International Conference on Research Reactors:

Achievements, Experience, and the Way to a Sustainable Future

November 11th – 15th, 2024

DRAFT PROGRAMME

Organized by the International Atomic Energy Agency (IAEA)

IAEA Headquarters Vienna, Austria

Programme Committee:

K. Toukan, Jordan

G. Storr, Australia

J. Perrotta, Brazil

S. Kim, Republic of Korea

K. du Bruyn, South Africa

L.-W. Hu, USA

IAEA Secretariat:

Scientific Secretaries: D. Ridikas

P. Chakrov

A. Shokr

Event Organizer:

T. Danaher

T. Kornelyuk M. Romero

E. Vargas

Location of the Event:

Administrative Support:

International Atomic Energy Agency

Vienna International Centre (VIC)

Building M, BRB/M1

Wagramer Strasse 5

A-1400 Vienna, Austria

Tel.: (+43 1) 2600 21330

Working Language: English

Resolutions: No resolutions may be submitted for consideration

on any subject; no votes will be taken.

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The functions and features of the App for smartphones and tablets will be used for various purposes during the event:



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Participate in voting during sessions



Raise questions to speakers during session



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TIMETABLE

Monday, 11 November 2024

| Time | Session No. | Session Title / Break | Venue |
|-----------------|-------------|---------------------------------------|------------------------------|
| 10:30– 11:00 | | Conference Opening | Board Room B/M1 |
| 11:00– 13:00 | 1A | Utilization and Applications | |
| 13:00– 14:00 | | Lunch Break | |
| 14:00– 15:30 | ЗА | New Research Reactor Programmes | |
| 15:30– 16:00 | | Coffee/Tea Break and Poster Session A | |
| 16:00– 18:00 | 2A | Operation and Maintenance | |
| 18:00– 19:30 | | Welcome Reception | M-Building – Ground Floor |

Tuesday, 12 November 2024

| Time | Session No. | Session Title / Break | Venue | | |
|-----------------|--------------|---|--------------------|--|--|
| 08:30– 10:00 | 4A | Safety of Research Reactors | Board Room B/M1 | | |
| 10:00– 10:30 | | Coffee/Tea Break and Poster Session A | | | |
| 10:30– 12:30 | 4B | Safety of Research Reactors | | | |
| 12:30– 13:30 | | Lunch Break | | | |
| 13:30– 15:00 | 1B | Utilization and Applications | | | |
| 15:00– 15:30 | | Coffee/Tea Break and Poster Session A | | | |
| 15:30– 16:00 | | Poster Session A | | | |
| 16:00– 17:30 | 2B | Operation and Maintenance | | | |
| 17:30– 18:30 | Side Event 1 | The Role of Research Reactors in Advancing Sustainable Development Goals | | | |
| 17:30– 18:30 | Side Event 2 | Nuclear Security Considerations for Research Reactors | | | |

Wednesday, 13 November 2024

| Session No. | Session Title / Break | Venue |
|--------------|---|---|
| 3B | New Research Reactor Programmes | Board Room B/M1 |
| | Coffee/Tea Break and Poster Session B | |
| 5A | Security of Research Reactors | Board Room B/M1 |
| | Lunch Break | |
| 4C | Safety of Research Reactors | Board Room B/M1 |
| | Coffee/Tea Break and Poster Session B | |
| 6A | Research Reactor Fuel Management | Board Room B/M1 |
| Side Event 3 | Capacity Building Based on Research Reactor Centers | |
| Side Event 4 | Safety Considerations in Use of Advanced and Innovative Technology in Research Reactors | Board Room B/M1 |
| | 3B 5A 4C 6A Side Event 3 | 3B New Research Reactor Programmes Coffee/Tea Break and Poster Session B 5A Security of Research Reactors Lunch Break 4C Safety of Research Reactors Coffee/Tea Break and Poster Session B 6A Research Reactor Fuel Management Side Event 3 Capacity Building Based on Research Reactor Centers Side Event 4 Safety Considerations in Use of Advanced and |

Thursday, 14 November 2024

| Time | Session No. | Session Title / Break | Venue |
|-----------------|--------------|--|--------------------|
| 08:30- 10:00 | 4D | Safety of Research Reactors | Board Room B/M1 |
| 10:00– 10:30 | | Coffee/Tea Break and Poster Session B | |
| 10:30– 11:00 | | Poster Session B | |
| 11:00– 12:30 | 7A | Common Management Considerations | Board Room B/M1 |
| 12:30– 13:30 | | Lunch | |
| 13:30– 15:00 | 1C | Utilization and Applications | Board Room B/M1 |
| 15:00– 15:30 | | Coffee/Tea Break and Poster Session B | |
| 15:30– 17:30 | 2C | Operation and Maintenance | Board Room B/M1 |
| 17:30– 18:30 | Side Event 5 | Women at Research Reactors: Challenges and Opportunities (WiN Global & IAEA) | |

Friday, 15 November 2024

| 08:30– 10:00 | 1D | Utilization and Applications | Board Room B/M1 |
|-----------------|--------------------|---|--------------------|
| 10:00– 10:30 | | Coffee/Tea Break | |
| 10:30– 11:30 | 7B | Common Management Considerations | |
| 11:30– 12:30 | Panel Session | Summary Discussion, Conclusions and Recommendations | |
| 12:30– 13:00 | Closing Session | Conference Closing | |

10:30-11:00 OPENING SESSION

(Plenary- M Building)

| Time | Name | Designating Member State/Organization | Title |
|-----------------|--------------------------------------|--|-----------------------------|
| 10:30– 10:45 | R. Grossi | Director General, IAEA | Opening Remarks |
| 10:45– 10:50 | K. Toukan | Conference Chair, Jordan Atomic Energy Agency (JAEC) | Conference Chair Remarks |
| 10:50– 11:00 | D. Ridikas P. Chakrov A. Shokr | Scientific Secretaries, IAEA | Administrative Remarks |

11:00–13:00 SESSION 1A: (Plenary- M Building)

Utilization and Applications

Chairpersons: G. Bignan, France

D. Wisnubroto, Indonesia

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|-----------------|---|--|
| 11:00– 11:25 | 274 | D. Ridikas | IAEA | IAEA activities in support of sustainable utilization and applications of research reactors |
| 11:25– 11:40 | 147 | M. Kim | Republic of Korea | Current Status of the HANARO Utilization |
| 11:40– 11:55 | 250 | K. Eberhardt | Germany | The Research Reactor TRIGA Mainz – Since More than 58 Years a Strong and Versatile Neutron Source for Science and Education |
| 11:55– 12:10 | 190 | K. Unlu | USA | New Innovative Developments and Sustainable Utilizations of the Penn State Breazeale Reactor |
| 12:10– 12:25 | 89 | S. Bustamante | Chile | Chilean Experience Post IRRUR Mission |
| 12:25– 12:40 | 35 | A. Shaimerdenov | Kazakhstan | R&D plan for the development of BNCT at the WWR-K |
| 12:40– 13:00 | | Q&A | | |

14:00-15:30 **SESSION 3A:** (Plenary- M Building)

New Research Reactor Programmes

K. Tiyapun, Thailand A. Alomari, Saudi Arabia Chairpersons:

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|------------------|--------------|-----------------|--|---|
| 14:00– 14:25 | 276 | A. Sitnikov | IAEA | Key-note speaker |
| 14:25– 14:50 | 130 | M. Kim | Republic of Korea | Status of KJRR project in Korea |
| 14:55– 15:05 | 2 | G. Bignan | France | Jules Horowitz Reactor (JHR) Reactor): A Future International Material Test Reactor in Support to Nuclear Industry, Regulators, and R&D Institutes: Status as of MID-2024 Following Major Reassessment of the Project |
| 15:05– 15:20 | 52 | Y. Fetisova | Russia | MBIR – The Most High-Flux Reactor in the World and a Unique Platform for International Scientific Cooperation |
| 15:20– 15:30 | | Q&A | | |
| 15:30 15:30–1 | 6:00 Poster | Session A and C | Coffee Break | |

16:00-18:00 SESSION 2A:

Operation and Maintenance

(Plenary- M Building)

Chairpersons: S. O'Kelly, USA

S. O'Kelly, USA P. Chakrov, IAEA

| Time | Paper No. | Name | Designating Member State/Organization | Title | | |
|-----------------|-----------------------|------------------|--|--|--|--|
| 16:00– 16:25 | 277 | R. Mazzi | IAEA | Key-note speaker | | |
| 16:25– 16:40 | 123 | J. Perrotta | Brazil | Commissioning Experiments of the New Core of the IPEN/MB-01 Research Reactor with Plate-Type Fuel Elements | | |
| 16:40– 16:55 | 257 | A. Salvini | Italy | Integrated Management system applied to a low power research reactor facility in operation: lesson learned and future perspective | | |
| 16:55– 17:10 | 191 | K. Tiyapun | Thailand | Ageing Management Experienced in Refurbishment of TRR-1/M1 Reactor Pool | | |
| 17:10– 17:25 | 265 | N. Arkhangelskiy | Russia | Current Status of Russian Research Reactors | | |
| 17:25– 17:40 | 87 | M. Ali | Pakistan | Maintenance, Periodic Testing, and In-Service Inspection at Pakistan Research Reactor-1 (PARR- 1) | | |
| 17:40– 18:00 | | Q&A | | | | |
| 18:00–19: | 18:00–19:30 Reception | | | | | |

08:30-10:00 SESSION 4A:

Safety of Research Reactors

(Plenary- M Building)

Chairpersons: A. Shokr, IAEA

R. Abu-Saleem, Jordan

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|------------------------|---------------------------------------|--|
| 08:30– 08:55 | 278 | A. Shokr | IAEA | IAEA Programme on Safety of Research Reactors: Achievements, Experience and Way Forward |
| 08:55– 09:10 | 41 | O. Kukhotskyi | Ukraine | Safety and Current Status of Ukrainian Research Nuclear Reactors |
| 09:10– 09:25 | 106 | R. Amorosi | France | The Specificities of the ITER Reactor (Regulatory Oversight of Research Reactors, including Licensing Process and Inspection Programs) |
| 09:25– 09:40 | 114 | D. Mosbah | AAEA | Challenges of Research Reactors Safety and Optimal Utilization in Arab Countries |
| 09:40– 10:00 | | Q&A Session A and Coff | | |

10:30-12:30 **SESSION 4B:**

Safety of Research Reactors

Chairpersons:

E. Grolleau, France S.J. Kim, Republic of Korea

| Time Paper | | Destauration Manuface | |
|---------------------------|---------------|---------------------------------------|--|
| No. | Name | Designating Member State/Organization | Title |
| 10:30- 269 9 10:55 | S. Kanamori | France | Periodic Safety Review of research reactors in France |
| 10:55- 109 I 11:10 | D. Lopez | The Netherlands | Challenges identified in developing the methodology for safety classification of SSC for the PALLAS-reactor |
| 11:10- 244 I 11:25 | R. Abu-Saleem | Jordan | EMRC's Review and Assessment of Research Reactor Safety |
| 11:25- 226 I 11:40 | M. Gimenez | Argentina | Safety classification: a methodology based on the internalization of defense in depth concept and a case of study applied to a research reactor |
| 11:40- 37 11:55 | J. Kalowski | Poland | Lessons learned from design and implementation of safety classification procedure for Maria Research Reactor |
| 11:55– 155 I 12:10 | D. Merrouche | Algeria | Verification of Safety Improvement of a Research Reactor |
| 12:10- 12:30 | Q&A | | |
| 12:30–13:30 L | Lunch Break | | |

(Plenary- M Building)

13:30-15:00 SESSION 1B:

Utilization and Applications

(Plenary- M Building)

Chairpersons: N. Bouzerkri, Morocco

P. Cantero, Argentina

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|-------------------|---------------------------------------|---|
| 13:30– 13:55 | 279 | M. Hawari | Jordan | JRTR utilization and impact |
| 13:55– 14:10 | 280 | V. Hutanu | Germany | Status and future of NTD-Si at research reactors |
| 14:10– 14:25 | 194 | M. Reichenberger | USA | Managing an Analytical Chemistry and Radiation Measurements Laboratory at a Nuclear Reactor, Where Operations and Research Collide |
| 14:25– 14:40 | 178 | M. Dastjerdi | Iran | Recent Developments in ISFAHAN MNSR Applications |
| 14:40– 15:00 | | Q&A | | |
| 15:00–15: | 30 Postei | Session A and Co | ffee Break | |
| 15:30–16:0 | 00 Poster | Session A - Check | k Annex I | |

16:00-17:30 SESSION 2B:

Operation and Maintenance

(Plenary- M Building)

Chairpersons: A. Pichlmaier, Germany

F. Kungurov, Uzbekistan

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|---------------|---------------------------------------|--|
| 16:00– 16:25 | 281 | S. O'Kelly | USA | Major refurbishment of Advanced Test Reactor |
| 16:25– 16:40 | 141 | S. Touati | Algeria | Prognosis and Health Management (PHM) of Electrical rotating equipment in nuclear research reactors: ES- Salam Case Study |
| 16:40– 16:55 | 5 | S. Sriyono | Indonesia | Structure, system, and components integrity detection on the primary system of RSG-GAS based on primary coolant radionuclides measurements |
| 16:55– 17:10 | 266 | A. Pichlmaier | Germany | FRM II: Why is Germany's only reactor with P > 1 MW temporarily shut down, where is it going |
| 17:10– 17:30 | | Q&A | | |

17:30-18:30 SIDE EVENT 1:

The Role of Research Reactors in Advancing Sustainable Development

Goals

Chairpersons: E. Vargas, IAEA

| Time | Name | Designating Member State/Organization | Title |
|-----------------|-------------------|--|---------------------|
| 17:30– 17:35 | E. Vargas | IAEA | Opening Remarks |
| 17:35– 18:10 | J. Antoine | Jamaica | Debate |
| 17:35– 18:10 | K. Tiyapun | Thailand | Debate |
| 17:35– 18:10 | B. Ponsard | Belgium | Debate |
| 17:35– 18:10 | TCLAC- Unknown | IAEA | Debate |
| 18:10– 18:25 | E. Vargas | IAEA | Q&A |
| 18:25– 18:30 | D. Ridikas | IAEA | Summary and Closing |

(Plenary- M Building)

17:30-18:30 SIDE EVENT 2:

Nuclear Security Considerations for

Research Reactors

Chairpersons: E. Buglova, IAEA

| | | | |
|-----------------|---------------|---------------------------------------|---------------------|
| Time | Name | Designating Member State/Organization | Title |
| 17:30– 17:35 | E. Buglova | IAEA | Opening Remarks |
| 17:35– 18:10 | M. Erdman | IAEA | Debate |
| 17:35– 18:10 | O. Abdelgawad | Egypt | Debate |
| 17:35– 18:10 | A. Meliana | Indonesia | Debate |
| 17:35– 18:10 | Y. Ibrahim | Nigeria | Debate |
| 18:10– 18:25 | E. Buglova | IAEA | Q&A |
| 18:25– 18:30 | E. Buglova | IAEA | Summary and Closing |

(M3- M Building)

08:30–10:00 SESSION 3B: (Plenary- M Building)

New Research Reactor Programmes

Chairpersons: A.T. Mozagba, South Africa

J. Perrota, Brazil

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|--------------|---------------------------------------|--|
| 08:30– 08:55 | 75 | P. Olivera | Brazil | RMB - The New Nuclear Research Centre in Brazil |
| 08:55– 09:10 | 150 | A.T. Mozagba | South Africa | Status Reports on New Research Reactor Programme in Progress, Experience and Lessons Learned - South Africa's MPR Project |
| 09:10- 09:25 | 78 | J. Rataj | Czech Republic | New Research Reactor at Czech Technical University in Prague - Subcritical Assembly VR-2 |
| 09:25– 09:40 | 29 | C. Niane | Senegal | Strategic Planning for Implementation of Research Reactor |
| 09:40– 10:00 | | Q&A | | |

10:00–10:30 Poster Session B and Coffee Break

10:30-12:30 SESSION 5A:

Security of Research Reactors

(Plenary- M Building)

Chairpersons: Z. Camtakan, Turkey

H. Looney, IAEA

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|-------------|---------------------------------------|--|
| 10:30– 10:55 | 275 | H. Looney | IAEA | Key-note speaker |
| 10:55– 11:10 | 272 | Z. Camtakan | Turkey | Security Management Experience of the ITU TRIGA Training and Research Reactor: Insights from IPPAS Mission and the Evolving Regulatory Framework |
| 11:10– 11:25 | 21 | M. El Tokhy | Egypt | Secure Monitoring and Information Transmission Scheme in IoT Environment for Nuclear Facilities |
| 11:25– 11:40 | 82 | M. Husain | Malaysia | The Development Progress of Design Basic Threat Documents for Nuclear Installation and Category One Facilities in Malaysia |
| 11:40– 11:55 | 84 | B. Purnomo | Indonesia | Challenges in the Implementation of Nuclear Security In Old Nuclear Research Reactors |
| 11:55– 12:10 | 256 | A. Nasser | Jordan | Insider Threat Mitigation at Jordan Research and Training Reactor |
| 12:10– 12:30 | | Q&A | | |
| 12:30-13:30 | Lunch E | Break | | |

13:30–15:00 SESSION 4C: (Plenary- M Building)

Safety of Research Reactors

Chairpersons: H. Cruz, USA

H. Odoi, Ghana

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|------------|--|---|
| 13:30– 13:55 | 282 | S. Malaka | South Africa | Ageing Management and Continued Safe Operation of SAFARI-1 |
| 13:55– 14:10 | 60 | F. Batool | Pakistan | PNRA Experience of Periodic Safety Review to Ensure the Continued Safe Operation of Research Reactors and Implementation of Identified Safety Improvements |
| 14:10– 14:25 | 251 | L. Hasa | Netherlands | HFR Ageing Management Program and Continued Safe Operation |
| 14:25– 14:40 | 65 | M. Daniels | USA | From Vacuum Tubes to Solid-State: The Upgraded Control Console for the Idaho State University AGN- 201 |
| 14:40– 15:00 | | Q&A | | |

15:30–17:30 SESSION 6A: (Plenary- M Building)

Research Reactor Fuel Management

Chairpersons: N. Arkhangelsky, Russia

K. Dunn, IAEA

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|--------------|---------------------------------------|---|
| 15:30– 15:55 | 284 | K. Dunn | IAEA | Keynote Speaker |
| 15:55– 16:20 | 139 | L. Belinskiy | Russia | Research Reactor Spent Fuel Management in Russia |
| 16:20– 16:35 | 95 | A. Asuku | Nigeria | From High Enriched Uranium to Low Enriched Uranium: Comparison of Fuel Cycle Performance of Accident-Tolerant Fuel for Optimization of Fuel Management of Miniature Neutron Source Reactors |
| 16:35– 16:50 | 12 | K. Khattab | Syria | Design of New LEU Core for the Syrian MNSR Reactor Using the MCNP Code |
| 16:50– 17:05 | 243 | F. Genezini | Brazil | Optimization of IEA-R1 Reactor Core Parameters Using Particle Swarm Algorithm |
| 17:05– 17:20 | 105 | A. Pungercic | Slovenia | Depletion Algorithm for the ON-FLY Nuclide Inventory Determination for Research Reactors in the RAPID Code System |
| 17:20– 17:30 | | Q&A | | |

17:30-18:30 (Plenary- M Building) **SIDE EVENT 3:**

Capacity Building Based on Research Reactor Centers

Chairpersons: P. Chakrov, IAEA

| Time | Name | Designating Member State/Organization | Title |
|-----------------|----------------|--|---------------------|
| 17:30– 17:35 | P. Chakrov | IAEA | Opening Remarks |
| 17:35– 18:10 | M. Villa | Austria | Debate |
| 17:35– 18:10 | C. Elyounoussi | Morocco | Debate |
| 17:35– 18:10 | P. Cantero | Argentina | Debate |
| 17:35– 18:10 | L. Skelenka | Czech Republic | Debate |
| 18:10– 18:25 | P. Chakrov | IAEA | Q&A |
| 18:25– 18:30 | P. Chakrov | IAEA | Summary and Closing |

17:30-18:30 **SIDE EVENT 4:** (M3- M Building)

Safety Considerations in Use of Advanced and Innovative Technology in

Research Reactors

Chairpersons: J. Christensen, IAEA

| Time | Name | Designating Member State/Organization | Title |
|-----------------|----------------|--|---------------------|
| 17:30– 17:35 | A. Bradford | IAEA | Opening Remarks |
| 17:35– 18:10 | L. Handsztok | Argentina | Debate |
| 17:35– 18:10 | Y. Suh | Republic of Korea | Debate |
| 17:35– 18:10 | H. Cruz | USA | Debate |
| 18:10– 18:25 | J. Christensen | IAEA | Q&A |
| 18:25– 18:30 | J. Christensen | IAEA | Summary and Closing |

08:30-10:00 SESSION 4D:

Safety of Research Reactors

(Plenary- M Building)

Chairpersons: M. Gaheen, Egypt

J. Mlicak, Czech Republic

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|-------------------|---------------------------------------|--|
| 08:30– 08:50 | 285 | E. Helvenston | USA | Regulatory Oversight of Research Reactors |
| 08:50– 09:05 | 229 | S. Zhao | China | Regulatory Supervision of Research Reactors in China |
| 09:05- 09:20 | 108 | F. Keles | France | ASN's Oversight on Ageing Management and Periodic Safety Review of Research Reactors, and Notably the PSR as a Tool for Handling Ageing Effects on Research Reactors |
| 09:20– 09:35 | 24 | M. Akpanowo | Nigeria | Regulatory Oversight of the Nigeria Research Reactor - 1 |
| 09:35– 09:50 | 55 | O.Y. Kutlu | Turkey | Implementation of Recommendations and Lessons Learned from INSARR Mission on TR-2 Research Reactor |
| 09:50– 10:00 | | Q&A | | |
| 10:00–10:30 | Poster S | Session B and Cof | fee Break | |
| 10:30–11:00 | Poster | Session B - Check | k Annex II | |

11:00–12:30 SESSION 7A: (Plenary- M Building)

Common Management Considerations

Chairpersons: H. Yang, China

E. Vargas, IAEA

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|-------------|---------------------------------------|---|
| 11:00– 11:25 | 287 | P. Chakrov | IAEA | Key-note speaker |
| 11:25– 11:40 | 273 | H. Yang | China | CIAE Experience of Handling Interface Between Safety and Security for Research Reactors |
| 11:40– 11:55 | 67 | L. Sklenka | Czech Republic | Development of National Strategy for Decomissioning of Research Reactors in the Czech Republic |
| 11:55– 12:10 | 235 | L. Dghaimat | Jordan | Safety Culture Program in the Jordan Research and Training Reactor |
| 12:10– 12:30 | | Q&A | | |
| 12:30-13:30 | 0 Lunch E | Break | | |

13:30–15:00 SESSION 1C: (Plenary- M Building)

Utilization and Applications

Chairpersons: M. Hawari, Jordan

V. Semkova, IAEA

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|--------------------|--|--|
| 13:30– 13:55 | 118 | J. Matouskova | Czech Republic | Neutron Imaging at Low and Medium Flux Neutron Sources |
| 13:55– 14:10 | 227 | A. Venter | South Africa | Beam Line Facilities at the Safari-1 Research Reactor and their Progression into the New Multi-Purpose Reactor |
| 14:10– 14:25 | 53 | S. Zhong | China | Progress in Construction of Neutron Stress Diffractometer "Hetu" and Small Neutron Scattering Spectrometer "Luoshu" of Shanghai Jiao Tong University |
| 14:25– 14:40 | 6 | D. Khalil | Egypt | Internal Structure Characterization for a Set of Greek-Roman Coins that Discovered in Mediterranean Sea at Egypt using Neutron Tomography |
| 14:40– 15:00 | | Q&A | | |
| 15.00 15.2 | O Postor | Soccion P and Coff | on Prook | |

15:30-17:30 SESSION 2C:

Operation and Maintenance

(Plenary- M Building)

Chairpersons: A. Salvini, Italy

R. Mazzi, IAEA

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|----------------|---------------------------------------|--|
| 15:30– 15:55 | 86 | L. Stefanini | Netherlands | Condition Based Maintenance for Research Reactors |
| 15:55– 16:10 | 199 | V. Cao | Vietnam | Forty Years of Operation and Exploitation of the Dalat Nuclear Research Reactor |
| 16:10– 16:25 | 20 | P. Dordoh-Gasu | Ghana | Over Two Decades of Operation of Ghana Research Reactor-1: Maintenance Practices and Lessons Learned |
| 16:25– 16:40 | 43 | F. Kungurov | Uzbekistan | Operation and Maintenance of WWR-SM Research Reactor in Uzbekistan |
| 16:40– 16:55 | 30 | N. Jahan | Bangladesh | Operational Experiences and Ageing Management of BAEC TRIGA Research Reactor |
| 16:55– 17:10 | 7 | D. Stanciu | Romania | Experience with Major Repairs and Refurbishment at TRIGA 14MW Open Pool Reactor |
| 17:10– 17:30 | | Q&A | | |

17:30–18:30 SIDE EVENT 5: (Plenary- M Building)

Women at Research Reactors: Challenges and Opportunities (WiN Global & IAEA)

Chairpersons: A. Elrafaei, IAEA

| Time | Name | Designating Member State/Organization | Title |
|-----------------|---------------|--|---------------------|
| 17:30– 17:35 | L. Evrard | IAEA | Opening Remarks |
| 17:35– 18:10 | S. Bustamante | Chile | Debate |
| 17:35– 18:10 | J. Matouskova | Czech Republic | Debate |
| 17:35– 18:10 | L. Dghaimat | Jordan | Debate |
| 17:35– 18:10 | A. Mozagba | South Africa | Debate |
| 17:35– 18:10 | L. Hu | USA | Debate |
| 18:10– 18:25 | A. Elrafaei | IAEA | Q&A |
| 18:25– 18:30 | A. Elrafaei | IAEA | Summary and Closing |

^{***} Note: As of 1/10, Amal has added on 3 additional participants: Unknown names

FRIDAY, 15 NOVEMBER 2024

08:30-10:00 (Plenary- M Building) SESSION 1D:

Utilization and Applications

R. Mikolajczak, Poland B. Ponsard, Belgium Chairpersons:

| Time | Paper No. | Name | Designating Member State/Organization | Title | |
|--------------------------|--------------|----------------|---------------------------------------|---|--|
| 08:30– 08:55 | 283 | R. Mikolajczak | Poland | Radioisotope Production in MARIA Research Reactor | |
| 08:55– 09:10 | 211 | J. Amda | Indonesia | Maximizing the Potential of Research Reactors in Indonesia for Radioisotope Production and Advancement in Medical Technology | |
| 09:10– 09:25 | 197 | J. Antoine | Jamaica | The Forensic Science Applications of the JM-1 SLOWPOKE Research Reactor | |
| 09:25- 09:40 | 111 | L. Snoj | Slovenia | Towards Optimized Use of Research Reactors in Europe – TOURR project: Strategy for upgrading existing and building new Research Reactors | |
| 09:40– 10:00 | | Q&A | | | |
| 10:00–10:30 Coffee Break | | | | | |

FRIDAY, 15 NOVEMBER 2024

10:30–11:30 SESSION 7B: (Plenary- M Building)

Common Management Considerations

Chairpersons: M. Salhi, Algeria

N. Pessoa Barradas, Portugal

| Time | Paper No. | Name | Designating Member State/Organization | Title |
|-----------------|--------------|-----------|---------------------------------------|---|
| 10:30– 10:50 | 286 | G. Storr | Australia | Considerations for a Sustainable Future for Research Reactors |
| 10:50– 11:05 | 230 | A. Eisa | Egypt | Assessment Criteria for Reviewing the Knowledge Management Status in Nuclear and Radiological Installations |
| 11:05– 11:20 | 117 | P. Mattar | Brazil | Considerations Regarding the Mission and Challenges of Deployment a New Research Reactor Center |
| 11:20– 11:30 | | Q&A | | |

11:30-12:30 Panel Session: Summary Discussion

FRIDAY, 15 NOVEMBER 2024

12:30-13:00

CLOSING SESSION

(Plenary- M Building)

| Time | Name | Designating Member State/Organization | Title |
|-----------------|--------------------------------------|--|-----------------|
| 12:30– 12:40 | Young Professional Poster Awards | IAEA | Awards |
| 12:40– 12:45 | M. Chudakov | DDG-NE, IAEA | Closing Remarks |
| 12:45– 12:50 | K. Toukan | Conference Chair, JAEC | Closing Remarks |
| 12:50– 13:00 | D. Ridikas P. Chakrov A. Shokr | Scientific Secretaries, IAEA | Closing Remarks |

IAEA PUBLICATIONS RELATED TO THE SUBJECT OF THE EVENT

To be completed later

To be completed later



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2024

International Conference on Enhancing Nuclear Safety and Security Through Technical and Scientific Support Organizations (TSOs): Challenges and Opportunities in a Rapidly Changing World, 2-6 December 2024, Vienna, Austria

2025

The Third International Conference on Applications of Radiation Science and Technology (ICARST-2025), 7-11 April 2025, Vienna, Austria

International Conference on Stakeholder Engagement for Nuclear Power Programmes, 26-30 May 2025, Vienna, Austria

30th IAEA Fusion Energy Conference, 13-18 October 2025, Xi'An, China

For information on forthcoming scientific meetings, please consult the IAEA web site: http://www.iaea.org/events

ANNEX I

Poster Presentations

TUESDAY, 12 NOVEMBER 2024

15:00–16:00 POSTER SESSION A: SESSIONS 1, 2, 3, 7

M Building Corridor

| Session | Designating Member State | Presenters | ld | Title |
|---------|-----------------------------|--|-----|--|
| 1 | Algeria | Abderrezak Hadri | 173 | DEVELOPMENT OF QUANTIFICATION PROGRAM FOR NEUTRON ACTIVATION ANALYSIS |
| 1 | Algeria | Guesmia Ahmed | 154 | Quality control and performance evaluation of k0-based neutron activation analysis laboratory at NUR Research reactor |
| 1 | Algeria | Lylia Hamidatou- Alghem | 144 | Status of the k0-Neutron Activation Analysis method using NUR Nuclear Research Reactor: Development and Application |
| 2 | Algeria | Said Touati | 141 | Prognosis and Health Management (PHM) of Electrical rotating equipment in nuclear research reactors: ES-Salam Case Study |
| 1 | Algeria | Tarek Azli | 153 | Determination of trace elements and heavy metals concentration by INAA around the industrial zone of Algiers. |
| 1 | Algeria | Zohra Bouhila | 142 | Environmental trace elements monitoring using neutron activation analysis in soil and air particulate matter samples nearby Algiers- Algeria |
| 1 | Bangladesh | MD. MOAZZEM HOSSAIN | 28 | Utilization and Applications of the 3MW TRIGA Mark-II Research Reactor of Bangladesh |
| 3 | Bolivia | Ksenia Nikolaeva | 252 | CENTER FOR NUCLEAR TECHNOLOGY RESEARCH AND DEVELOPMENT IN BOLIVIA: PROJECT STATUS |
| 3 | Brazil | DANIEL HONORIO, Marcelo Zanellati de Jesus | 237 | Balancing Development and Preservation: Environmental and Nuclear Licensing Aspects of the Brazilian Multipurpose Reactor (RMB) |
| 2 | Colombia | Jaime Sandoval Lagos | 218 | COMPUTATIONAL MODEL AND CHARACTERIZATION OF THE COLOMBIAN NUCLEAR RESEARCH REACTOR IAN-R1 USING MCNP6 |
| 7 | Egypt | Hade Elsayed | 120 | Safety and Security Requirements during the Decommissioning of Research Reactors |

| 7 | Egypt | Hade Elsayed | 223 | Implementation of a Nuclear Knowledge Management Program on Decommissioning of Nuclear Facilities |
|---|-----------|-------------------------|-----|---|
| 1 | Egypt | Mohamed Gizawy | 31 | Production Capacity of new emerging therapeutic radioisotopes at Egyptian Second Research Reactor (ETRR-2) for addressing the national supply |
| 2 | Egypt | Mohamed SHAAT | 18 | Feedback of Operating Experience and Learned Lessons after 25 Years of Successful Operation of Second Egyptian Research Reactor |
| 1 | Egypt | Mohamed Soliman | 47 | Innovative neutron activation approach for analysis of large liquid samples based on short-lived radionuclides. |
| 7 | Egypt | Tamer Sakr | 32 | Medical Radioisotopes Production in ETRR-2 Complex: Strategic Plan |
| 7 | Egypt | Wafaa Bakr | 159 | Analysis of the Reported Research reactor events; Management system point of view |
| 3 | Ethiopia | Ashabir Tesfaye KENO | 134 | Nationwide Assessment of Human Resources of Nuclear Science and Technology for Ethiopian First Research Reactor |
| 3 | Ethiopia | Birhanu Tolawak | 240 | Development of National Nuclear Infrastructure for Research Reactor Program as Newcomer: in case of Ethiopia |
| 3 | Ethiopia | Tewodros Wako | 124 | Public Opinion Survey on the Peaceful Applications of Nuclear Energy and Nuclear programme of Ethiopia |
| 7 | France | Jonathan RUILLE | 107 | Use of the graded approach in inspections of integrated management systems at two licensees (Laue-Langevin Institute and CEA) |
| 1 | Ghana | Henry Cecil Odoi | 15 | Ghana's Experience in Research Reactor Utilization |
| 7 | Ghana | Suraj Sam Issaka | 3 | Enhancing Nuclear Security and safety in Ghana Research Reactor-1: Challenges and the Way Forward |
| 1 | Greece | ALEXANDRA IOANNIDOU | 91 | A Student Training Nuclear Reactor on Education and Training |
| 7 | IAEA | Alexey Katukhov | 233 | IAEA Technical Cooperation Programme as a Tool to Support Research Reactor Safety and Utilization in Europe and Central Asia |
| 7 | Indonesia | Danung Rismawan | 71 | MODEL OF SAFETY PERFORMANCE INDICATOR ASSESSMENT IN RESEARCH REACTOR BASED ON THE |

| | | | | REGULATORY INSPECTION PERSPECTIVE IN INDONESIA |
|---|-----------|---|-----|--|
| 7 | Indonesia | Djarot Sulistio Wisnubroto | 179 | Leveraging Strengths and Opportunities: A SWOT Analysis of Indonesia's Research Reactors for Advancing Science and Technology |
| 3 | Indonesia | Geni Rina SUNARYO | 182 | The Development of a Safe and Versatile Experimental Reactor (RDE) for Indonesia's Power Program |
| 2 | Indonesia | Umar Sahiful Hidayat | 176 | Comprehensive In-service Inspection Implementation of Kartini Reactor SSCs for Continues Safe Operation |
| 2 | Indonesia | Zulfikar Bhagaskara | 11 | Development of Digital Instrumentation for Research Reactor |
| 1 | Iran | Ebrahim Abedi | 214 | Development of a fuel test loop in Tehran Research Reactor for domestic designed fuels experiments |
| 1 | Italy | Andrea Gandini | 204 | Training and applications of academic neutrons |
| 1 | Italy | Massimo Rogante | 23 | Rogante Engineering Office: Italian landmark for Industrial Applications of Neutron Techniques |
| 7 | Jordan | Ahmad Alsabbagh, Lujain Khalaileh | 196 | Investigating Stakeholder Perceptions of Jordan's Research and Training Reactor: A Survey- Based Approach |
| 2 | Jordan | Ahmad Hawari | 128 | Optimizing Preventive Maintenance Strategies for UPS: Case study on verifying battery cells connection for continuous Class II power supply during transient period between LOOP and DG start-up. |
| 1 | Jordan | Akram Al-Ibraheem | 238 | 177Lu-PSMA Radioligand Therapy Efficacy in Heavily Pretreated Metastatic Prostate Cancer Patients Treated at King Hussein Cancer Center (KHCC) in Jordan: a Glimpse of Radiotheranostics in the Arab World |
| 1 | Jordan | Altaieb Mohammad Ababneh, Hamza Almomani, Mohammad Elkhaeiry | 132 | HKJ (Jordan) 99mTc Extractor, Design Improvement and Performance Enhancement |
| 1 | Jordan | Hibatallah Nimer | 146 | JRTR RIPF Best Practices Applied in Iodine-131 Packaging & Dispatching Process |
| 1 | Jordan | Kamal Harahsheh, Ahmad Alsabbagh | 175 | Application of Neutron Activation for the Analysis of Rare Earth Elements |
| 1 | Jordan | Khaleel Qabajeh | 177 | I-131 Production Capacity and Method Applied at JRTR. |
| 2 | Jordan | MO'ATH ABUTO'AMAH | 103 | Reactor Power Control |

| 2 | Jordan | Mohammad Elduwieb | 99 | A MITIGATION APPROACH OF WET STACKING IN RESEARCH REACTOR DIESEL GENERATOR AT JRTR |
|---|-------------|-------------------------------------|-----|--|
| 2 | Jordan | Mohannad Almarafi | 131 | GOOD PRACTICE IN MAINTENANCE AT THE JORDAN RESEARCH AND TRAINING REACTOR |
| 3 | Jordan | Reem Khrais | 231 | From Misconceptions to Engagement The Impact of Social Media on Nuclear Energy Promotion in Jordan |
| 1 | Jordan | Shafeeq alawad | 183 | Ho-166 Microspheres processing, Testing and dispatching in JRTR |
| 1 | Kazakhstan | Aigerim Nessipbay | 36 | Development of the device for the formation of the therapeutic neutron beam at the WWR-K reactor |
| 1 | Kazakhstan | Damir Satpayev | 14 | Activities at the WWR-K reactor related to radiation coloration of topazes |
| 7 | Kazakhstan | Dauren Nugumanov, Damir Satpayev | 13 | 55th Anniversary of the WWR-K reactor: past, present, future |
| 3 | Kenya | CALVINCE ODENY | 34 | OPPORTUNITIES, STATUS AND CHALLENGES OF RESEARCH REACTOR DEVELOPMENT IN SUB-SAHARAN AFRICA: THE CASE OF KENYA. |
| 1 | Libya | Mohamed Ashrief | 145 | The experience on production of radioisotopes and radiopharmaceuticals at Tajoura Nuclear reach center. |
| 7 | Malaysia | julia abdul karim | 50 | Managing and Sustaining the Safe Use of the PUSPATI TRIGA Reactor (RTP) in Malaysia: Challenges, Lesson Learned and Good Practices |
| 3 | Mongolia | MUNKHBAT Byambajav | 110 | The Current Status of Research Reactor Project in Mongolia |
| 1 | Morocco | Chafik EL Younoussi | 166 | New core configuration to increase lodine 131 production capability in the Moroccan TRIGA MARK II Research Reactor |
| 1 | Morocco | Khalid LARAKI | 33 | Moroccan PGAA Facility Commissioning Stages Around The TRIGA MARK II Research Reactor |
| 2 | Netherlands | Lorenzo Stefanini | 160 | Time Limited Ageing Analyses for Research Reactors |
| 7 | Nigeria | Ahmed Rufai Abubakar | 69 | IMPLEMENTATION OF INTEGRATED MANAGEMENT SYSTEM IN NIGERIA RESEARCH REACTOR |
| 2 | Nigeria | Ahmed Rufai Abubakar | 70 | DEVELOPMENT OF A TOOL FOR CALIBRATION OF NIGERIA RESEARCH REACTOR -1 (NIRR- 1) INSTRUMENTATION |
| 2 | Nigeria | Uwaisu Shuaibu Adam | 48 | Total Productive Maintenance Approach for the Nigerian |

| | | | | Research Reactor Availability Improvement |
|---|----------------------|------------------------------|-----|---|
| 2 | Peru | Frederico GENEZINI | 195 | THERMAL NEUTRON FLUX PROFILE CHARACTERIZATION ON THE IEA-R1 NUCLEAR SAFETY MONITORING CHANNEL |
| 1 | Peru | wilder Arévalo Farro | 215 | Calculation of Dose and Neutron Flow in the Neutrography Facility of the RP-10 Reactor using the SABINE code |
| 2 | Phillipines | Alvie Asuncion- Astronomo | 121 | Continuous and pulse-mode operation of a TRIGA-fueled subcritical assembly |
| 3 | Phillipines | Alvie Asuncion- Astronomo | 201 | Establishment of the Philippine Research Reactor-1 (PRR-1) Subcritical Assembly for Training, Education, and Research (SATER) |
| 2 | Republic of Korea | CHANGDONG LEE | 98 | Replacement of Heat Plates in Primary Cooling System of HANARO |
| 2 | Republic of Korea | Jongmin Park | 207 | Detector Position Sensitivity of Control Rod Worth by the Rod Drop Experiment Using Time-Dependent Monte Carlo Simulations |
| 1 | Republic of Korea | Myong-Seop Kim | 152 | Current Status of the HANARO Neutron Transmutation Doping System in 2023 |
| 1 | Republic of Korea | Myungkook Moon | 126 | HANARO Ex-core Neutron Irradiation Facility(ENF) for neutron imaging and irradiation |
| 3 | Russia | Andrei Goriachikh | 224 | Concept of a molten salt research reactor (IZhSR) |
| 3 | Russia | Yana Fetisova | 225 | MBIR – Research Facility for validation of Innovative Reactor Designs |
| 3 | Saudi Arabia | Abdullah S. Alomari | 253 | The Saudi Low Power Research Reactor (LPRR): Current Status |
| 7 | Saudi Arabia | Anas M. Alwafi | 255 | Building a robust safety culture for construction research reactor in an emerging nuclear country |
| 3 | Saudi Arabia | Salman M. Alshehri | 254 | Utilization and Human Capital Building for the Saudi Low Power Research Reactor (LPRR) |
| 1 | Slovenia | Domen Kotnik | 157 | Current status of the water activation loop at JSI TRIGA reactor |
| 1 | Slovenia | Julijan Peric | 138 | Water activation experiments under fusion-relevant conditions at the JSI TRIGA research reactor: design and implementation of the JSI water activation loop systems |
| 1 | Slovenia | Klemen Ambrožič | 203 | Nuclear heating measurements and simulations at the JSI TRIGA reactor |
| 1 | Slovenia | Luka Snoj | 161 | Research Reactor Simulator at JSI |
| | | | | |

| 3 | Tanzania | Alex Muhulo | 205 | INTERNET RESEARCH REACTOR (IRL) FOR CAPACITY BUILDING: TANZANIA CASE |
|---|----------|--------------------------------|-----|--|
| 1 | Thailand | Saensuk Wetchagarun | 202 | TRR-1/M1 for Education and Training: Past, Present, and Future |
| 2 | Thailand | sunan somchit | 198 | Non-Destructive Inspection (NDT) Project: Testing and Analysis of Emergency Core Cooling System Water Tank. |
| 1 | Thailand | Weerawat Pornroongruengchok | 127 | Non-Destructive 3D Visualization of Cultural Heritage Artifacts using Neutron Tomography at Thai Research Reactor |
| 1 | Tunisia | Mahmoud Daoudi | 56 | Study of mixed Neutron/Gamma irradiation effect from MINERVE Research Reactor in Epoxy Resin: Structural Stabilization for Shielding Application and Improvement the Optical and Electric Performances |
| 1 | Tunisia | Walid Dridi | 49 | Alternative NiO-based neutron reactor dosimeter overseeing by optical, nanostructural and morphological changes |
| 3 | USA | Alexandra Meehan | 236 | Proliferation Resistance of Research Reactor Systems – An Overview And Update |
| 3 | USA | Basar Ozar | 222 | Demonstration of the Proliferation Resistance Optimization of Research Reactor Designs |
| 2 | USA | Kelly McCary | 125 | Modernizing the Legacy Fission Wire Measurement System for the Advanced Test Reactor – Critical Facility |
| 2 | USA | Michael Reichenberger | 61 | Niobium Activation Measurements for Lobe Power Calculation Indication System Alignment at the Advanced Test Reactor. |
| 2 | USA | Nathan Manwaring | 46 | Experience with Nuclear Test Design to Optimize Usefulness and Sustainability of the Advanced Test Reactor (ATR) |

ANNEX II

Poster Presentations

THURSDAY, 14 NOVEMBER 2024

10:00–11:00 POSTER SESSION B: SESSIONS 4, 5, 6 **M Building Corridor**

| Session | Designating Member State | Presenters | ld | Title |
|---------|-----------------------------|------------------|-----|---|
| 4 | Algeria | Ahmed Hadjam | 151 | Numerical Simulation of Fluid Structure Interaction following a LBLOCA accident in the fuel bundle test section of the CALLISTO test loop facility coupling with BR2 Research Reactor |
| 4 | Algeria | Dahia Ahmed | 156 | Numerical simulation of SB-LOCA transient accident during leakage in water supply cooling system of research Reactor |
| 4 | Algeria | Djillali Saad | 158 | The PCT uncertainty and sensitivity analysis of Es-Salam reactor fuel rods during steady-state operations |
| 4 | Algeria | Nacim Mellel | 164 | Evaluation of the Thermo- Mechanical Behavior of the Low- Enriched Uranium Plate Target considering the Fission Gas Release Pressure at the Interface of the Cladding Target using the Redlich–Kwong state equation |
| 4 | Algeria | Samir Mazidi | 165 | Deterministic method for estimation of main neutronic safety parameters of NUR research reactor core |
| 4 | Algeria | Adnane Messai | 170 | Implementation of a Digital Reactivity-meter Using Xilinx Zynq System on Chip (SoCs) Devices |
| 6 | Algeria | Mohamed Khalfa | 172 | Influence of the oxide film growth on temperature of fuel plate in benchmark IAEA Nuclear Research Reactor: Thermalhydraulic calculation. |
| 4 | Argentina | Alicia Doval | 97 | A reviewed approach to Operational Limits and Conditions and Operating Procedures |
| 4 | Argentina | Fabricio Brollo | 168 | Periodic Safety Review Process in RA-6 Research Reactor |
| 4 | Argentina | Enzo Beretta | 169 | A framework for the Research Reactors Deterministic Safety Analysis supported with specific software development and QA tools |
| 4 | Argentina | Lucas Claramonte | 171 | Best Estimate Deterministic modeling approach for Probabilistic Safety Assessment support |
| 4 | Argentina | Cristian Vega | 181 | Licensing approach for Loss Of Coolant Accident used in the |

| | | | | Deterministic Safety Analysis of Research Reactors |
|---|------------------------------------|-----------------------------------|-----|---|
| 4 | Argentina | Luis Barrios | 208 | Advances and challenges in the application of periodic safety reviews in research reactors. |
| 4 | Bangladesh | Mohammad Abdul Motalab | 85 | Neutronics and Thermal-Hydraulics Coupling for Small Research Reactor Core Simulation: Methodological Development and Validation |
| 4 | Canada | Chelsea Trudeau | 263 | Aging Management in the ZED-2 Research Reactor |
| 4 | China | Yao Lu | 192 | Construction and Analysis of a Multi-layer Cylindrical Fuel Reactor Verification Benchmark using Monte Carlo Techniques |
| 4 | Colombia | Edgar Mauricio Lopez Rodriguez | 219 | EFFECT OF CADMIUM SPECIES ON THE VARIATION OF KINETIC PARAMETERS IN THE IAN-R1 NUCLEAR RESEARCH REACTOR |
| 6 | Colombia | Jose Antonio Sarta Fuentes | 242 | RADIOACTIVE INVENTORY OF TRIGA FUEL ELEMENTS IN THE IAN-R1 RESEARCH REACTOR |
| 4 | Democratic Republic of Congo | Petrus Bompere Lemo | 90 | CNPRI Regulatory Supervision of Research Reactor during extended shutdown state: Current inspections and future plan |
| 4 | Egypt | Abdelfattah Ali | 4 | Thermal Hydraulic Analysis of Inward and Outward Fuel Plate Buckling in a Typical MTR Reactor |
| 4 | Egypt | Moustafa Ibrahim | 9 | Calculations of Control Rods Worth and Kinetic Physical Parameters for ASTRA Critical Facility |
| 4 | Egypt | Hesham Elkhatib | 40 | Safety Enhancement of the Egypt Second Research Reactor to Reduce the Effect of Loss Off-Site Power Supply |
| 4 | Egypt | Mohamed Esawy | 64 | Ageing Management of ETRR-1 during Extended Shutdown to Support its Restart or Decommissioning Option |
| 4 | Egypt | Magdy Abdelaal | 73 | Analytical Model for the First Periodic Safety Review of Nuclear Research Reactors in Light of National Regulations and International Recommendations |
| 5 | Egypt | Omar Abdelgawad | 174 | DEVELOPMENT OF NUCLEAR SECURITY RISK MODEL FOR RESEARCH REACTORS AND ASSOCIATED FACILITIES |
| 4 | Egypt | Nageib Ashoub | 186 | Safety Analysis of Positive Reactivity in Research Reactor during Loss of Flow (LOF) Accident |
| 4 | Egypt | Hassan Hassan | 187 | Safety Analysis of Loss of Flow Accident in MTR Research Reactor |
| | | | | |

| 4 | Egypt | Mohamed Hanaa Abou Gabal | 213 | Modeling and characterization of beryllium reflector elements under irradiation conditions |
|---|-----------|------------------------------------|-----|--|
| 4 | Egypt | Amany Arafa | 216 | Study of Positive Reactivity in Research Reactor During Rod Ejection Accident |
| 5 | Egypt | Nesma Elsokkary | 221 | Deep learning-based Dynamic Risk Assessment Framework for Research Reactor Using Monitoring Data |
| 4 | Egypt | Mohamed Gaheen | 234 | Review of Thermal hydraulic Safety Aspects of Research Reactor Core |
| 6 | Ghana | Sylvester Attakorah Birikorang | 22 | Utilization after the completion of Ghana's MNSR conversion from HEU to LEU and lessons learned |
| 4 | Ghana | Prince Amoah | 26 | Regulatory Oversight of Ghana's Research Reactor -Post Core Conversion. |
| 4 | Indonesia | Ade Awalludin | 42 | Regulatory Oversight of Nuclear Research Reactors in Indonesia: Policy Adjustments for Operational Challenges |
| 6 | Indonesia | Titik Sundari | 68 | Experiences in Indonesian Wet Storage of Spent Nuclear Fuels and the Future Challenges Including Decommissioning Case of Triga Bandung Reactor |
| 5 | Indonesia | Pradika Annas Kuswanto | 72 | Analysis of the Role of the National Vital Object Police in Enhancing Nuclear Security for Nuclear Research Reactors in Indonesia |
| 4 | Indonesia | Azizul Khakim | 76 | Safety analysis of Inadvertent control rods withdrawal of RSG GAS for various initial powers |
| 4 | Indonesia | Arifin Muhammad Wibowo | 77 | Application of Balis Smile as a Tool for Indonesian Nuclear Installation Facility Inspection and Safety Monitoring |
| 5 | Indonesia | Alfitri Meliana | 80 | The Necessity of Secure Transportation of Nuclear and Radioactive Materials for Indonesian Research Reactors |
| 6 | Indonesia | Titik Sundari | 83 | Spent Nuclear Fuels Testing and Inspections as a Part of Quality Management in The Indonesian Interim Storage for Spent Fuel |
| 6 | Indonesia | Argo Wicaksono | 115 | Benchmark for Neutronic Analysis of Kartini Reactor using SRAC2006 Code System |
| 4 | Jordan | Ghazal Al-Naddaf | 38 | A Prospective using Non- Destructive Examination Approach for Ensuring the Safety of Research Reactors Instrumentation |
| 4 | Jordan | Mohammed Omari, Sayel Marashdeh | 101 | The safety analysis of new Targets at the Jordan Research and Training Reactor |

| 4 | Jordan | MUSTAFA ALBREK | 113 | Evaluation of occupational exposure during normal operation of the Radioactive-waste Treatment Facility at the Jordan Research and Training Reactor |
|---|----------|------------------------|-----|--|
| 4 | Jordan | Mohammad Abu- Shams | 140 | Effects of Grain Boundary Engineering on the Irradiation- Induced Damage in Beryllium Using Molecular Dynamics (MD) Simulation |
| 4 | Jordan | Mohammad Alqudah | 143 | Assessing the Consequences of a Hypothetical Accident at the JRTR |
| 4 | Jordan | Alaaddin Alnajjar | 162 | Radiological Protection Program at Jordan Research and Training Reactor (JRTR): Experience, challenges and Best Practices for Safe and Sustainable Operation |
| 4 | Jordan | Sajedah Alameer | 163 | Tritium around Jordan Research and Training Reactor |
| 4 | Jordan | Mohammed Utoom | 232 | DESIGNING A PROGRAMME TO ASSESS AND CALCULATE THE TOTAL RADIATION DOSE FOR RADIATION WORKERS |
| 4 | Jordan | Akram Al-Ibraheem | 239 | An Overview of Appropriate Medical Practice in Emergency Response to Radiological and Nuclear Emergencies: An Insight from the Middle East |
| 6 | Libya | TARIQ Malatim | 81 | Modification of Tajoura Research Reactor Fuel Elements Dimensions - Neutronic simulation |
| 4 | Libya | Fatma Ghangir | 241 | Simulating Water Hammer behavior due to break in a Horizontal Channel of Tajoura Nuclear Research Centre's reactor using the Parent Model. |
| 4 | Malaysia | Mazleha Maskin | 79 | Fire Probabilistic Safety Assessment: An Evaluation at Reactor TRIGA PUSPATI Control Room |
| 6 | Nigeria | Nasiru-Deen Bello | 25 | HEU TO LEU FUEL CONVERSION FOR NIRR-1: A REGULATORY PERSPECTIVE |
| 4 | Nigeria | SUNDAY JONAH | 74 | THE NIGERIA RESEARCH REACTOR-1: Operational Safety and Optimal Utilization Five Years After Conversion to LEU |
| 4 | Nigeria | Nuruddeen Abubakar | 92 | RECENT CHALLENGES IN NIRR- 1 AND IAEA SUPPORT TOWARDS OPERATIONAL SAFETY ENHANCEMENT AND COMPLIANCE WITH NEW NATIONAL REGULATIONS |
| 4 | Nigeria | John Simon | 94 | Modeling Atmospheric Dispersion of Radionuclides Released from NIRR-1 LEU Core: Implications for Decommissioning Planning |

| 5 | Nigeria | Yakubu Ibrahim | 188 | Approach to Nuclear Security at the Nigeria Research Reactor-1 Facility |
|---|----------------------|--|-----|--|
| 4 | Pakistan | Shahbaz Ali Nasir Bhatti | 58 | PNRA Experience of Regulating Research Reactor and Molybdenum Production Facility (MPF) during Construction and Operation Phases |
| 4 | Paksitan | MOHAMMAD Qayyum | 51 | Experience in application of the IAEA Code of Conduct on the Safety of Research Reactors |
| 4 | Paksitan | Muhammad Abid Aslam Meo | 59 | Analysis of Single Failure Criterion during Natural Circulation Mode at PARR-1 |
| 4 | Peru | Victor Viera Castillo | 209 | Calculation of the axial peak factor and the average of the thermal neutron flux with U3O8 fuel elements of the reactor RP-10 |
| 4 | Peru | Alvaro Aguirre Ancieta, Wilder Arevalo Farro | 217 | EXPERIMENTAL DETERMINATION OF DELAYED NEUTRON FRACTION USING NEUTRON NOISE AND NEUTRON ACTIVATION ANALYSIS AT RP-10 |
| 6 | Republic of Korea | Yong Jin Jeong | 129 | Status of Developments of High- density Atomized U3Si2 Fuel Plates in KAERI |
| 4 | Republic of Korea | Seong Hoon Kim | 180 | Experimental works for Kijang Research Reactor |
| 4 | Thailand | kunthida Waree | 200 | Dose Assessment of Maximum Hypothetical Accident (MHA) for a new research reactor |
| 4 | Turkey | feride kutbay | 54 | The Risk Assessment of Aircraft Crash onto Research Reactors in Istanbul |
| 5 | Uganda | Bernard Mugalya | 210 | Developing and maintaining computer security plans to strengthen nuclear security for a Research Reactor |
| 4 | Ukraine | Andrii Shepitchak | 212 | REVISION OF UKRAINE'S SAFETY REQUIREMENTS FOR RESEARCH REACTORS |
| 4 | Uzbekistan | Sapar Baytelesov | 45 | INVESTIGATION OF THE AEROSOL AND GASEOUS COMPOSITION OF IODINE ISOTOPE COMPOUNDS IN EMISSIONS FROM THE WWR-SM REACTOR FACILITY |