 2018

09:00–10:40	Track 3: Applied Geology & Geometallurgy or Uranium and Associated Metals	Board Room A
09:00–10:40	Track 4: Advances in Exploration	Conference Room M3
10:40–11:00	<i>Coffee / Tea Break</i>	

11:00–12:40	Track 3: Applied Geology & Geometallurgy or Uranium and Associated Metals	Board Room A
11:00–12:40	Track 10: Health, Safety, Environment and Social Responsibility	Conference Room M3
12:40–14:00	<i>Lunch Break</i>	
14:00–15:20	Track 4: Advances in Exploration	Board Room A
14:00–15:40	Track 10: Health, Safety, Environment and Social Responsibility	Conference Room M3
15:40–16:00	<i>Coffee / Tea Break</i>	
16:00–17:20	Track 6: Underground and Open Pit Uranium Mining and Milling	Board Room A
16:00–17:40	Track 10: Health, Safety, Environment and Social Responsibility	Conference Room M3

Wednesday, 27 June 2018

09:00–10:40	Track 4: Advances in Exploration	Board Room A
09:00–10:40	Track 12: Uranium Newcomers	Conference Room M3
10:40–11:00	<i>Coffee / Tea Break</i>	
11:00–12:20	Track 6: Underground and Open Pit Uranium Mining and Milling	Board Room A

11:00–12:30	Track 12: Uranium Newcomers	Conference Room M3
12:30–14:00	<i>Lunch Break</i>	
14:00–15:40	Track 7: Uranium Production by the In Situ Leaching (ISL) Process	Board Room A
14:00–15:40	Track 10: Health, Safety, Environment and Social Responsibility	Conference Room M3
15:40–16:00	<i>Coffee / Tea Break</i>	
16:00–17:00	Track 4: Advances in Exploration	Board Room A
16:00–17:00	Track 8: Unconventional Uranium Resources	Conference Room M3
17:00–18:00	Poster Session	Outside of Board Room A

Thursday, 28 June 2018

09:00–10:40	Track 3: Applied Geology & Geometallurgy or Uranium and Associated Metals	Board Room A
09:00–10:40	Track 11: Tailings and Waste Management	Conference Room M3
10:40–11:00	<i>Coffee / Tea Break</i>	

11:00–12:40	Track 3: Applied Geology & Geometallurgy or Uranium and Associated Metals	Board Room A
11:00–13:00	Track 10: Health, Safety, Environment and Social Responsibility	Conference Room M3
13:00–14:00	<i>Lunch Break</i>	
14:00–15:40	Track 4: Advances in Exploration	Board Room A
14:00–15:40	Track 5: Economic Evaluations of Uranium Projects	Conference Room M3
15:40–16:00	<i>Coffee / Tea Break</i>	
16:00–18:00	Track 7: Uranium Production by the In Situ Leaching (ISL) Process	Board Room A

16:00–17:20	Track 9: Thorium & Associated Resources	Conference Room M3
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Friday, 29 June 2018

09:00–10:00	Closing Session	Board Room A
10:00–10:30	<i>Coffee / Tea Break</i>	
10:30–12:30	Closing Session	Board Room A

MONDAY, 25 JUNE 2018

08:00–10:00 Registration Desk

10:00–12:40 **OPENING SESSION**
Board Room A

Y. Amano
Director General
International Atomic Energy Agency (IAEA)

Welcome address and opening remarks

M. Cuney
Symposium Chairman
CNRS – GeoRessources
CREGU – Université de Lorraine

Opening remarks

P. Woods
IAEA
Scientific Secretary – URAM-2018

Opening remarks

O. Skorlyakova
World Nuclear Association (WNA)

2017 Fuel Report World Nuclear Association

L. Grancea
OECD- Nuclear Energy Agency

Nuclear Energy and Uranium: Looking to The Future

N. Carter
Executive Vice President
Ux Consulting Company
United States of America

The Impact of Global Nuclear Fuel Inventories on Forward Uranium Production

H. Tulsidas
United Nations/Economic Commission for Europe (UNECE)

Foundational Fuels of the 21st Century:
Evolving Socio-economics of Sustainable Energy Systems

V. Konstantinov
President
Uranium One Group
Russian Federation

Uranium One development Outlook

12:40–14:00 *Lunch Break*

MONDAY, 25 JUNE 2018

14:00–15:20 **Track 2:**
Uranium Markets
Board Room A

Chairpersons: **N. Carter, O. Skorlyakova**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	R. Rizvi	Kazakhstan	Regulations for the Diversification of Partners as Part of the Security of Supply Policy
14:20–14:40	L. Lopez	Argentina	Uranium Resources and Perspectives for Nuclear Supply in Argentina
14:40–15:00	B. Bulut Acar	Turkey	Estimation of Uranium Requirements for Planned Nuclear Power Plants and Supply Capacity of Uranium Resources in Turkey
15:00–15:20	T. Calvert	Canada	Canada's Uranium Mining Industry: 75 Years of Production and Future Prospects

15:20–16:00	<i>Coffee / Tea Break</i>		
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MONDAY, 25 JUNE 2018

14:00–15:40 **Track 8:**
Uranium from Unconventional Resources

Conference Room M3

Chairpersons: **H. Tulsidas, B. Moldovan**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	P. Bruneton	France	Unconventional Resources in IAEA Uranium DEPOsit Database (UDEPO)
14:20–14:40	P. Kay	Australia	Uranium: Waste or Potential Future Resource?
14:40–15:00	R. Reyes	Philippines	Status of Uranium Activities on Unconventional Resources in the Philippines
15:00–15:20	F. Tavares	Brazil	Conventional and Unconventional Uranium Resources in the Carajás Mineral Province, Brazil: Prospectivity Criteria for IOCG and Granite-Related Deposits
15:20–15:40	J. Ramirez	Philippines	Uranium Extraction Technology in the Philippines: The Next Step
15:40–16:00	<i>Coffee / Tea Break</i>		

MONDAY, 25 JUNE 2018

16:00–17:00 **Track 1:**
***Nuclear Power and Associated Modern
Energy Markets***

Board Room A

Chairpersons: **L. Grancea, R. Schodde**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	H. Tulsidas	UNECE	The Emerging Uranium Industry Landscape: Push or Pull Resource Recovery?
16:20–16:40	A. K. Sarangi	India	Uranium Mining Towards Sustainable Clean Energy: Indian Scenario
16:40–17:00	P. E. De Oliveira Lainetti	Brazil	History of Nuclear Fuel Cycle Development, Facility Decommissioning and Site Restoration at IPEN — CNEN/SP, Brazil

17:40–20:00 *Welcome Reception*
M-Building, 2nd Floor

MONDAY, 25 JUNE 2018

16:00–17:40 **Track 3:**
***Applied Geology and Geometallurgy of
Uranium and Associated Metals***

Conference Room M3

Chairpersons: **Z. Li, S. Hall**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	M. Cuney	France	The Ultimate Origin of Uranium Provinces
16:20–16:40	E. Afanasyeva	Russian Federation	Uranium Provinces of the World
16:40–17:00	L. Shumlyanskyy	Ukraine	Sr-Nd-Pb Isotope Systematics of U-Bearing Albitites of the Central Ukrainian Uranium Province: Implication for the Source of Metasomatizing Fluids
17:00–17:20	S. Nuchdang	Thailand	Development of Handheld X-Ray Fluorescence (hXRF) Spectrometry for Major and Minor Elements Analysis in Geological Samples from Phuket Province, Thailand
17:20–17:40	J. Manrique	Ecuador	Geochemical Prospecting Study of the Vanadium–Uranium Mineralization of Puyango, Ecuador
17:40–20:00	<i>Welcome Reception M-Building, 2nd Floor</i>		

TUESDAY, 26 JUNE 2018

09:00–10:40

Track 3:

***Applied Geology and Geometallurgy of
Uranium and Associated Metals***

Board Room A

Chairpersons:

C. K. Asnani, M. Cuney

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:20	Z. Li J. Nie	People's Republic of China	Structural Characteristics and Its Control on Uranium Mineralization in Xiangshan Uranium Ore-Field
09:20–09:40	Z. Huang	People's Republic of China	Volcanic Type Uranium Deposits in North China
09:40–10:00	J. Yan	People's Republic of China	Geological and Geochemical Characteristics of the Huayangchuan U-Nb-Pb Deposit, Shan'xi China
10:00–10:20	C. Bonnetti	People's Republic of China	Alteration Fingerprint of the Early Yanshanian Granite-Related High-Temperature Hydrothermal Uranium Mineralization in the Nanling Metallogenic Belt, Southeast China
10:20–10:40	K. Wenrich	United States of America	Rare Earth Elements in Uraninite: Breccia Pipe Uranium District, Northern Arizona, USA
10:40–11:00	Coffee / Tea Break		

TUESDAY, 26 JUNE 2018**09:00–10:40****Track 4:*****Advances in Exploration******Conference Room M3*****Chairpersons:****M. Mihalasky, I. Pechenkin**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:20	I. R. Annesley	Canada	Investigation of the Geological Processes Which Control the Genesis of Unconformity-Type Uranium Deposits Using Parallelized Numerical Simulation on a Supercomputer
09:20–09:40	T. Allen	Canada	The Midwest Project, East Athabasca Basin, Northern Canada: Reviving old deposits to prepare for the future
09:40–10:00	M. B. Verma	India	Potential for Unconformity-Related Uranium Deposits in the Northern Part of the Cuddapah Basin, Telangana and Andhra Pradesh, India
10:00–10:20	P. Ledru	Canada	The Challenges to Explore and Discover an Unconformity Deposit at Depth
10:20–10:40	Z. Hajnal, I. R. Annesley	Canada	Integration and Cost Saving Utilization of the Seismic Reflection Technique in the Athabasca Basin, Canada
10:40–11:00	Coffee / Tea Break		

TUESDAY, 26 JUNE 2018

11:00–12:40 **Track 3:**
***Applied Geology and Geometallurgy of
Uranium and Associated Metals***

Board Room A

Chairpersons: **A. Boytsov, C. Polak**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
11:00–11:20	S. Hall	United States of America	Genetic Deposit Model for Calcrete Uranium in the Southern High Plains Region, United States of America
11:20–11:40	P. Bruneton	France	UDEPO: The IAEA Uranium Deposits Database
11:40–12:00	E. Afanasyeva	Russian Federation	Uranium Deposits of the Karelian-Kola Province (Russian Federation)
12:00–12:20	V. Petrov	Russian Federation	Free Thermal Convection Model for Formation of the Largest Uranium Field in the Streltsovka Caldera (Transbaikalia, Russia)
12:20–12:40	M. Abzalov	Australia	Exploration and Resource Development of Uranium Mineralization in Central Jordan

12:40–14:00	Lunch Break
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TUESDAY, 26 JUNE 2018

11:00–12:40 **Track 10:**
***Health, Safety, Environment and Social
Responsibility***

Conference Room M3

Chairpersons: **H. Tuslidas, J. Hendry**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
11:00–11:20	F. Harris	Australia	An Internationally Standardized Reporting Tool to Understand the Sustainable Development Performance of Uranium Mining and Processing Sites
11:20–11:40	G. Schneider	Namibia	Uranium, the Environment and Sustainable Development: Lessons from Namibia
11:40–12:00	A. Rocha Sciclewski	Brazil	Perspectives on Social Communication in the Brazilian Nuclear Licensing Process and Challenges on Stakeholder Engagement: Caetité Uranium Mining Case
12:00–12:20	A. H. Abakar	Chad	Uranium Deposit Types, Exploration Methods and Corporate Social Responsibility (CSR) Programs: Case of LERE (Chad)
12:20–12:40	M. Franklin	Brazil	Societal Barriers to Uranium Mining: A Case Study from Brazil
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12:40–14:00	Lunch Break		

TUESDAY, 26 JUNE 2018

14:00–15:20 **Track 4:**
Advances in Exploration

Board Room A

Chairpersons: **S. Hall, I. Pechenkin**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	P. Wollenberg	Canada	DASA: Africa's Newest World Class Uranium Deposit in Niger, West Africa — A Global Atomic Corporation Project
14:20–14:40	F. Ye	People's Republic of China	Advances in Hyperspectral Remote Sensing Technology for the Exploration of Hydrothermal Type Uranium Deposits in China: A Case Study in the Xuemisitan and Longshoushan Areas
14:40–15:00	D. K. Sinha	India	Uranium Potential of Singhbhum Shear Zone, India: Future Prospects
15:00–15:20	J. Iranmanesh	Islamic Republic of Iran	Uranium Exploration by Remote Sensing Methods in the Kaleybar Area, North-Western Region, Islamic Republic of Iran
15:20–16:00	Coffee / Tea Break		

TUESDAY, 26 JUNE 2018

14:00–15:40 **Track 10:**
***Health, Safety, Environment and Social
Responsibility***

Conference Room M3

Chairpersons: **G. Schneider, D. Mwalongo**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	M. Franklin	Brazil	Sustainable Water Resource Management at a Uranium Production Site
14:20–14:40	F. P. Carvalho	Portugal	Uranium Mining Waste, Risk Perception by Populations and Environmental Remediation in Portugal
14:40–15:00	S. Jovanovic	Montenegro	Advanced Quantitative Gamma Spectrometry Software for Optimized Environmental Assessment During 'Cradle-to-Grave' Uranium Exploitation Management
15:00–15:20	K. Turner	Australia	Development, Evolution and Implementation of Environment Protection Standards for Uranium Mining in the Australian Tropics
15:20–15:40	K. Tayler	Australia	A Risk Based Approach to Uranium Mining Rehabilitation
15:40–16:00	Coffee / Tea Break		

TUESDAY, 26 JUNE 2018

16:00–17:20 **Track 6:**
***Underground and Open Pit Uranium
Mining and Milling***

Board Room A

Chairpersons: **C. Polak, M. Mihalasky**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	S. Tumuluri	India	Comprehensive Extraction Scheme for Multimetal Recovery from Metasomatite–Albitite Hosted Low Grade Indian Uranium Ore
16:20–16:40	D. Princep	Australia	Modern Uranium Open Pit Grade Control
16:40–17:00	W. Dong	People’s Republic of China	Preliminary Study on Uranium Ore Grade Control Techniques for the Husab Mine, Namibia
17:00–17:20	R. Bowell	United Kingdom	Cost Effective Heap Leaching, The Case Study of Mutanga, Zambia

17:20	Adjourn		
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TUESDAY, 26 JUNE 2018

16:00–17:40 **Track 10:**
***Health, Safety, Environment and Social
Responsibility***

Conference Room M3

Chairpersons: **J. Hendry, G. Schneider**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	M. Roberts	IAEA	IAEA Coordination Group for Uranium Legacy Sites (CGULS): Strategic Master Plan for the Environmental Remediation of Uranium Legacy Sites in Central Asia
16:20–16:40	D. Mwalongo	United Republic of Tanzania	Five Years After the UPSAT Mission: Progress and Challenges
16:40–17:00	P. Waggitt	Australia	Uranium Mining Remediation in Australia's Northern Territory
17:00–17:20	N. Kurinova	Russian Federation	Assessment of the Impact of Uranium Production Waste Storage Facilities on the Environment Based on the Results of Hydrogeological Monitoring and Numerical Modeling
17:20–17:40	J. Wlosok	Czech Republic	Development of Mine Water Quality, Subsequent Sediments Contamination and Passive 226Ra Treatment in Zadní Chodov, Czech Republic – Case Study
17:40	Adjourn		

WEDNESDAY, 27 JUNE 2018

09:00–10:40 **Track 4:**
Advances in Exploration

Board Room A

Chairpersons: **L. Lopez, M. Fairclough**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:20	M. Mihalasky	United States of America	Quantitative Mineral Resource Assessments of Roll-Front and Calcrete Uranium in Southern Texas and the Southern High Plains Province of the United States: Results and Simple Economic Filter Analysis
09:20–09:40	R. Schodde	Australia	Long Term Trends for Global Uranium Exploration
09:40–10:00	A. Wild	Australia	Prospectivity Analysis of the Mount Isa Region (Queensland, Australia) for Metasomatite-Type Uranium
10:00–10:20	M. Bruce	Australia	Using Continent-Scale Spatial Targeting to Delineate Permissive Areas for Sandstone-Hosted Uranium
10:20–10:40	J. Carranza	Canada	Spatial Analysis of Prospectivity for Surficial Uranium Deposits: A Case Study in British Columbia, Canada
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10:40–11:00	Coffee / Tea Break		

WEDNESDAY, 27 JUNE 2018

09:00–10:40 **Track 12:**
Uranium Newcomers

Conference Room M3

Chairpersons: **D. Mwalongo, B. Moldovan**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:20	J. Zhang	IAEA	Deploying Technology and Management of Sustainable Uranium Extraction Projects
09:20–09:40	P. Woods	IAEA	Supporting Sustainable Development of Uranium Resources in Africa
09:40–10:00	G. Zakrzewska-Koltuniewicz	Poland	Uranium from Domestic Resources in Poland
10:00–10:20	S. Gezer	Turkey	Uranium Exploration and Mining Activities of Turkey as a Newcomer
10:20–10:40	P. Woods	IAEA	A Milestones Approach to Uranium Mining and Development: An IAEA Initiative
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10:40–11:00	Coffee / Tea Break		

WEDNESDAY, 27 JUNE 2018

11:00–12:20 **Track 6:**
***Underground and Open Pit Uranium
Mining and Milling***

Board Room A

Chairpersons: **L. Grancea, Z. Li**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
11:00–11:20	P. Zhong	People's Republic of China	Overview of Uranium Heap Leaching Technology in China
11:20–11:40	C.K. Asnani	India	Development of Alkali Leaching Technology: Key to Self Sufficiency in Uranium Production in India
11:40–12:00	B. Moldovan	IAEA	Coagulation of Colloidal Silica from Uranium Leach Solutions for Improved Solvent Extraction
12:00–12:20	M. Maley	Australia	Investigation of Key Parameters for Effective SDU Precipitation

12:20–14:00	Lunch Break		
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WEDNESDAY, 27 JUNE 2018

11:00–12:20 **Track 12:**
Uranium Newcomers

Conference Room M3

Chairpersons: **A. Boytsov, R. Schodde**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
11:00–11:20	Syahril	IAEA	An Integrated Capacity Building Approach to Uranium Production Cycle Milestones for Regional Asia Pacific Technical Co-Operation
11:20–11:40	J. Karniliyus	Nigeria	Uranium Potential in Nigeria
11:40–12:00	S. Katamoura	Saudi Arabia	Uranium/Thorium Resource Assessment in Saudi Arabia
12:00–12:20	V. Rasoamalala	Madagascar	Uraniferous Potential and Occurrences of Madagascar: An Overview

12:20–14:00	Lunch Break
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WEDNESDAY, 27 JUNE 2018

14:00–15:40 **Track 7:**
***Uranium Production by the In Situ
Leaching (ISL) Process***

Board Room A

Chairpersons: **C. Polak, O. Gorbatenko**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	A. Boytsov	Russian Federation	Major Innovations in ISL Mining at Uranium Ore Mines in Kazakhstan
14:20–14:40	Y. Yuan, Y. Niu	People's Republic of China	The Fundamental Research and Industrial Application of the CO ₂ and O ₂ In Situ Leaching Process in China
14:40–15:00	D. Aizhulov	Kazakhstan	Stochastic Modelling of Uranium Roll-Front Deposits Based on Streamline Simulation
15:00–15:20	M. Kurmanseit,	Kazakhstan	Impact of Gravity Effect on in Situ Leaching of Uranium
15:20–15:40	M. Maley	Australia	Laboratory and Ion Exchange Pilot Plant Studies Supporting the Field Leach Trial at the Honeymoon Uranium Project

15:40–16:00	Coffee / Tea Break		
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WEDNESDAY, 27 JUNE 2018

14:00–15:40 **Track 10:**
***Health, Safety, Environment and Social
Responsibility***

Conference Room M3

Chairpersons: **D. Mwalongo, L. Lopez**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	A. Jagger	Australia	Effective Radiation Monitoring: Back to Basics
14:20–14:40	J. Hondros	Australia	"It's Not All About the Radiation!" - Practical Radiation Management
14:40–15:00	R. Meck	United States of America	Action Levels for Airborne Natural Uranium in the Workplace: Chemical and Radiological Assessments
15:00–15:20	S. H. Brown	United States of America	Radiological Aspects of Alkaline Leach Uranium in Situ Recovery (ISR) Facilities in The United States
15:20–15:40	H. B. Okyar	IAEA	A New IAEA Safety Report on Occupational Radiation Protection in the Uranium Mining and Processing Industry
15:40–16:00	Coffee / Tea Break		

WEDNESDAY, 27 JUNE 2018

16:00–17:00 **Track 4:**
Advances in Exploration

Board Room A

Chairpersons: **A. Boytsov, M. Mihalasky**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	Z. Li	People's Republic of China	Regional Signatures and Metallogenic Models of Sandstone Hosted Uranium Deposits in Northern China
16:20–16:40	M. Fairclough	IAEA	Mapping the World Distribution of Uranium Deposits
16:40–17:00	M. Fairclough	IAEA	Spatial and Quantitative Modelling of Uranium Resources
17:00–18:00	Poster Session		

Outside of Board Room A, 2nd Floor

WEDNESDAY, 27 JUNE 2018

16:00–17:00 **Track 8:**
Uranium from Unconventional Resources

Conference Room M3

Chairpersons: **C.K. Asnani, L. Grancea**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	C. Marie	France	Understanding of Uranium Extraction Mechanisms from Phosphoric and Sulphuric Media Using DEHCNPB
16:20–16:40	N. Al-Khaledi	Kuwait	Selective Leaching of Uranium from Phosphates Ore
16:40–17:00	P. Britt	United States of America	Overview and Update on the Seawater Uranium Recovery from Technology Development Sponsored by the U.S. Department of Energy
17:00–18:00	Poster Session		

Outside of Board Room A, 2nd Floor

THURSDAY, 28 JUNE 2018

09:00–10:40 **Track 3:**
***Applied Geology and Geometallurgy of
Uranium and Associated Metals***

Board Room A

Chairpersons: **L. Lopez, M. Fairclough**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:20	I. Pechenkin	Russian Federation	Regional Forecasting of Sandstone Type Uranium Deposits
09:20–09:40	A. Ali	Pakistan	Genesis of Sandstone Type Uranium Deposit in Dhok Pathan Formation, Siwalik Group of Trans-Indus Salt Range (Surghar Range), Pakistan
09:40–10:00	V. Lusambo	Zambia	The Karoo Sandstone-Hosted Uranium Deposit at Dibwe East, Mutanga, Zambia
10:00–10:20	O. Gorbatenko	Kazakhstan	3D Modeling of Roll-Front Type Uranium Deposits in Kazakhstan
10:20–10:40	F. Nie	People's Republic of China	The Fluid Flows and Uranium Mineralization In The Northern Ordos Basin, North China
10:40–11:00	Coffee / Tea Break		

THURSDAY, 28 JUNE 2018

09:00–10:40 **Track 11:**
Tailings and Waste Management

Conference Room M3

Chairpersons: **J. Hendry, P. Woods**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:20	J. Hendry	Canada	A Review of the Geochemical Controls on Elements of Concern in Uranium Mill Tailings, Athabasca Basin, Canada
09:20–09:40	T. Metschies	Germany	Remediation of Former Uranium Mill Tailings Facilities: Concepts and Lessons Learned
09:40–10:00	O. Voitsekhovych	Ukraine	Environment Aspects of Th-230 Accumulated in Residues Components at the Uranium Production Legacy Site Pridneprovsky Chemical Plant
10:00–10:20	G. Dunn	Australia	The Removal of Radiation and Other Impurity from Copper Sulphide Concentrates
10:20–10:40	B. Moldovan	IAEA	Hydrometallurgical Controls on Arsenic, Molybdenum and Selenium in Uranium Mill Effluent and Tailings

10:40–11:00	Coffee / Tea Break		
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THURSDAY, 28 JUNE 2018

11:00–12:40 **Track 3:**
***Applied Geology and Geometallurgy of
Uranium and Associated Metals***

Board Room A

Chairpersons: **S. Hall, C. Polak**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
11:00–11:20	A. Hanly	IAEA	Unconformity-Type Uranium Deposits: A New IAEA Technical Document
11:20–11:40	G. Chi	Canada	Fluid Inclusion Evidence for Uranium Extracted from the Athabasca Basin as a Source for Unconformity-Related Uranium Mineralization
11:40–12:00	I. Annesley	France	New U–Pb Ages and Geochemistry from the Wheeler River Uranium Deposits, Athabasca Basin, Canada
12:00–12:20	J. Gigon	France	Comparison Between the Uranium Deposits in the Alligator River Uranium Field and the Westmoreland Area (Northern Territory and Queensland, Australia)
12:20–12:40	P. Acosta-Gongora	Canada	Geochemical Signatures of U-Bearing Metasomatic Deposits of The Central Mineral Belt, Labrador, Canada
12:40–14:00	Lunch Break		

THURSDAY, 28 JUNE 2018

11:00–13:00 **Track 10:**
**Health, Safety, Environment and Social
Responsibility**

Conference Room M3

Chairpersons: **H. Tuslidas, G. Schneider**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
11:00–11:20	B. Boyer	IAEA	IAEA Safeguards Aspects of, and Issues in, Uranium Mining and Ore Processing
11:20–11:40	D. Mwalongo	United Republic of Tanzania	IAEA-TDL-003: A Cornerstone for Nuclear Security for Uranium Ore Concentrates for Newcomers
11:40–12:00	A. Khamzayeva	IAEA	Guidance and Training for Nuclear Security in the Uranium Extraction Industry
12:00–12:20	B. Moldovan	IAEA	Practical Approach to Improving Conventional Safety Performance and Culture in Uranium Mines and Mills
12:20–12:40	H. B. Okyar	IAEA	UMEX Project, an IAEA Survey of Global Uranium Mining and Processing Occupational Doses
12:40–13:00	Saïdou	Cameroon	Natural Radiation Exposure to the Public in the Uranium and Thorium Bearing Regions of Cameroon: from Measurements, Dose Assessment to a National Radon Plan
13:00–14:00	Lunch Break		

THURSDAY, 28 JUNE 2018

14:00–15:40 **Track 4:**
Advances in Exploration

Board Room A

Chairpersons: **M. Mihalasky, Z. Li**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	M. Brouand	France	Contribution to the Characterization of the Host Formation of the Francevillian Uranium Mineralization (Haut Ogooué Province, Gabon): Petrography, Sedimentology, Stratigraphy, Age and New Isotopic Data
14:20–14:40	J. Kvasnicka	Australia	Radon Monitoring in the Soil Air with Nuclear Track Detectors – Uranium Exploration Method
14:40–15:00	T. O'Connor	Canada	Uranium-Lithium Deposits at Macusani, Peru: Geology, Processing and Economics Along the Path to Production
15:00–15:20	P. Sorjonen-Ward	Finland	Advanced Technologies for Sustainable Exploitation of Uranium-Bearing Mineral Resources in Finland
15:20–15:40	M. Seredkin	Australia	Features of Geological Modelling, Mineral Resources and Reserves Estimation of Uranium Roll-Front Deposits
15:40–16:00	Coffee / Tea Break		

THURSDAY, 28 JUNE 2018

14:00–15:40 **Track 5:**
Economic Evaluation of Uranium Projects

Conference Room M3

Chairpersons: **N. Carter, R. Schodde**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:20	J. Randabel	Niger	Falea: An Unconformity-Type Polymetallic Deposit, Mali, West Africa
14:20–14:40	H. Allaboun	Jordan	Central Jordan Uranium Project: Monitoring the Project Maturity Via the Application of the UNFC-2009
14:40–15:00	H. Garba Barke	Niger	Economic Evaluation of Uranium Projects (Niger Case Study)
15:00–15:20	C. Chiwambo	Malawi	Regional Framework for The Classification of Uranium Deposits: Africa's Approach to Adopting UNFC-2009 Through Implementation of African Mining Vision
15:20–15:40	J. Randabel	Niger	Exploration Successes in the Tim Merso Basin (Niger): A Case Study

15:40–16:00	Coffee / Tea Break
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THURSDAY, 28 JUNE 2018

16:00–18:00 **Track 7:**
***Uranium Production by the In Situ
Leaching (ISL) Process***

Board Room A

Chairpersons: **A. Boytsov, P. Woods**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	O. Gorbatenko	Kazakhstan	Experience of Plasma-Pulse Action for ISL Uranium Wells
16:20–16:40	A. Yastrebkov	Russian Federation	The Results of Laboratory and Field in Situ Leaching Tests at the Nyota Uranium Deposit (United Republic of Tanzania)
16:40–17:00	H. Maerten	Germany	Effective and Environmentally Compliant in Situ Recovery of Sedimentary Hosted Uranium
17:00–17:20	M. Noskov	Russian Federation	Groundwater Contamination and Self-Purification at Uranium Production by the in Situ Leaching Process
17:20–17:40	S. Brown	United States of America	A Uranium Isotopic Perspective on the Formation of Roll-Front Mineral Deposits and Implications for Post Mining Remediation
17:40–18:00	A. Omirgali	Kazakhstan	Actual Problems of Development and Carrying out of Repair and Restoration Works of Underground Uranium Leaching Wells
18:00	Adjourn		

THURSDAY, 28 JUNE 2018

16:00–17:20 **Track 9:**
Thorium and Associated Resources

Conference Room M3

Chairpersons: **M. Cuney, C.K. Asnani**

<i>Time</i>	<i>Name of Presenter</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16:00–16:20	H. Tulsidas	UNECE	Thorium as Nuclear Fuel: What, How and When?
16:20–16:40	A. Hamed	Sudan	Black Sand in Sudan for Economics Thorium Fuel Cycles
16:40–17:00	J. Zhong	People's Republic of China	Thorium Resources in China: Spatial Distribution, Genetic Type and Geological Characteristics
17:00–17:20	R. Hazan	Malaysia	Effect of Caustic Soda Fusion Temperature on Malaysian Xenotime

17:20	Adjourn		
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FRIDAY, 29 JUNE 2018

09:00–12:30 **Closing Session**

Board Room A

Chairpersons: **M. Cuney, O. Gorbatenko**

09:00–09:20	A. Boytsov Russian Federation	Sustainable Development of Uranium Production: Status, Prospects, Challenges
09:20–09:40	A. Hanly IAEA	World Uranium Resources and Production
09:40–10:00	S. Gorlin World Nuclear Association (WNA)	Harmony - the Future of Electricity and Nuclear Delivering its Potential

10:00–10:30 *Coffee / Tea Break*

10:30–12:00 **Panel Discussion**
Moderated by J. Hendry
Canada

12:00–12:15 **M. Cuney**
France

Chair's Closing Remarks

12:15–12:30 **C. Xerri**
Director, IAEA
Division of the Nuclear Fuel Cycle and Waste
Technology

IAEA's Closing Remarks

POSTERS

Posters will be on display starting on 26 June 2018 and will remain throughout the Symposium

Poster contributors are requested to be at their posters during the Poster Session – **Wednesday, 27 June 2018 (17:00)**

<i>No. of Paper IAEA-CN-261</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
2	F. Carvalho	Portugal	Radioactivity Monitoring and Environmental Restoration of a Legacy Mine and Milling Site
4	L. Silva	Brazil	Conceptual Model of The Fractured Aquifer of The Uranium Mine in Caetité, Brazil: Implications for Underground Water Flow
8	U. Mirsaidov	Tajikistan	Uranium Legacy Sites of the Former Soviet Union in Tajikistan: Problems and the Way Forward
9	U. Mirsaidov	Tajikistan	Possibility of Uranium Industry Wastes Reprocessing in Tajikistan
13	J. Iranmanesh	Islamic Republic of Iran	Geology, Mineralogy and Petrography of Rocks with Radioactive Element Mineralization in Anomaly 6 of the Khoshumi Area, Islamic Republic of Iran
15	D. Rattanaphra	Thailand	Characterization of Uranium, Thorium and Rare Earths in The Decomposition Process of Thai Monazite Ore Samples by X Ray Powder Diffraction and Wavelength Dispersive X Ray Fluorescence Techniques
17	C. A. B. Dath	Senegal	Challenges and Opportunities of Small Uranium Mines in the SMR Development Era
19	R. Reyes	Philippines	Assessment of Thorium and Associated Resources: Philippine Initiatives
22	G. Haddadi	Islamic Republic of Iran	Indoor Radon Levels in Gachin (Islamic Republic of Iran)
23	K. Changkrueng	Thailand	Geological Samples Pinpoint for Nuclear Forensics Examination in Thailand
26	J. Manrique	Ecuador	Geochemical and Mineralogical Characterization of The Uraniferous Phosphate Rocks of the Navay Formation, Táchira State, Venezuela
27	E. Kimaro	Tanzania	Uranium Mining in the United Republic of Tanzania: Current Status, Challenges and Opportunities
28	Y. Q. Niu	China	The Extraction of Uranium from Salt Lakes in China

<i>No. of Paper IAEA-CN-261</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
30	E. Calderón	Ecuador	Hydrometallurgical Tests for Vanadium Extraction from Black Limestones from Puyango Sector, Loja Province, Ecuador
33	S. Dieguez	Argentina	Yellowcake Production and Environmental Remediation at the Sierra Pintada Mine, Argentina: Lack of Social Licence
34	M. Arrondo	Argentina	Environmental Factors Control at Sierra Pintada, Argentina: Water Quality
37	J. Kraikaew	Thailand	Alternative Database for Domestic LOF Nuclear Materials and Fuel
54	T. K. D. Nguyen	Vietnam	Removal of Uranium and Thorium from Uranium and Rare Earth Ores Processing - Case Study of QA/QC on Environmental Analysis
58	K.X. Wang	China	Geological and Geochemical Characteristics of the Jiling Na-Metasomatism Uranium Deposit, Gansu, China
60	S. S. Maspalma	Nigeria	An Overview of Geology and Occurrence of Unconventional Uranium Resource: Potential Recoveries from Precambrian Basement and Cretaceous Sedimentary Rocks of Nigeria
61	J. Deng	China	Advances in Geophysical Methods Used for Uranium Exploration and Their Applications in China
66	G. Top	Turkey	Determination of Uranium-Bearing Samples in Terms of Possible Contamination, Arikli Uranium Region, Canakkale, Turkey
68	L. López	Argentina	Thorium and Rare Earth Element Comprehensive Extraction Projects in Argentina: Assessment Using the United Nations Framework Classification for Resources (UNFC)
74	B. Mishra	India	Uranium Mineralization in the Khetri Sub-Basin, North Delhi Fold Belt, India
75	R. Villegas	Brazil	Uranium Recovery from Acid Mine Drainage Treatment Residue – Caldas, Brazil Case
77	K. Thrane	Denmark	Uranium Potential in Greenland: An Update
92	S. B. Dampare	Ghana	Geochemical and Mineralogical Studies of Uranium Potential of The Late Devonian To Early Carboniferous Takoradi Black Shale, Sekondian Group, Ghana
100	W. Laksmono	Indonesia	Uranium Mine Operations in Indonesia

<i>No. of Paper IAEA-CN-261</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
101	J. Alvarez	Argentina	New Studies of Uranium Deposits Related to Granites in Argentina
107	M. Vujovic	Serbia	Regulatory Aspects of Former Uranium Mine Sites in Eastern Serbia
112	A. R. Iurian	IAEA	Uranium and Its Environmental Behaviour: A New IAEA Technical Reports Series Publication
127	G. Mashkovtsev	Russian Federation	Evaluation of the Opportunity of Production of Uranium from Phosphorite Ore
128	O. Šálek	Czech Republic	The Test of new UAV Gamma-ray Spectrometer at a Real Uranium Anomaly
129	H. Sayed	Sudan	Using Nuclear Technology for Detection and Determination of Minerals and For Preparing Standard Reference Material
130	S. K. Satpati	India	Technological Upgrading by Recycling Effluents Generated at A Uranium Metal Production Plant, India
134	A. Khaldi	Algeria	Application of the United Nations Framework Classification for Resources (UNFC) to Uranium Resources Discovered in Algeria
139	A. Osman	Sudan	Investigation Of U-238 And Th-232 In Fingernails, Total Blood and Drinking Water Among Well Users in Kadugli Town, a High Natural Background Radiation Area in Sudan
149	T. Berg	Argentina	Remote Sensing Identification of Uranium Exploration Targets - Laguna Sirven Project, Santa Cruz, Argentina
150	T. Berg	Argentina	Biogeochemical Orientation Survey for Surficial Uranium Deposits, Laguna Sirven, Santa Cruz, Argentina
157	M. Noskov	Russian Federation	Innovative Intellectual Management Technology of Uranium Mining by the ISL Method
164	L. López	Argentina	Perspectives of Phosphate - Uranium Comprehensive Extraction Projects in Argentina
170	E. T. Zege	Ethiopia	Tailings and Waste Management at The Kenticha Tantalum Mine Site
174	F. Reitsma	IAEA	Coordinated Research Project on Uranium/Thorium Fuelled High Temperature Gas Cooled Reactor Applications for Energy Neutral and Sustainable Comprehensive Extraction and Mineral Product Development

<i>No. of Paper IAEA-CN-261</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
176	A. Karpaeva	Kyrgyzstan	The Mining Sector Capacity Improvement in The Kyrgyz Republic Through Building Effective Cooperation Among Governments, Mining Companies and Local Communities
183	A. Hanly	IAEA	IAEA Coordinated Research Project: Geochemical and Mineralogical Characterization of Uranium and Thorium Deposits
215	S. Dai	United States of America	Recovery of Uranium from Seawater by Polymeric Adsorbent Systems
218	V. Vokál	Czech Republic	WNU SUP – Efficient Capacity Building Tool in U-Production Cycle
220	K. Kiegiel	Poland	Recovery of Uranium and Accompanying Metals from the Secondary Raw Materials
221	M. Kopbayeva	Kazakhstan	Concentration of Uranium from Solutions Using Nanomembranes
223	H. Maerten	Germany	Effective and Environmentally Compliant In-Situ Recovery of Sedimentary-Hosted Uranium
228	M. Mathuthu	South Africa	Organic Solvent Extraction of Uranium from Alkaline Nuclear Waste

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IAEA PUBLICATIONS RELATED TO THE SUBJECT OF THE SYMPOSIUM

IAEA-TECDOC-1843	World Distribution of Uranium Deposits (UDEPO)	2018
IAEA-TECDOC-1842	Geological Classification of Uranium Deposits and Description of Selected Examples	2018
IAEA-TECDOC-1849	Uranium resources as Co- and By-products of Polymetallic, Base, Rare Earth and Precious Metal Ore Deposits	2018
IAEA- STI/PUB/1800	World Distribution of Uranium Deposits: Second Edition	2018
IAEA NES NF-T-1.4	In Situ Leach Uranium Mining: An Overview of Operations	2016
Red Book (26 th Edition)	Uranium 2016: Resources, production and demand, published by the OECD & IAEA	2016
Red Book (25 th Edition)	Uranium 2014: Resources, production and demand, published by the OECD & IAEA	2014
IAEA NES NF-T-1.5	Advances in Airborne and Ground Geophysical Methods for Uranium Exploration	2013
STI/PUB/1582	Radiation protection and management of NORM residues in the phosphate industry	2013
Red Book (24 th Edition)	Uranium 2011: Resources, production and demand, published by the OECD & IAEA	2012
STI/PUB/1524	The Uranium Mining Remediation Exchange Group (UMREG). Selected Papers 1995-2007	2011
STI/PUB/1512	Radiation protection and NORM residue management in the production of rare earths from thorium containing minerals	2011
Red Book (23 rd Edition)	Uranium 2009: Resources, production and demand, published by the OECD & IAEA	2010
IAEA NES NF-T-1.3	Radioelement mapping	2010

IAEA NES NF-T-1.2	Best Practice in Environmental Management of Uranium Mining	2010
IAEA-TECDOC-1629	World Distribution of Uranium Deposits (UDEPO), with Uranium Deposit Classification, 2009 Edition	2009
IAEA NES NF-T-1.1	Establishment of Uranium Mining and Processing Operations in the Context of Sustainable Development	2009

FORTHCOMING SCIENTIFIC MEETINGS SCHEDULED BY THE IAEA

2018

FAO/IAEA International Symposium on Plant Mutation Breeding and Biotechnology (CN-263), 27–31 August; Vienna, Austria

Scientific Forum, Nuclear Technology for Climate: Mitigation, Monitoring and Adaptation (CN-264), 18–19 September; Vienna, Austria

International Symposium on Communicating Nuclear and Radiological Emergencies to the Public (CN-265), 1–5 October; Vienna, Austria

International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSOs) in Enhancing Nuclear Safety and Security (CN-266), 15–18 October; Brussels, Belgium

27th IAEA Fusion Energy Conference (FEC 2018) (CN-258), 22–27 October; Ahmedabad, India

Symposium on International Safeguards (CN-267), 5–9 November; Vienna, Austria

Ministerial Conference on Nuclear Science and Technology: Addressing Current and Emerging Development Challenges (CN-262), 28–30 November; Vienna, Austria

International Conference on the Security of Radioactive Material: The Way Forward for Prevention and Detection (CN-269), 3–7 December; Vienna, Austria

International Symposium on Understanding the Double Burden of Malnutrition for Effective Interventions (CN-268), 10–13 December; Vienna, Austria

2019

International Symposium on Isotope Hydrology (CN-271), 20–24 May; Vienna Austria

International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry (IDOS-2019) (CN-273), 18–21 June; Vienna, Austria

International Conference on the Management of Spent Fuel from Nuclear Power Reactors, (CN-272), 24–28 June, Vienna, Austria

Scientific Forum, (CN-274), September; Vienna, Austria

International Conference on Climate Change and the Role of Nuclear Power (CN-275), 7–11 October; Vienna, Austria

International Symposium on Trends in Radiopharmaceuticals (ISTR-2019) (CN-276), 28 October–1 November; Vienna, Austria

International Conference on Effective Regulatory Systems for Nuclear and Radiation Safety (CN-270), November, Amsterdam, The Netherlands

International Conference on Research Reactors: (CN-277), 25–29 November, Buenos Aires, Argentina

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