

Invitation

2nd AFRA Conference on ICT

With the theme

**“The Role of Information and Communication Technologies (ICTs)
in Nuclear Science and Technology Training”**

To be held at the

**Medical School of the University of Stellenbosch, Tygerberg Campus,
16 to 17 November 2009**

*Organised by the ICT Tele-centre in cooperation with the Government of South Africa with
the support of Medical Physics, University of Stellenbosch, International Atomic Energy
Agency (IAEA) and AFRA*



■ Background

The renewed interest of African countries in the peaceful application of nuclear techniques and atomic energy brought many challenges related to education and training in nuclear science and technology. Over the past two decades the majority of African countries concentrated efforts on specific peaceful applications of nuclear techniques, such as radiation therapy to fight cancer, improvement of malnutrition and combating communicable diseases.

In this context, the development of sufficient qualified human resources gained tremendous interest because several countries lost skilled scientists during the past two decades or have not developed and implemented sound human resources strategies. In view of these new challenges, the IAEA has accorded its highest priority to education and capacity building with special modalities particularly suitable to Least Developed Countries (LDCs).

The IAEA's conventional form of educational/training through fellowships or group training suffers from a number of restrictions such as limited access, cost-effectiveness and language barriers; therefore ICT-based training-learning tools and methodologies have been introduced by the IAEA through the AFRA programme. This program offers mass customization as technology allows individual differences in the goals, learning styles and abilities of the trainees to be accommodated while providing immediate feedback on progress made and results achieved. ICTs have therefore been incorporated into materials and multimedia tools for training and learning in various fields of particular significance to the developing Member States in Africa, such as •nuclear medicine, •artificial insemination, •pest

control and eradication, •maintenance of nuclear instrumentation, •troubleshooting/repair of several nuclear instruments, •nuclear analytical techniques, etc. In parallel to this effort, training of ICT material developers and trainers as well as the establishment of ICT Tele-centres has been provided under several IAEA-supported projects.

■ Objectives of the Conference

- To provide a forum for discussions between participants from the African Member States about the role of Information and Communication Technologies (ICTs) in Nuclear Science and Technology Training
- To provide a platform and facilitate exchange of information and experience about national approaches for considering ICTs
- To sensitize Member States about the role of the IAEA and projects related to applications of ICTs in education and training
- To promote regional cooperation in the field

■ Participation

- ICT Managers
- Developers of ICT materials
- Software developers
- Website designers
- Lecturers and students in radiation science
- Radiation physicists
- Radiation oncologists
- Radiographers

■ Venue

The Conference will take place at the Medical School of the University of Stellenbosch on the Tygerberg Campus (Tygerberg Hospital grounds).

■ Topics

1. Utilization of ICT-based training/learning in the following fields:

- Human health
- Food security
- Environmental monitoring
- Research Reactor utilization
- Radiation protection
- Agriculture
- Instrumentation
- Analytical chemistry with emphasis on nuclear analytical techniques

2. Development of ICT-based training/learning materials

- Tools and user interfaces
- Methodologies
- Validation of developed ICT materials
- Training for developers

3. Role of ICT-based training/learning materials

- Education and training
- E-learning
- Tele-maintenance
- Online laboratories
- Integration of ICT materials in education
- Challenges and solutions

4. Tele-centres

- Infrastructure
- Organizational and legal framework
- Management
- End-users
- Activities and success stories
- Cooperation with universities and other research institutions

5. Regional and sub-regional co-operation

- Development
- Joint events
- Promotion
- Interactions with other organizations

■ Registration (Includes tea & lunch)

- Full registration fee: R 400
- Exhibition stand: R5 000 (2 delegates included)

Please complete attached registration form and e-mail to pmqitsan@pgwc.gov.za before 16 October 2009

- Banking details:
 - ABSA Bank Sanbel, Branch code 523410
 - Account number 9229696019
 - Account name ICT Conference

Please fax proof of payment to 086 662 3185 or e-mail to msr@pgwc.gov.za

■ Conference secretariat

- Postal address:
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■ Organizing committee

- Anne-Mari Rossouw (Project Coordinator)
- Pamela Mqitsana (Secretary)
- Hannelie Mac Gregor (Treasurer)
- Jing Zhang (IAEA)
- Wilhelm Groenewald
- Monique du Toit
- Thea Eiselen
- Tumelo Moalosi

■ Scientific committee

- Nafaa Reguigui (Chairperson, Tunisia)
- Andrzej Markowicz (IAEA)
- Jing Zhang (IAEA)
- Anne-Mari Rossouw (South Africa)
- Thea Eiselen (South Africa)
- Medhat Eliwa (Egypt)
- Zeinabou Souley (Niger)
- Ahmadou Wague (Senega)

■ Invited speakers

- **Dr Heinrich Deutschmann** - Medical Physicist, Salzburg, Austria
Networking in Radiotherapy – A vendor-independent, non-commercial approach
- **Prof Andries van Aswegen** - Dept of Medical Physics, UOFS, Bloemfontein, South Africa
Application of ICT-based programmes for Medical Physicists working in a Nuclear Medicine Environment
- **Dr Otto Schulze** – Dept of Medical Imaging and Clinical Oncology, Tygerberg Hospital, South Africa
The application of PACS in Radiology Training
- **Dr S Landsberger** – USA
Advancing Nuclear Information Technology by current Electronic Technology

■ Provisional programme

■ Monday, 16 November 2009

- **Markowicz, A, Austria** - *ICT-related projects at the International Atomic Energy Agency*
- **Van Aswegen, Andries, South Africa** - *Application of Information and Communication Technology-based training programmes for Medical Physicists working in a Nuclear Medicine Environment*
- **Adjerad, Athmane, Algeria** - *Design of ICT module of training in radiation protection*
- **Andriambololona, Raelina, Madagascar** - *Rayprotect- Training and working web tool for Radiation Protection*
- **Afriyie, P Kofi, Ghana** - *Modular outlines for learning and teaching of the methodology and application of energy dispersive x-ray fluorescence spectrometry*
- **Mucheusi, Longino, Kenya** - *Developing ICT materials for proposed Training of RTTs at Kenyatta National Hospital*
- **Barongo, Philbert, Tanzania** - *The role of ICT in improving livestock production in Tanzania through AI Programme*
- **Engel-Hills, Penelope, South Africa** - *A DVD in Radiation Oncology*
- **Landsberger, S, USA** - *Advancing Nuclear Information Technology by Current Electronic Technology*
- **Bebbouchi, Dalila, Algeria** - *Online collaborative writing tools using web 2.0: The use of Google doc in an online specialized post graduation in information science*
- **Philotheou, Geraldine, South Africa** - *IAEA SPECT/CT and PET/CT ON-LINE training programme for nuclear medicine technologists*
- **Seotsanyana, Motlatsi, South Africa** - *Verifying Therapy Safety Interlock Systems with SPIN*
- **Mangena, Bayeza, Zimbabwe** - *Utilisation of Wi-Fi and WiMAX Technology for Bridging the Digital Divide in Rural Communities*
- **Willemse, M, South Africa** - *Learning Gamma Spectroscopy Through Multimedia*

■ Tuesday, 17 November 2009

- **Schulze, Otto, South Africa** - *Application of PACS for Radiology Training*
- **Ferhat, Khenak, Algeria** - *REV – Algérien*
- **Bouchra, Nasri, Morocco** - *E-learning on Nuclear Sector on Morocco*
- **Amadou, Seidou, Senegal** - *Study for the implementation of an Intranet network between higher educational establishments of Senegal by using a VSAT connection*
- **Jaballah, Sana, Tunisia** - *The role of information and communication technologies (ICTs) in combating consumer fear of irradiated food products*
- **Nakato, Teddy, Uganda** - *The Role of ICT in Promoting Nuclear Science and Technology in Uganda*
- **Bosman, JP, South Africa** - *Rapid e-Learning tools - a lecturer's best friend*
- **Davids, Razeen, South Africa** - *An interactive simulation for the teaching of electrolyte and acid-base disorders*
- **Tshiashala M, Arthur, Congo** - *ICT at the CGEA, A tool for human resource development, state of art*
- **Nigatu, Hailu, Ethiopia** - *Tele-centres in Ethiopia*
- **Ahunanya, Stella, Nigeria** - *Providing ICT Education and Training in Nigeria: Universities and Private Participation*
- **Apollinaire, Molaye, CAR** - *Establishment of an e-training and access FREE Education resources in the Multimedia Resource Centre at the University of Bangui*
- **Deutschmann, Heinrich, Austria** - *Networking in radiotherapy – a vendor-independent non-commercial approach*
- **Rajaobelison, Joël, Madagascar** - *Madagascar-INSTN Cooperation with universities and other research institutions in Madagascar*
- **Djiteye, Aligui, Mali** - *Capacity Building through ICT in the fields of Education and Health in Mali*