



## Young Professionals Competition for the Youth Panel Side Event

Associated with the

**International Conference on Effective Nuclear and Radiation Regulatory Systems: Preparing for the Future in a Rapidly Changing Environment (EVT2102332)**

Abu Dhabi, United Arab Emirates

13 - 16 February 2023

### Overview

The continued development of young professionals working in nuclear and radiation regulatory systems is important to many regulatory bodies globally. The International Atomic Energy Agency (IAEA) also continues to emphasize on the importance of empowering young professionals and promoting their involvement as future leaders and supporting their growth as experts in this field.

The main theme of the upcoming conference is “Preparing for the Future in a Rapidly Changing Environment”, and one of its goals is to highlight the importance of capacity-building and the role of regulators in ensuring the sustainability of competence of the work force in the nuclear regulatory sector. In conjunction with the Conference, a competition is being held to provide an opportunity for young professionals to showcase their abilities and engage with the international nuclear regulatory community.

This competition targets junior and early career professionals up to 35 years of age from Member States, who wish to submit a synopsis outlining tangible and innovative ideas, solutions or initiatives that address the Conference’s topical issues.

Shortlisted synopses will need to be further elaborated by the respective authors as papers and presented during the Conference’s Youth Panel Side Event. Authors of five selected submissions will receive financial support to attend the Conference and deliver their presentations. Winners will be announced during the Conference’s Youth Panel Side Event.

This competition aims to promote creative and innovative thinking and highlight the critical role that the young generation of professionals plays in sustaining and ensuring a safe future for the peaceful uses of nuclear technology and radioactive materials. The ideas, solutions, and initiatives from winning presentations/papers, as well as the discussion during the panel, will be considered and recognized during the Conference. Winners will be formally acknowledged in the Conference President’s Report.

Early career professionals with a personal or professional interest in nuclear and radiation regulatory systems, are encouraged to participate.

**The IAEA especially encourages women and representatives from developing countries to**

participate in this competition.

### Competition Rules

- Format: Submissions of synopses outlining tangible and innovative ideas, solutions, or initiatives to address the challenges listed below in the section titled “Competition Topics” must be sent in Microsoft Word or PDF format.  
Synopsis Submission Deadline: **Monday, 24 November 2022**, 11:59 p.m. (CET).
- Length of synopsis: Between 500 and 1500 words.
- Submission method: Submissions must be sent to the following email address [RegConference2023.Essay-Contest@iaea.org](mailto:RegConference2023.Essay-Contest@iaea.org)
- Limit: One submission per person or per group (group can consist of 3-5 people).
- The results of the selection process will be announced by **Thursday, 8 December 2022**. Authors of the shortlisted synopses will be asked to submit a short paper and presentation covering more details. The deadline to receive these short papers and presentations will be **Tuesday January 3, 2023**, 11:59 p.m. (CET).
- Authors of five selected submissions (individual or group of 3-5 people contributing to particular synopsis) will be invited to attend the Conference and present those ideas, solutions, or initiatives to the audience during the Side Event.
- The top three winners will be selected by a panel during the Youth Panel Side Event and they will receive a trophy and a certification for their contribution and achievement.
- In addition, the winners’ proposed idea or solution will be shared at the IAEA or one of the National Regulatory Bodies, a Technical Support Organization or a Research Institution for consideration for a sponsorship opportunity.
- Language: Submissions must be written in English language and participants should note that the youth panel will be conducted entirely in English.

### Competition Topics

The synopsis should reflect ideas/solutions/initiatives which will address one of the following aspects or challenges pertinent to the Conference’s topical sessions:

- **Climate change:** Changes in the environment lead to new challenges in both regulating existing nuclear installations under new external hazards and licensing new nuclear installations that will be connected to national grids. How can the new regulatory challenges be summarized? What actions from the side of the regulatory body would you propose to address these challenges in the next 5-10 years?
- **Application of the “graded approach” while developing or adapting regulatory strategies and programmes:** “Graded approach” is defined in the IAEA Safety Glossary as *“a process or method in which the stringency of the control measures and conditions to be applied is commensurate, to the extent practicable, with the likelihood and possible consequences of, and the level of risk associated with, a loss of control”*. The use of a graded approach is intended to ensure that the necessary levels of analysis, documentation and actions are commensurate with the magnitudes of any radiological hazards and non-radiological hazards, the nature and the particular characteristics of a facility, and the stage in the lifetime of a facility. How do you see the “graded approach” for nuclear and non-nuclear applications, including small modular reactors, transportable reactors and fusion reactors; and radiological applications, such as medical and industrial technologies. What challenges can appear and what would be your solution to overcome these challenges?
- **Regulatory approaches for decommissioning and radioactive waste management of power and research reactors:** Propose a comprehensive infrastructural solution (without describing technology behind decommissioning and radioactive waste management) for decommissioning and radioactive waste management of power and research reactors, including interim and long-term storage and strategies for managing

spent fuel. Analyze pros and cons of your proposal and describe the most significant risks for implementation of your solution.

- **Regulatory communication and outreach:** Describe the ideal communication and outreach approach for a national nuclear regulatory body. Describe what aspects of communication need to be tailored to the national culture and circumstances and what can be universally applied across national nuclear regulatory bodies. Propose methods and tools that could be used for reaching out to younger groups of society.
- **Capacity Building for the future:** The nuclear and radiological regulatory sector is facing a challenge in attracting and sustaining nuclear expertise and ensuring the sustainability of the work force. This includes the promotion of gender balance and empowering youth. How can nuclear regulatory bodies overcome this challenge and be better prepared for the future?
- **Regulatory effectiveness in an increased use of digitalization and innovative technologies:** The expanded use of digital technologies in nuclear and non-nuclear applications provide solutions for complying with nuclear safety standards and security guidance. Their increased use also presents a regulatory challenge, including aspects of computer security. How would you envisage an effective regulatory approach and accomplishment of regulatory functions? How could digitalization be used for the improvement of the regulatory effectiveness?

The submissions should focus and address the challenges from the perspective of improving the effectiveness of the nuclear regulatory systems.

### **Shortlisting Process**

- Submitted synopses received by the deadline will be collected and reviewed for conformance to the criteria stated below:
  - ✓ How relevant is it to one of the above-mentioned competition topics?
  - ✓ Is the proposed concept feasible or achievable?
  - ✓ How will it impact the effectiveness of nuclear regulatory systems?
  - ✓ Does it address future challenges?
  - ✓ How innovative is the initiative?
- Valid submissions of synopses will be reviewed and scored anonymously by a selection committee comprised of IAEA staff and without regard to nationality, gender, or occupation of the applicants. The synopses will be assessed using a wide range of technical and non-technical criteria, however, special attention should be paid by applicants to ensure that the synopses adhere to one of the identified topics, include creative and innovative thinking, and avoid using industry jargon.
- Shortlisted synopses need to be elaborated further in form of a presentation/paper by the respective author(s). Submitted papers will be further reviewed anonymously and without regard to nationality, gender, or occupation of the applicant.
- Authors of the five selected papers (individual or group of 3-5 people contributing to a particular submission) will be notified by **30 December 2022**.
- Authors of these five selected papers (individual or group of 3-5 people contributing to a particular synopsis) will be provided financial support to travel to and participate in the Conference and will be asked to prepare a presentation on their paper. The financial support to be provided will be determined based on individual circumstances and consistent with IAEA rules and regulations.

### **Additional Terms and Conditions**

- The competition is only open to candidates from IAEA Member States.
- Applicants must be between 18 and 35 years of age at the time of their submission. Winners will be requested to send their identification documents (e.g., copy of passport) to facilitate administrative arrangements and travel to the venue of the Conference (Abu Dhabi, United Arab Emirates).
- Only one submission is permitted per applicant or per group of applicants (3-5 members). Once a synopsis has been submitted, the applicant(s) will not have an opportunity to revise it.
- While submitting the synopsis to the IAEA, the following details need to be mentioned:
  - Applicant's full name as it appears in their passport.
  - Organization name
  - Gender
  - Date of birth
  - Country of passport.
- Synopses and corresponding papers must be submitted by an applicant or a single group of applicants (3-5 members) acting in their own personal capacity. Winning applicants can mention their current affiliation while attending the Conference but their participation in the Youth Panel Side Event has to be in the role of an independent expert or team.
- All synopses and corresponding papers and presentations must be the original work of the applicant(s) in their own words, except for quotations from published and unpublished sources, which are clearly indicated and acknowledged as such. Citations must follow internationally-recognised styles and applicants can at any time be requested to provide clarification of the source. Any content that can be identified as plagiarism will be disqualified.