

**School of Nuclear Knowledge Management**  
**24 - 28 September 2007, Trieste, Italy**

***Faculty Information***



**Dr. Yanko Yanev, Director**

(International Atomic Energy Agency, Vienna, Austria)

Yanko Yanev studied at the University of Sofia, taking MSc in Nuclear Chemistry and a PhD in Environmental Radiochemistry. For more than 20 years he developed an academic career as a professor in Nuclear Chemistry and Head of the Radiochemical Laboratory of the University of Sofia. In 1991 he was appointed Chairman of a Government Commission, which reviewed the nuclear power industry in Bulgaria. Other highlights include: President of the State Committee on the Use of Atomic Energy for Peaceful Purposes from 1991 to 1996 (the Bulgarian Atomic Energy Commission) and Vice Chairman of the IAEA's Board of Governors. He has acted as a senior energy consultant to the Bulgarian-Russian Investment Bank, and took up the post of Programme Liaison Officer in the Department of Nuclear Energy at the International Atomic Energy Agency (IAEA) in 1998. In 2001, he was appointed Section Head of the International Nuclear Information System (INIS) and has been the Agency's cross-cutting coordinator for Nuclear Knowledge Management since 2002.

His fields of expertise cover: environmental radiochemistry, nuclear chemical engineering, nuclear power and nuclear safety, nuclear and energy regulation. Mr. Yanev is a member of various nuclear societies and the Bulgarian Energy Policy Association. He has authored or co-authored more than 100 scientific papers and conference reports in the field of nuclear chemical engineering, environmental issues relating to nuclear power, radiation and nuclear safety, and energy regulation and management. He has served on a number of international committees: as co-chairing Committee III on the Conference for the

Extension of the Treaty for the Non-Proliferation of Nuclear Arms (New York, 1995); as Bulgaria's representative in the Plenary meeting and meetings of the Steering Committee of the G-24 Co-ordination Mechanism for Improving the Safety of Soviet-designed Nuclear Power Plants, the EC group of nuclear regulators (CONCERT) and others.

Currently he is the Head of the Nuclear Knowledge Management Unit of the IAEA.

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**Dr. Andrey Kosilov, Director**

(International Atomic Energy Agency, Vienna, Austria)

Andrey Kosilov received his PhD in nuclear engineering at Moscow Institute for Physics and Engineering in 1976. He has a broad range of experience in nuclear field, including 17 years as the staff member of the International Atomic Energy Agency, 8 years as a deputy head of department responsible for the long term planning and implementation of programmes in nuclear field. He performed responsibilities of group leader, knowledge management specialist, nuclear power training specialist, associate professor, lecturer, researcher and nuclear engineer. Duties have included nuclear knowledge management, NPP personnel training and qualification, nuclear engineering, safety applications, NPP control and engineering, long-term project planning and management, development of information technology applications.

Particular areas of experience include: knowledge management for nuclear industry, human resources development, configuration management, SAT-based training for NPP personnel, management of

training document development, software development, nuclear power plant instrumentation and control, human-machine interface issues, operator support systems for NPPs, control room systems design, computerization of operation and maintenance of NPPs, development of web applications.

In 2001 Dr. Kosilov received American Nuclear Society Training Excellence Award.

Currently he is a Group Leader of the Nuclear Knowledge Management Unit of the IAEA.

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**Dr. Claudio Tuniz, Director**  
(International Centre for Theoretical Physics,  
Trieste, Italy)

**Education:**

Laurea in Physics, University of Trieste, Italy,  
1974

**Research interests:**

Accelerator mass spectrometry (AMS) and its applications in environmental science, biomedicine and other disciplines utilising long-lived radionuclides as chronometers and tracers. Tuniz has co-authored one book, several book chapters and about 100 scientific papers, mostly on the above subject.

**Biography:**

Tuniz earned his doctorate in Physics at the University of Trieste, Italy, where he carried out research in nuclear physics from 1974 to 1980. He was post doctoral fellow at Rutgers University in New Jersey, USA, from 1981 to 1983, becoming involved in pioneering applications of cosmogenic radionuclides to understand the cosmic record in meteorites and lunar rocks.

In the following years, he promoted accelerator mass spectrometry methods in Italy and coordinated a programme funded by the National Institute of Nuclear Physics. He was also involved in the development use of synchrotron radiation microprobes.

Tuniz moved to Australia in 1991, following an invitation by the Australian government to lead the AMS group at the Lucas Heights Research Laboratories in Sydney. The world class AMS centre developed under his leadership carried out research programmes in global climate change, Antarctic research, environmental monitoring for nuclear safeguards, biomedicine and archaeology.

Later he became Director of the Physics Division at Lucas Heights (1996-1999) and coordinated a broad spectrum of inter-disciplinary research based on the use of ions, neutrons and synchrotron radiation. Tuniz was counsellor for science policy matters at the Australian Permanent Mission to the United Nations Organisations in Vienna between 1999 and 2004.

He is Assistant Director and Head of the Multidisciplinary Laboratory at ICTP since June 2004.

**Collaborations:**

Tuniz served as Chairman of the Executive Committee for the Australian Program on Synchrotron Radiation Research, Chairman of the Neutron Scattering Committee for the Australian Replacement Reactor, Co-Chairman of the Australasian Archaeometry Conference, Co-Chairman of the International Conference on Accelerator Mass Spectrometry, member of the Asian Committee for Future Accelerators, member of the International Committee for Radionuclide Metrology and member of the Executive Committee of the Australian Institute of Nuclear Science and Engineering.

He is fellow of the Australian Institute of Physics, member of the American Association for the Advancement of Science, the Italian Physical Society, the Institute of Physics (UK) and the Italian Association of Archaeometry.

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## SCHOOL LECTURERS



**Mr. James E. (Ed) Boyles**

Ed retired from the Tennessee Valley Authority in October 2005 after 26 years. During his career with TVA he held a number of key positions in engineering and management, including assignments at Sequoyah and Watts Bar Nuclear Plants. At retirement he was serving as the Manager of Work Force Planning and was a leader in developing and implementing TVA's Knowledge Management Program.

Since leaving, he has participated in several IAEA Knowledge Management projects such as assist visits, Technical Meetings and Workshops. This is Ed's third participation in the School of Nuclear Knowledge Management.

Ed lives in Chattanooga, Tennessee U.S.A.  
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**Dr. David Beraha**  
(Gesellschaft für Anlagen und Reaktorsicherheit  
GRS mbH Forschungsinstitute, Munich, Germany)

Personal Details  
Birthday: 26.5.1948  
Nationality: Spanish

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Education:  
1966-1971 ETH Zurich, Dipl.Ing Elektrotechnik  
1971-1972 Imperial College London, M.Sc.  
Automatic Control  
1983 Technical University Munich, Dr. Ing.

Professional Experience:  
since 1973 at GRS  
1983-2001 Head of the Simulation Technology  
Department  
2001- Head of the Knowledge Management  
Department

Present Position:  
Head of Knowledge Management Department

Qualifications and Skills:  
Control and Instrumentation; Systems, Software  
Engineering and Expert Systems Development;  
Man Machine Interface and Human Factors;  
Simulation Technology and Nuclear Engineering  
Simulators; Knowledge Management

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**Dr. Andres Cicuttin**  
(International Centre for Theoretical Physics,  
Trieste, Italy)

Graduated in Physics in La Plata National University, Argentina, in 1992, and since 1993 he is with ICTP as technical staff member. He is now involved in several multidisciplinary research activities at the ICTP Multidisciplinary Laboratory under the supervision of Prof. Claudio Tuniz. He is also associate researcher at the Italian National Institute for Nuclear Research. He is mainly involved in instrumentation development for high energy physics experiments in Italy and at CERN, Geneva. He is also in charge of the organization of international training activities on advanced microelectronic design techniques for experimental physics research including VLSI Design and Programmable Logic Devices.

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**Mr. Andy Jackson**  
(AMEC Ltd., Knutsford, Cheshire UK)

Andy Jackson has 25 years experience in the nuclear power industry in a wide variety of roles in the UK and International markets. A Mechanical Engineer by training, he spent ten years on the Sizewell 'B' PWR project, as part of the team that developed the reference design of the Nuclear Steam Supply Systems (NSSS) to incorporate UK safety requirements into the US PWR design. Since then Andy has held various management roles in AMEC covering business development and project delivery.

Andy is currently responsible for managing resources within AMEC's European Nuclear Directorate, and in recent years has provided support to the IAEA Nuclear Knowledge Management Section as part of workshops and assist missions to institutes, regulators, and operating Nuclear Power Plants.

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**Dr. Petr FIRBAS**  
(International Atomic Energy Agency, Vienna, Austria)

Unit Head, NS/SSCS Programme and Policy Unit, IAEA

Mr. Petr Firbas joined the International Atomic Energy Agency after having worked nine years for the IAEA sister organization in Vienna, the Comprehensive Nuclear-Test-Ban Organization (CTBTO). He was the very first technical professional at the CTBTO and contributed to building this organization from its beginning to its shape today. While at the CTBTO, his focus was global monitoring of nuclear explosions; he was responsible for methods and approaches, including application software. He intensively worked with the Policy Making Organs and with representatives of States Signatories. In the 90's he took part in the Treaty negotiations at the Conference of Disarmament in Geneva and, throughout his career, also gained his diplomatic experience and reached the rank of minister-counselor. For many years he

had been involved in NPP safety work in his home country, having worked on different projects on material properties, components, site selections for new NPPs, and projects for nuclear waste disposal.

He is a physicist by training, having among other degrees also a PhD in applications of nuclear physics.

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**Mr. Andrey Pryakhin**  
(International Atomic Energy Agency, Vienna, Austria)

Andrey Pryakhin studied at the Moscow Engineering Physics Institute (State University) in Moscow taking MSc in Nuclear Engineering and Information Technology. For more than 15 years he worked in the fields of Education, Training, IT/IM System Design and Development for safe operation of Nuclear Power Plants. He was also certified as Quality Management Systems specialist.

His fields of expertise cover: nuclear power plant training program development for operating and maintenance personnel; areas of information technology and information management to support nuclear education, personnel training and NPP operation; design, development and deployment of information systems for nuclear power industry; information systems for assessment and licensing of NPP personnel; nuclear knowledge management systems and web-based portals; document management systems.

At various time he worked for the following innovative information and knowledge management systems: Operator Support System (OSS); Electronic Nuclear Training Catalogue (ENTRAC); Power Reactor Information System (PRIS); International Nuclear Information System (INIS); IAEA Nuclear Knowledge Portal (Nucleus); Various Document Management Systems.

Particular areas of experience include: knowledge management applications, web portals and information systems; NPP simulators for education, including PWR, BWR, CANDU, ACR, WWER-1000; e-learning cyber platforms and web-based distance learning applications.

Currently he is a Nuclear Information Specialist of the Nuclear Power Division of the IAEA.

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**Dr. Antonio Carlos de Oliveira Barroso**  
(Instituto de Pesquisas Energeticas e Nucleares; IPEN, San Paulo, Brazil)

**Education:** Ph.D. in Nuclear Engineering by the Massachusetts Institute of Technology, MA, USA.

**Fields of interest and expertise:** Presently - Management of R&D; Knowledge Management; Technology Foresight and Roadmap. Previously: Simulations of nuclear systems and plant dynamics; Comparative assessment of different energy options.

**Present Activities:** Professor and senior researcher at IPEN that is both a research institute of CNEN and also a unit of the São Paulo University – USP for Post graduate studies in Nuclear Technology. Special Advisor for the Director of Research and Development of CNEN. Coordinator of a research group on applications of KM methods to nuclear technology and of some research and pilot projects aimed at preserving and leveraging of Nuclear Knowledge developed by CNEN's institutes. Outside the duties with CNEN, I am member of the Standing Advisory Group on Nuclear Applications - SAGNA.

Outside the nuclear area I am also a free-lancer Associate Researcher and Consultant of Terra Forum Consultores, the leading Brazilian Consulting Company for Knowledge Management.

**Past activities:** Acting Chairman of CNEN for 7 months and Director of R&D of CNEN for 9 years. Commissioner of CNEN and also alternate governor from Brazil at the IAEA Board of Governors. Also served as Chairman of the Administrative Council of two Government owned Companies – INB and NUCLEP.

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**Ms. Keiko Hanamitsu**  
(International Atomic Energy Agency, Vienna, Austria)

Ms. Keiko Hanamitsu has taken up her duties in the Nuclear Knowledge Management Unit in the INIS&NKM Section as Nuclear Knowledge Specialist in January 2006. She is coordinating the activities of the Asian Network for Education in Nuclear Technology (ANENT) in order to promote, manage and preserve nuclear knowledge in the region. She is also organizing the regional workshop on managing nuclear knowledge which will be held in October in Tokyo, Japan. Other duties include a preparation of publication and organizing meetings.

Before joining IAEA, she had been engaged in the Japan Atomic Industrial Forum in Tokyo, where she was coordinating various projects and meetings including the Forum for Nuclear Cooperation in Asia (FNCA) supported by Japanese government.

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**Mr. Serge Gorlin**  
(World Nuclear Association, London, UK)

Serge Gorlin began his career in the nuclear industry as a translator and interpreter at British Nuclear Fuels in 1996. In 2005, he joined the World Nuclear Association - the global association of the nuclear industry - in London, where he runs the Transport Working Group and supports World Nuclear University programmes. Serge is the author of a popular textbook for learners of English working in the nuclear field entitled *Nuclear English*. His areas of professional interest include transport, education and cross-cultural communication.

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**Dr. Peter Paul De Regge**  
(European Nuclear Education Network Association ENEN – Réseau Européen pour l’Enseignement des Sciences Nucléaires p/a Institut National des Sciences et Techniques Nucléaires)

Mai 8, 1944 in Gent, Belgium  
European Nuclear Education Network Association  
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From 2004, Dr. De Regge is responsible for managing the European Nuclear Education Network (ENEN) Association and coordinating its participation to EC framework programmes NEPTUNO, IP EUROTRANS, ENEN-II.

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**Ms. Ryoko Kusumi**  
(European Nuclear Education Network Association ENEN Centre CEA de Saclay – INSTN)

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From 2007, Ms. Kusumi is Deputy Secretary General, European Nuclear Education Network (ENEN) Association (Gif-sur-Yvette, France).