International Conference on Nuclear Knowledge Management and Human Resource Development: Challenges and Opportunities

Monday, 13 June 2022 - Thursday, 16 June 2022

Moscow, Russia

Scientific Programme

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Wednesday, 10 April 2024

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Objective

The objective of the conference is to review the global situation in human resources development and nuclear knowledge management, consider the current and future challenges and opportunities. It will provide participants with practical solutions that they can use to develop and maintain the human resources needed to support safe, secure and sustainable nuclear power programmes.

Various issues related to specific human competencies, methodological or process knowledge and technology-related knowledge management will also be addressed.

Lessons Learnt during the Covid-19 pandemic will also be considered.

Opening Session: Opening, plenary and keynote presentations

Opening addresses will be made by a senior management representative of the IAEA, a representative of the Government of the Russian Federation and the Chairperson of the Conference, who will be a senior manager from the host organization. The session will set the conference objectives and provide background information on the status and trends in the field of NKM and HRD including challenges to ensure the future nuclear workforce capability. Keynote interventions will provide information about cross-cutting aspects in NKM and HRD and specific applications of nuclear technologies that will emphasize the increasing reliance on a systematic and more effective approach to enhance the safe and economical operation of nuclear facilities. This includes lessons learnt in response to the Learning and Development (L&D) challenges from the Covid-19 pandemic response.

Nuclear Knowledge Management

This session will address strategies and policies to support NKM methodologies and implementation approaches. It will include discussions of knowledge management across the nuclear facility life cycle and within nuclear regulatory organizations. Knowledge management for nuclear science and non-power applications, and nuclear technology research, development and innovation will also be addressed.

Learning and Development for Human Resources

This session will discuss nuclear education and outreach, including how to build a learning culture in nuclear organizations, human resources planning to support building and maintaining a workforce, competency mapping and management, training, certification and continued professional development. It will address performance, monitoring and improvement, roles and responsibilities related to human resources and leadership functions within nuclear organizations, as well as networking and technical communities of practice.

Digital Transformation to support NKM and HRD

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This session will address the use of digital tools and technologies to support education and training of a nuclear workforce, including plant information models. It will also explore ways to plan and improve the digitalization strategy, smart digital tools to enhance existing training programmes or support the establishment of new programmes, and digital technologies with the potential to transform industry and businesses.

Nuclear Information Management

This session will cover issues associated with information management, particularly the use of technology to support new trends in information, records and data management. It will include discussions on managing big data for analytics and transformation, exploring data disruption and predictive analytics as digital information management tools.

International Student Competition

To foster the interest of young people in nuclear technology and to promote discussion on the impact of nuclear technology in addressing climate change, the conference will feature a Student Video Contest entitled "The role of nuclear technology in addressing climate change".

Exhibitions

Space will be available for displays and exhibits by commercial vendors during the conference. Interested exhibitors should contact the Local Organizing Committee by email as soon as possible (see the Conference Announcement section K).

Panel Discussions

To discuss technical challenges and experiences, panel discussions will be organized for technical sessions 1 to 12 in parallel. The panellists and audiences will have a chance to exchange their hands-on experiences and lessons learned on knowledge management challenges and approaches. A closing panel discussion by high level technical experts will consider:
- Technological issues;
- Regulatory issues;
- Political issues;
- Human resources; and
- Public information.

Closing Session

To conclude the conference, the session chairs will summarize the presentations and discussion of each technical session and the Chairperson will present their conclusions and recommendations to the IAEA.