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International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

National Liaison Officer

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In reply please refer to: RER/6/033-008

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2016-07-15

**Subject:** Invitation to a Regional Training Course on Brachytherapy Physics, Moscow, Russian Federation, 24-28 October 2016

Dear National Liaison Officer,

I am pleased to invite you to send nominations of suitable candidates to participate in the above-mentioned training course under the framework of TC Project RER/6/033 – Strengthening Knowledge of Radiation Therapy Professionals (Radiation Oncologists, Medical Physicists and Radiation Therapy Technologists). The purpose of the training course and related information are outlined in the attached Prospectus.

For candidates who are selected by the IAEA, the IAEA will cover the cost of return international travel from the home country to Moscow, Russian Federation and provide a stipend for the duration of the training course in line with IAEA rules and procedures.

Please submit nominations to the IAEA online through the Technical Cooperation Department's InTouch system (<http://intouch.iaea.org>). Only if this is not possible, nominations may be submitted on the Nomination Form for Training Course available on the IAEA website: <http://www.iaea.org/technicalcooperation/How-to-take-part/train-course/index.html>. Completed forms should be endorsed by relevant national authorities and sent to the Programme Management Officer for this project, Ms Mayumi Yamamoto (IAEA Official Fax: +43-1-26007 or E-Mail [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org)), through the official channels, i.e. the designated National Liaison Office for IAEA matters, not later than **19 August 2016**.

Yours sincerely,

Martin Krause

Director

Division for Europe

Department of Technical Cooperation

Enclosure: Prospectus

# International Atomic Energy Agency

## Regional Training Course on Brachytherapy Physics

### PROSPECTUS

- Project Number & Title:** RER/6/033: Strengthening Knowledge of Radiation Therapy Professionals (Radiation Oncologists, Medical Physicists and Radiation Therapy Technologists)
- Place (City, Country):** Moscow, Russian Federation
- Dates:** 24-28 October 2016
- Deadline for Nominations:** 19 August 2016
- Organizers:** The International Atomic Energy Agency (IAEA) in cooperation with the Government of the Russian Federation through the Association of Medical Physicists in Russia (AMPR)
- Host Country Organizer:** Mr Valeriy Kostylev  
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Kashirskoye shosse 24  
115478 Moscow  
Russian Federation  
Tel.: +7 495 3246093  
Fax: +7 495 3243408  
Email: [kostylev@amphr.ru](mailto:kostylev@amphr.ru)
- Language:** Russian
- Purpose:** The course is to provide theoretical and practical training in medical physics aspects of brachytherapy.
- Expected Output(s):** In-depth knowledge of dosimetry, imaging, treatment planning and delivery, and related QA procedures applicable to brachytherapy as per *The Transition from 2-D Brachytherapy to 3-D High Dose Rate Brachytherapy*, IAEA Human Health Reports No. 12 (IAEA, Vienna, 2015), ICRU-38 and GEC-ESTRO recommendations as well as TG43 formalism.
- Scope and Nature:** The course will consist of deductive lectures and practical sessions followed by discussions with the course participants. The course programme will include basic brachytherapy physics principles, radiation safety, 2D brachytherapy, its limitations and rationale for transition to 3D image based brachytherapy and relevant QA requirements as recommended by the IAEA:
- Types of brachytherapy
  - Brachytherapy systems & characteristics, commissioning and QC
  - Source strength specification
  - Dosimetry systems
  - Dose calculation models
  - Principles of brachytherapy for various anatomical sites
  - LDR and HDR brachytherapy

- 2D brachytherapy and to 3D image based brachytherapy
- Radiobiology considerations
- Safety and QA requirements.

Practical sessions will entail dosimetry measurements and dose calculation exercises including source calibration with well-type chamber, after loader QC, applicator reconstruction using 2D and 3D imaging, and treatment planning optimization for selected anatomical cases.

**Background Information:**

The activity of the project RER/6/033 includes supporting participation in regional training courses to train medical physicists in the region and allow interaction and exchange of experience with other medical physicists on practices and lessons learned. Opportunities for training and on-going professional growth can serve to increase motivation and professional qualification.

**Participation:**

The course is open to 21 participants from the countries that are taking part in the RER/6/033 project and that need assistance in training staff in radiotherapy physics. The course is targeted towards Russian-speaking participants.

The targeted countries are: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Greece, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Tajikistan, the Former Yugoslav Republic of Macedonia, Turkey, Ukraine and Uzbekistan.

\*The course is also open to qualified Russian-speaking medical physicists from other regions.

**Participants' Qualification:**

The nominees should be clinical medical physicists working in radiation therapy departments who are willing to refresh their knowledge in brachytherapy physics.

Fluency in written and spoken Russian is required.

This training course is not intended for radiation oncologists nor radiologists.

**Nomination Procedure:**

Please submit nominations to the IAEA online through the Technical Cooperation Department's InTouch system (<http://intouch.iaea.org>). Only if this is not possible, nominations may be submitted on the Nomination Form for Training Course available on the IAEA website: <http://www.iaea.org/technicalcooperation/How-to-take-part/train-course/index.html>.

**Furthermore, please ensure to provide the dose records for the last 5 years in the attached form. Failure to do so will be considered as incomplete submission of application, and your nomination form may not be reviewed.**

Completed forms should be endorsed by relevant national authorities and sent to the Programme Management Officer for this project, Ms Mayumi Yamamoto (IAEA Official Fax: +43-1-26007 or E-Mail [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org)), through the official channels, i.e. the designated National Liaison Office for IAEA matters, not later than **19 August 2016**.

**Administrative  
and Financial  
Arrangements:**

Nominating Governments will be informed in due course of the names of the candidates who have been selected and will, at that time, be given full details of the procedures to be followed with regard to administrative and financial matters.

Selected participants from countries eligible to receive technical assistance under the IAEA's technical cooperation programme will be provided with a round trip economy class air ticket from their home countries to Moscow, Russian Federation, and a stipend sufficient to cover the cost of their food and minor incidentals. Accommodation will be provided by the host institute. Shipment of accumulated course materials to the participants' home countries is not the responsibility of the IAEA.

The organizers of the course do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.