

**International Group on Research Reactors (IGORR) Conference**

**and**

**IAEA Technical Meeting (TM) on Research Reactor Ageing Management, Refurbishment and Modernization**

**Co-organized by IGORR and IAEA**

**31st May – 4th June 2021 (Virtual Event)**

**Draft Agenda (as of 19th May 2021)**

**(CEST, GMT+1, Vienna time)**

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| **Monday, 31 May 2021** | | |
| **Opening Session:** *Ruben Mazzi (TM Chair) / Gilles Bignan (IGORR Chair)* | | |
| 12:00-12:25 | Opening remarks and introduction | DDG-NE, DIR-NEFW, DIR-NSNI SH-RRS, SH-RRSS (IAEA)  Gilles Bignan (IGORR) |
| **Session 1: Ageing Management, Refurbishment and Modernization (IAEA TM)** *Session Chair: Ruben Mazzi* | | |
| 12:25-12:50 | 1. **Keynote 1:** IAEA activities in support of research reactor ageing management, refurbishment and modernization | Ruben Mazzi  (IAEA) |
| 12:50-13:15 | 1. **Keynote 2**: IAEA Safety Standards and services on  ageing management for research reactors | Kaichao Sun (IAEA) |
| 13:15-13:30 | 1. Ageing management activities at HANARO research reactor | Hyungkyoo Kim (KAERI, Korea, Rep. of) |
| 13:30-13:45 | 1. Ageing management program High Flux Reactor | Stefanni Lorenzo (NRG, the Netherlands) |
| 13:45-14:00 | 1. High Flux Reactor continued safe operation: overview of scoping and screening procedures | Luca Ratti (NRG, the Netherlands) |
| 14:00-14:15 | 1. The Ageing management program of the BR2 reactor | Steven Van Dyck (SCK-CEN, Belgium) |
| 14:15-14:30 | Break | |

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| **Session 2: New Research Reactor (IGORR)** *Session Chair:* *Gilles Bignan* | | |
| 14:30-14:55 | 1. **Keynote 3**: International consortium based on multipurpose fast research reactor MBIR | A. Zagornov  V. Konstantinov  (Rosatom, Russia) |
| 14:55-15:10 | 2. Development of nuclear research facility concept with multipurpose fast test reactor MBIR | S. I. Novikov (RIAR, Russia) |
| 15:10-15:25 | 3. JHR project, France irradiation device, <<Adeline type>> preliminary qualification tests | Stephane Gaillot  (CEA, France) |
| 15:25-15:40 | 4. JHR completion of the erection of the reactor core vessel | Jerome Bouzat  (CEA, France) |
| 15:40-15:55 | 5. Core and reactor design: from the first outline to site assembly at JHR facility | Michel Boyard  (TechnicAtome, France) |
| ~~15:55-16:10~~ | ~~6. Conceptual design of a dual fluid research reactor~~ | ~~Jan-Christian Lewitz (LTX Consulting)~~ |
| **Tuesday, 1 June 2021** | | |
| **Session 3: RR Utilization, Fuels & Decommissioning (IGORR)** *Session Chair:* *Nuno Pessoa Barradas* | | |
| 12:00-12:05 | Introduction |  |
| 12:05-12:30 | 1. **Keynote 4**: The IAEA e-learning course on neutron imaging | Nuno Pessoa Barradas (IAEA) |
| 12:30-12:45 | 1. Fuel management strategy of the pool type research reactor | Guanbo Wang  (CAEP, China) |
| 12:45-13:00 | 3. Experience in decommissioning RBT-10/1 and AST-1 nuclear research installations | A. L. Petelin (RIAR, Russia) |
| 13:00-13:15 | Break | |
| **Session 4: Ageing Management, Refurbishment and Modernization (IAEA TM)** *Session Chair:* *Sean O’Kelly and Nuno Pessoa Barradas* | | |
| 13:15-13:30 | 1. Ageing management plan for PRR-1 in support of the planned operation of the Subcritical assembly for Training, Education and Research (SATER) | Alvie Asuncion-Astronomo (PNRI, Philippines) |
| 13:30-13:45 | 1. Ageing management activities towards safe operation of Reactor TRIGA PUSPATI (RTP) | Muhammad Khairul Ariff Mustafa (MNA, Malaysia) |
| 13:45-14:00 | 1. Ageing management of materials in research reactor | Cedric Gasqueres (TecnicAtome, France) |
| 14:00-14:15 | 1. ETRR-1 ageing management activities during extended shutdown | Mohamed Esawy (EAEA, Egypt) |
| 14:15-14:30 | 1. Ageing management of ETRR-2 research reactor | Moussa Othman (EAEA, Egypt) |
| 14:30-14:45 | 1. Experiences at the TRIGA of the university of Pavia in the management of the Ageing of the TRIGA research reactor | Andrea Salvini (LENA, Italy) |
| 14:45-15:00 | 1. SAFARI-1 research reactor ageing management programme: a case study: successes and challenges | Sammy Malaka (Necsa, South Africa) |
| 15:00-15:15 | 1. Advanced Test Reactor ageing management program implementation | Sean O’Kelly (INL, USA) |
| 15:15-15:30 | 1. The IPEN ageing and modernization program for its research reactors | Federico Genezini (IPEN, Brazil) |
| 15:30-15:45 | 1. Algerian experience with refurbishment of EsSalam research reactor | Aziouez Keffaz (COMENA, Algeria) |
| 15:45-16:00 | 1. Moved to the end of Session 6 |  |
| **Wednesday, 2 June 2021** | | |
| **Session 5: Ageing Management, Refurbishment and Modernization (IAEA TM)** *Session Chair:* *Ram Sharma* | | |
| 12:00-12:05 | Introduction |  |
| 12:05-12:30 | 1. **Keynote 5**: Towards the restart of JRR-3 operation | T. Tsumura (JAEA, Japan) |
| 12:30-12:45 | 2. OPAL secondary cooling system – major refurbishment activities | Chris Humphrey (ANSTO, Australia) |
| 12:45-13:00 | 3. An asset management approach for reliability | David Vittorio (ANSTO, Australia) |
| 13:00-13:15 | 4. Ageing management, refurbishment and modernization of research reactor Dhruva | Sanjeev Bajpai (BARC, India) |
| 13:15-13:30 | 5. Ageing Management Activities for Three Indonesian Research Reactors | Abdul Rohim Iso Suwarso  (BATAN, Indonesia) |
| 13:30-13:45 | 6. Experience of TRR-1/MI research reactor for pool repairing | Suvimol Rattanodom (TINT, Thailand) |
| 13:45-14:00 | 7. Roles and activities of Regulatory Body on Ageing Management of Research Reactors in Thailand | Pantip Ampornrat (OAP, Thailand) |
| 14:00-14:15 | 8. Ageing management of Ghana RR-1 in recent times | Henry Cecil Odoi (GAEC, Ghana) |
| 14:15-14:30 | Break | |
| **Session 6: Research Reactor Safety (IGORR)**  *Session Chair:* *Kaichao Sun* | | |
| 14:30-14:45 | 1. FRM II: Lessons learned from the reportable incident “release of c-14 above discharge authorisation” | Axel Pichlmaier (TU-Munich, Germany) |
| 14:45-15:00 | 1. Research performed at the RIAR JSC critical assemblies in justification of reactor test safety | A.V. Paidulov (RIAR, Russia) |
| 15:00-15:15 | 1. Commissioning of the RP-10 research reactor with the uranium silicide fuel assembly | Germán Cáceres Vivanco (IPEN, Peru) |
| 15:15-15:30 | 1. Allocation of safety functions to defence in depth levels | Nestor De Lorenzo (INVAP, Argentina) |
| 15:30-15:45 | 1. Methodology for SSC ageing evaluations in the framework of safety reviews for Argentine research reactors | Pablo Brenna (CNEA, Argentina) |
| 15:45-16:00 | 1. Chilean experience in RECH-1 research reactor improvement project | Eugenio Vargas Cárdenas (CNEC, Chile) |

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| **Thursday, 3 June 2021** | | |
| **Session 7: Ageing Management, Refurbishment and Modernization (IAEA TM)** *Session Chair:* *Ruben Mazzi* | | |
| 12:00-12:05 | Introduction |  |
| 12:05-12:30 | 1. **Keynote 6**: SM-3 core refurbishment project | Alexander Tuzov (presented by G.Bignan) (RIAR, Russia) |
| 12:30-12:45 | 1. Implementation of ageing management programme in NIRR-1 Facility | Abubakar Nurudeen (CERT ABU, Nigeria) |
| 12:45-13:00 | 1. Ageing Management for WWR-SM Research Reactor | Nodir Maksumov (INP, Uzbekistan) |
| 13:00-13:15 | 1. Pool-type reactors RBT-6 and RBT10/2: Operation and ageing management experience | A.L. Petelin (RIAR, Russia) |
| 13:15-13:30 | 1. Modernization of research reactor MIR.M1 and extension of its lifetime | D.V. Fomin  (RIAR, Russia) |
| 13:30-13:45 | 1. BOR-60 reactor operating experience, work on improving safety and extending lifetime | Mr. Igor ZHEMKOV  (RIAR, Russia) |
|  | 1. ~~Assessing the enhancement of reliability of the means of reactivity control on CMRR with the installation of HWSS~~ | ~~Xiangmiao Mi (CAEP, China)~~  CANCELLED |  |
| 13:45-14:45 | Break | |
| **Session 8: Innovative Methods (IGORR)** *Session Chair:* *Gilles Bignan* | | |
| 14:45-15:00 | 1. 1. Reactor tests and post-irradiation examinations of materials and fuels in justification of the operated and promising nuclear power plants | A. L. Izhutov  (RIAR, Russia) |
| 15:00-15:15 | 1. Comparison between using the deterministic package WIMSD/CITATION and probabilistic Monte Carlo codes for neutronics and burnup calculations of research reactors | Rani Osama Adbulaziz (SAEC, Sudan) |
| 15:15-15:30 | 1. Feynman-alpha and covariance-to-mean methods for reactivity estimation in a SUR100 research reactor | Pablo Bellino (CNEA, Argentina) |
| 15:30-15:45 | 1. Coded aperture technique for characterization and localization of radioactive hotspots – signal to noise ratio optimization for extended sources | Ioannis Kaisas (GAEC, Greece) |
| 15:45-16:00 | 1. Modelling and characterization of Beryllium reflector elements under irradiation conditions | Mohamed Gaheen (EAEA, Egypt) |
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| **Friday, 4 June 2021** | | |
| 12:00-12:05 | Introduction |  |
| 12:05-14:00 | 1. Review of IAEA Nuclear Energy Series Document: “Guidelines for an Ageing Management, Modernization and Refurbishment Programme for a Research Reactor” | Ruben Mazzi, Dario Jinchuk, Kaichao Sun (IAEA)  Ram Sharma (India) |
| 14:00-14:15 | Closing Remarks | Gilles Bignan (IGORR Chair)  Ruben Mazzi (IAEA) |
| 14:15-15:30 | IGORR Steering Committee Meeting | IGORR Steering Committee |