



European Nuclear Conference
16-20 September 2007, Brussels, Belgium

PRELIMINARY PROGRAMME

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07:30 – 08:30					Bus shuttles from 'Place de Brouckère' to VUB		
08:00 – 09:00					REGISTRATION		
Q aula A					Q lower ground	marquee	Q corridors
09:00	- Plenary - opening of the conference keynote session - EU research policy				Research expo & science café	Industry expo	Poster gallery
10:00					Refreshment break		Refreshment break
10:30	- Plenary - keynote session -The politics of science & technology						
11:30							
Break							
11:45	- Plenary - panel debate Business and Industries view on science and R&D policy, challenges and needs						
12:45					Lunch	Lunch opening industry exhibition	
13:45	Science as living knowledge - E&T policy and knowledge management -						
14:45					Refreshment break	Refreshment break	
15:15	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications	topical workshop 1 E&T & KM			
16:15	break						
16:30	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications	topical workshop 1 E&T & KM			
17:30	Q aula A	Q satellite B	Q satellite C	Q satellite D			
19:00					ENC2007 Welcome reception – Brussels' town hall (shuttle service)		

day 1	Programme	Monday 17 September 2007 – morning
	Q aula A	
09:00	Plenary keynote session	<p>Opening of the conference / keynotes - EU research policy</p> <p>Welcome address by M. Maris (ENC Conference Chairman) and F. Deconinck (ENS President)</p> <p>Keynote 1 R. Schenkel (EU Commission DG, Joint Research Centre)</p> <p>Keynote 2 P. Fernandez-Ruiz (Director for Energy-Euratom, DG-Research, European Commission)</p> <p>Keynote 3 The Belgian minister responsible for energy and scientific research (tbc)</p>
10:00	Refreshment break (corridors and lower ground)	
10:30	Plenary keynote session	<p>The politics of science & technology <i>Chair: R. Schenkel, co-chair: S. San Antonio</i></p> <p>Keynote 1 L. Echávarri (Director-General, OECD Nuclear Energy Agency)</p> <p>Keynote 2 Prof. Löfstedt (Director of King's Center of Risk Management, Kings College)</p>
11:30	Break	
11:35	Plenary panel debate	<p>Business and Institutions view on science and R&D policy, challenges and needs <i>Chair: J. Shepherd</i></p> <p>Panellists: A. Bucaille (Senior Vice-President in charge of Research & Innovation, AREVA) H. De Man (former CEO of IMEC, Europe's leading independent research center in the field of micro- and nanoelectronics, nanotechnology) J. Goossen (Westinghouse Electric Company) P. Gowin (IAEA) J. Carelli (GE – Hitachi Nuclear Energy)</p>
12:25	Exhibitors lunch reception (marquee)	
	Programme	Monday 17 September 2007 – morning

day 1	Programme	Monday 17 September 2007 – afternoon – plenary – keynote session
	Q aula A	
13:45	Plenary keynote session	<p>Science as living knowledge - E&T policy and knowledge management <i>chair: P. Beeley, co-chair: P. Gowin</i></p> <p>J. Naegele (European Commission DG TREN) – The European Commission policy on education and training in radiological protection P. Gowin (IAEA) – The IAEA nuclear knowledge management programme</p>
14:45	Refreshment break (marquee and lower ground)	
15:15		

	Q aula A	Q satellite B	Q satellite C	
15:15	<p>Track 1 New reactor and energy technologies</p> <p>session 17.1.1</p> <p>Advanced reactors <i>chair: S. San Antonio, co-chair: C. Lombardi</i></p> <p>IRIS – An advanced, grid-appropriate PWR for near-term deployment <i>C. Lombardi et al. (Westinghouse) – USA</i></p> <p>ACR-1000: Product update <i>I. Love et al. (Atomic Energy of Canada) – Canada</i></p> <p>Why the Westinghouse advanced, passive pressurized water reactor, AP1000? <i>P. Gaio et al. (Westinghouse) - USA</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 17.2.1</p> <p>Reprocessing <i>chair: D. Haas, co-chair: C. Madic</i></p> <p>Radioactive spent resins conditioning by the hot super-compaction process at Tihange NPP <i>B. Centner et al. (Electrabel and Tractebel Engineering) - Belgium</i></p> <p>The behaviour of ZR in a L1CL-KCL eutectic melt during electro refining <i>E. Mendes et al. (European Commission, JRC) – Germany</i></p> <p>Main results of EUROPART project for actinide partitioning <i>C. Madic et al. (CEA) – France</i></p>	<p>Track 3 Medical applications</p> <p>session 17.3.1</p> <p>Diagnostics in Nuclear Medicine <i>chair: T. Lahoutte, co-chair: B. Brans</i></p> <p>Clinical SPECT Imaging <i>T. Lahoutte (VU Brussel) – Belgium</i></p> <p>Clinical application of PET/CT in oncology <i>H. Everaert (VU Brussel) – Belgium</i></p>	<p>Topical workshop 1</p> <p>Education & training and knowledge management</p>
16:15	Break			
16:30				

	Q aula A	Q satellite B	Q satellite C	
16:30	<p>Track 1 New reactor and energy technologies</p> <p>session 17.1.2</p> <p>Advanced reactors <i>chair: W. De Roovere, co-chair: V. Rangelova</i></p> <p>AP1000 passive design for in-vessel retention <i>I. Keegan et al. (Westinghouse) – USA</i></p> <p>Optimizing the ACR-1000 core for safety, economics and reliability <i>A. Buijs (Atomic Energy of Canada Ltd.) – Canada</i></p> <p>Application of technology neutral methodology for assessment of defence in depth application for generation IV reactor systems <i>V. Rangelova et al. (European Commission, JRC and CEA) – The Netherlands/France</i></p> <p>The balanced safety approach of EPR <i>B. Guesdon (AREVA) - France</i></p>	<p>Track 2 The nuclear fuel cycle / nuclear operations</p> <p>session 17.2.2</p> <p>Fuel <i>chair: L. Van den Durpel, co-chair: E. Merle-Lucotte</i></p> <p>Fabrication of Plutonium Based Coated Particle Fuel for High Temperature Reactors <i>D. Haas et al. (European Commission, JRC) – Germany</i></p> <p>Technological aspects concerning the producing procedures of UO₂-GD₂O₃ nuclear fuel <i>M. Durazzo et al. (IPEN et al.) – Brazil</i></p> <p>The thorium molten salt reactor: Launching the thorium cycle while closing the current fuel cycle <i>E. Merle-Lucotte et al. (CNRS-IN2P3-LPSC) – France</i></p>	<p>Track 3 Medical applications</p> <p>session 17.3.2</p> <p>Therapeutic applications 2 <i>chair: F. Corstens, co-chair: A. Bossuyt</i></p> <p>Developing radionuclide therapy in the 21th century <i>B. Brans (Atrium Medical Centre) – The Netherlands</i></p> <p>Potential radionuclides for radiosynoviortheses. Dosimetric criteria for their selection <i>M.B. Torres Berdeguez et al. (Centro de Isótopos and Hospital General Docente Enrique Cabrera) – Cuba</i></p>	<p>topical workshop 1</p> <p>Education & training and knowledge management</p> <p>Continued</p>
17:30				
19:00	Welcome reception at Brussels' town hall			
21:00				

day 1		Programme	Monday 17 September 2007 – afternoon – slow track – workshop 1
		Q satellite D	
		Topical workshop 1	<p>Peaceful nuclear applications are widely spread in industry, medicine and agriculture and contribute to the welfare of society. These applications are strongly knowledge-based and coherent and trans-boundary management of this knowledge becomes a real need in a time of perceived decrease of expertise. Attracting young motivated people and efficient transfer of knowledge are but a few of the challenges nuclear is currently facing with a view to the continued safe use of nuclear applications.</p> <p>The workshop will start with presentations of the different submitted contributions. Afterwards a discussion with the audience will be held on knowledge management in different nuclear application fields and the needs and challenges related to education and training in nuclear matters.</p>
		intro	
14:45		Refreshment break (marquee and lower ground)	
15:15		Topical workshop 1	<p>Education & training and knowledge management / cases <i>chair: M. Coeck, co-chair: V. Slugen</i></p> <p>Contribution to preservation and management of nuclear knowledge on VVER reactor pressure vessels <i>V. Slugen et al. (Slovak University of technology) – Slovakia</i></p> <p>Physics and engineering of nuclear reactors at ‘Ecole Nationale Supérieure de Physique de Grenoble’ of the ‘Institut National Polytechnique de Grenoble’ <i>E. Merle-Lucotte et al. (ENSPG-INPG/LPSC) – France</i></p> <p>Nuclear engineering education: Pioneering activities in safety, decommissioning and new-build <i>M. Joyce and T. Aves (Lancaster University) – UK</i></p> <p>CHERNE – Developing a network to enhance cooperation for higher education on radiological and nuclear engineering <i>F. Tondeur et al. (Institute Supérieur de Bruxelles, HE Spaak, CHERNE Network) – Belgium</i></p> <p>Popularizing nuclear science and technology to students of some Brazilian high schools <i>W. A. Soares et al. (Centro de Desenvolvimento da Tecnologia Nuclear (CDTN), CNEN, Ministério da Ciência e Tecnologia (MCT) – Brazil</i></p>
16:15		Break	
16:30		Topical workshop 1	<p>Education & training and knowledge management / round table <i>chair: M. Coeck, co-chair: A. Hermanne</i></p> <p><i>discussion on challenges and needs for E&T in nuclear engineering and radiological protection</i></p>
17:30		(cont'd)	
		Q satellite D	
19:00	Welcome reception at Brussels’ town hall		
21:00			
day 1		Programme	Monday 17 September 2007 – afternoon – slow track – workshop 1

07:30 – 08:30		Bus shuttles from 'Place de Brouckère' to VUB						
		Q aula A			Q lower ground	marquee	Q corridors	
09:00	The human factor in risk governance - aspects of awareness and responsibility -				Research expo & science café	Industry expo	Poster gallery	
10:00					Refreshment break	Refreshment break		
10:30	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications	topical workshop 2 Safeguards & terrorism				
11:30								
break								
11:45	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications	topical workshop 2 Safeguards & terrorism				
12:45								
Lunch								
13:45	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications					
14:45					Refreshment break	Refreshment break		
15:15	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications	topical workshop 3 ENS YG				
16:15								
break								
16:30	New reactor & energy technologies	The nuclear fuel cycle / Nuclear operations	Medical applications	topical workshop 3 ENS YG				
17:30								
	Q aula A	Q satellite B	Q satellite C	Q satellite D				
20:00		ENC2007 Conference Dinner – Albert Hall, Brussels City Centre (shuttle service)						

day 2	Programme Tuesday 18 September 2007 – morning – plenary	
09:00	Q aula A Plenary keynote session	<p>The human factor in risk governance - aspects of awareness and responsibility <i>chair: G. Meskens, co-chair: F. Corstens</i></p> <p>Benefits, Costs and Hurts of Nuclear Medicine <i>F. Corstens (University Medical Centre Nijmegen) – The Netherlands</i></p> <p>Social awareness requires more than information and participation <i>K. Andersson (Karita Research) – Sweden</i></p>
10:00	Refreshment break (marquee and lower ground)	
10:30		

	Q aula A	Q satellite B	Q satellite C	
10:30	<p>Track 1 New reactor and energy technologies</p> <p>session 18.1.1</p> <p>Generation IV reactors <i>chair: A. Versteegh, co-chair: P. Martin</i></p> <p>European research on thermal hydraulics for heavy liquid metal ADS applications <i>F. Roelofs et al. (NRG et al.) – The Netherlands</i></p> <p>ELSY : Neutronic design approach <i>S. Monti et al. (ENEA et al.) – Italy</i></p> <p>French programme towards a Gen IV sodium cooled fast reactor <i>P. Martin et al. (CEA – AREVA – EDF R&D) – France</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 18.2.1</p> <p>Fuel <i>chair: H. Zaccai, co-chair: L. Van den Durpel</i></p> <p>Monitoring of nuclear fuel assemblies in condition of Slovak WET interim spent fuel storage facility <i>V. Slugen et al. (Slovak University of technology) – Slovakia</i></p> <p>Advanced Candu fuel bundles source term assessment for some accidental criticality scenarios <i>C. A. Margeanu et al. (Institute for Nuclear Research Pitesti) – Romania</i></p>	<p>Track 3 Medical applications</p> <p>session 18.3.1</p> <p>Instrumentation <i>chair: A. Todd Pokropek, co-chair: G. Llosa</i></p> <p>Novel solid state photomultipliers and their application to very high resolution PET and hybrid systems <i>G. Llosa et al. (University of Pisa) – Italy</i></p> <p>High sensitivity PET detector design using monolithic scintillator crystals <i>P. Bruyndonckx et al. (VUB) – Belgium</i></p> <p>Development and evaluation of a new multi-slit collimator on the LinoView animal SPECT <i>S. Walrand (Université Catholique de Louvain) – Belgium</i></p>	<p>Topical workshop 2</p> <p>Safeguards and terrorism</p>
11:30	Break			
11:45				

	Q aula A	Q satellite B	Q satellite C	
11:45	<p>Track 1 New reactor and energy technologies</p> <p>session 18.1.2</p> <p>Status of future concepts <i>chair: A. Gagarinski, co-chair: L. Cinotti</i></p> <p>Current status of Japanese sodium cooled loop type fast reactor (JSFR) development <i>K. Aoto et al. (Japan Atomic Energy Agency) – Japan</i></p> <p>The (European) HTR technology network (HTR-TN) and the development of HTR technology in Europe <i>D. Hittner (AREVA) – France</i></p> <p>The ELSY project <i>L. Cinotti et al. (Del Fungo Giera Energia et al.) – Italy</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 18.2.2</p> <p>Core design and protection <i>chair: D. Haas, co-chair: A. Versteegh</i></p> <p>Prototype design of an advanced core protection calculator system <i>Seung-Yeob Baeg et al. (Doosan) – Korea</i></p> <p>Manufacture and test of prototype reactor protection system <i>Sung-Jin Lee et al. (Doosan) – Korea</i></p> <p>CORMORAN: Core monitoring & reactor analysis <i>D. Vantroyen et al. (Tractebel) – Belgium</i></p>	<p>Track 3 Medical applications</p> <p>session 18.3.2</p> <p>Radiolabelling of molecules <i>chair: V. Cavelliers, co-chair: H. Coenen</i></p> <p>Labelling with short-lived radio nuclides for in-vivo imaging of molecular functions <i>H. Coenen (Forschungszentrum Jülich) – Germany</i></p> <p>In vivo evaluation of [18F]-2-Fluoromethyl-L-Phenylalanine in tumor bearing rats with PET acquisition <i>K. Kersemans et alii (VUB) – Belgium</i></p>	<p>Topical workshop 2</p> <p>Safeguards and terrorism</p> <p>Cont'd</p>
12:45	Lunch (marquee)			
13:45				

Q satellite D

Topical workshop 2

intro

Although there may be no direct objective relation between safeguards and terrorism, it is clear that they are linked in the minds of the public, especially since 9/11 and the war in Iraq, as they both relate to illicit use of nuclear materials.
Nuclear safeguards through initial design specifications, site inspections etc. aim at improving proliferation resistance.
Nuclear security through import/export control, detection ports or physical protection measures aim at reducing the risk of terrorist use of radioactive materials.
The workshop will address some aspects of both safeguards and nuclear security and point to the contributions that research in one field can provide to the other field.

10:00

Refreshment break
(lower ground and marquee)

10:30

Topical workshop 2

Safeguards and terrorism *chair: W. Janssens, co-chair: S. F. De Muth*

Field trial of safeguards' short notice random inspections at the Juzbado plant
O. Zurrón-Cifuentes and C. Alvaro-Pérez (ENUSA) – Spain
Advanced safeguards for the global nuclear energy partnership (GNEP)
S. F. De Muth et al. (Los Alamos National Laboratory) – USA

Round table

11:30

Break

11:45

Topical workshop 2

(cont'd)

Safeguards and terrorism *chair: M. Deffrennes, co-chair: A. van Heek*

Contribution of nuclear safeguards research to enhanced border monitoring and combating illicit trafficking of nuclear and radiological materials
W. Janssens et al. (European Commission, JRC) – Italy

Round table

12:45

Lunch
(marquee)

Q satellite D

	Q aula A	Q satellite B	Q satellite C
13:45	<p>Track 1 New reactor and energy technologies</p> <p>session 18.1.3</p> <p>Countries' perspectives on nuclear energy policy <i>chair: R. Cizelj, co-chair: M. Nilsson</i></p> <p>Concept of the global nuclear energy system <i>A. Yu. Gagarinski et al. (Kurchatov Institute) - Russia</i></p> <p>Nordic nuclear market trends <i>M. Nilsson (Westinghouse) – Sweden</i></p> <p>The effect of electricity generating park renewal on fossil and nuclear waste streams: The case for the Netherlands <i>A. v. Heek and J. Hart (NRG) – The Netherlands</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 18.2.3</p> <p>New developments in fuel technology <i>chair: P. Gaio, co-chair: G. Braehler</i></p> <p>Strategy of Advanced PWR Fuel Development in Korea <i>Jung-Min Suh et al. (Korea Nuclear Fuel Co.) – Korea</i></p> <p>Current status and development plan on fuel cycle system of fast reactor cycle technology in Japan <i>T. Namekawa et al. (JAEA) – Japan</i></p> <p>PBMR HTR fuel production facility project South Africa <i>G. Braehler et al. (Nukem) – Germany</i></p>	<p>Track 3 Medical applications</p> <p>session 18.3.3</p> <p>R&D challenges <i>chair: F. Deconinck, co-chair: M. Bourguignon</i></p> <p>Advances in nuclear medicine instrumentation and processing <i>A. Todd-Pokropek (University College London) - UK</i></p> <p>Health effects of doses or ionising radiations <i>M. Bourguignon (ASN) – France</i></p>
14:45	Break (marquee and lower ground)		
15:15			

	Q aula A	Q satellite B	Q satellite C	
15:15	<p>Track 1 New reactor and energy technologies</p> <p>session 18.1.4</p> <p>Status of future projects <i>chair: J. Guidez, co-chair: R. Lo Frano</i></p> <p>Preliminary seismic analysis of a next generation NPP <i>R. Lo Frano and G. Forasassi (University of Pisa) – Italy</i></p> <p>A new approach for the seismic analysis and design of the IRIS reactor <i>S. De Grandis et al. (ENEA) – Italy</i></p> <p>Status of research reactors for future nuclear research in Europe <i>J. Guidez et al. (CEA) – France</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 18.2.4</p> <p>Decommissioning <i>chair: D. Bonser, co-chair: P.E. de Oliveira Lainetti</i></p> <p>Nuclear decommissioning –“The way forward” – A contractor’s viewpoint <i>G. Ellcock and T. Handley (British Nuclear Group Project Services) - UK</i></p> <p>Decommissioning of nuclear fuel cycle facilities in the Ipen-cnem/Sp (Brazil) <i>P. E. de Oliveira Lainetti (IPEN) – Brazil</i></p> <p>Operation and decommissioning of the nuclear research reactor Frankfurt (Frf) <i>H. Starke and I. Schilling (Babcock Noell GmbH and STEAG encotec GmbH) – Germany</i></p>	<p>Track 3 Medical applications</p> <p>session 18.3.4</p> <p>New developments in nuclear imaging <i>chair: M. Defrise, co-chair: N. Belcari</i></p> <p>Pinhole SPECT <i>C. Vanhove (UZBrussel) – Belgium</i></p> <p>Experience with a combined PET/SPECT scanner for small animal imaging <i>N. Belcari et al. (University of Pisa) – Italy</i></p> <p>Nuclear imaging of the human brain <i>S. Laureys (University of Liege) – Belgium</i></p>	<p>Topical workshop 3</p> <p>ENS YG</p> <p>Challenges and opportunities for nuclear professionals</p>
16:15	Break (marquee and lower ground)			
16:30				

	Q aula A	Q satellite B	Q satellite C	
16:30	<p>Track 1 New reactor and energy technologies</p> <p>session 18.1.5</p> <p>Research reactors <i>chair: A. Stoyanova, co-chair: P. Garrec</i></p> <p>Development of human engineered graphic display for the HANARO research reactor <i>Hoan-Sung JUNG et al. (KAERI) – Korea</i></p> <p>Improvement of integrated management system for the research reactor in Sofia <i>A. Stoyanova et al. (INRNE) – Bulgaria</i></p> <p>Evaluation tests of the telerobotic system Mt200-tao in Areva-nc/La Hague hot cells <i>P. Garrec et al. (CEA) - France</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 18.2.5</p> <p>Waste and transport <i>chair: F. Decamps, co-chair: C. Rostaing</i></p> <p>Vitrification experience and new technology development in Tokai vitrification facility (TVF) <i>A. Aoshima et al. (JAEA) – Japan</i></p> <p>Minor actinides partitioning : main results during the fifteen years research and prospects <i>C. Rostaing et al. (CEA) – France</i></p> <p>PUMA - Plutonium and minor actinides management in thermal high-temperature reactors <i>J.C. Kuijper (NRG) – The Netherlands</i></p>	<p>Track 3 Medical applications</p> <p>session 18.3.5</p> <p>New developments in radiotherapy <i>chair: J. Frühling, co-chair: Y. Jongen</i></p> <p>The IBA solution in cancer treatment by radiation: From proton therapy to carbon ion therapy <i>Y. Jongen et al. (IBA) – Belgium</i></p> <p>Tomotherapy: Online image guidance and dosimetry using mega voltage imaging in radiotherapy <i>K. Tournel et al. (Oncology Center UZ Brussels) – Belgium</i></p> <p>Tumour motion tracking: Experiences with microsystems for radiotherapy <i>M. Bandala et al. (Lancaster University) – UK</i></p>	<p>Topical workshop 3</p> <p>ENS YG</p> <p>Challenges and opportunities for nuclear professionals</p> <p>Cont'd</p>
17:30				
20:00	Conference dinner at Albert hall			
24:00				

day 2

Programme

Tuesday 18 September 2007 – afternoon – slow track – workshop 3

Q satellite D

14:45

Refreshment
break
(marquee and
lower ground)

15:15

Topical
workshop 3

ENS YG workshop - Challenges and opportunities for nuclear professionals *chair: I. Vuković, co-chair: K. Van Tichelen*

Perspective from universities/academia/institutes
G. Van den Eynde (SCK-CEN) – Belgium

16:15

Round table

Break

16:30

Topical
workshop 3

ENS YG workshop - Challenges and opportunities for nuclear professionals *chair: K. Van Tichelen, co-chair: I. Vuković*

(cont'd)

Perspective from nuclear industry/utilities
M. Streit (Atel) – Switzerland

17:30

Round table

20:00

Conference dinner at Albert hall

24:00

Q satellite D

Programme

Tuesday 18 September 2007 – afternoon – slow track – workshop 3

07:30 – 08:30		Bus shuttles from 'Place de Brouckère' to VUB				Q lower ground	marquee	Q corridors
	Q aula A	Q satellite B	Q satellite C	Q satellite D				
09:00	State-of-the-art of European research policy nuclear and medical science and technology				Research expo & science café	Industry expo	Poster gallery	
10:00					Refreshment break	Refreshment break		
10:30	The nuclear fuel cycle / Nuclear operations	The nuclear fuel cycle / Nuclear operations	The nuclear fuel cycle / Nuclear operations	Topical workshop 4 Politics of SD				
11:30	Break							
11:45	The nuclear fuel cycle / Nuclear operations	The nuclear fuel cycle / Nuclear operations	The nuclear fuel cycle / Nuclear operations	Topical workshop 4 Politics of SD				
12:45					Buffet lunch	Buffet lunch		
13:45	- Plenary - Briefing session - YG reporters & Topical workshops			Satellite seminar Gen IV & synergetic R&D in Europe				
14:45					Refreshment break	Refreshment break		
15:15	- Plenary - Panel debate - Nuclear science & society conclusions of the conference			Satellite seminar Gen IV & synergetic R&D in Europe				
16:15								
16:30								
Farewell drink at industry exhibition (shuttle service)								
17:30								

day 3	Programme	Wednesday 19 September 2007 – morning – plenary
	Q aula A	
09:00	Plenary keynote session	<p>State-of-the-art of European research policy of nuclear and medical science and technology <i>chair: B. Bonin; co-chair: S. Webster</i></p> <p>Educational activities in the EMIL network : The technological and training platform of Orsay for small animal nuclear imaging <i>R. Boisgard (Orsay Technological and Training Platform) – France</i></p> <p>Research – a sine qua non for the nuclear sector <i>S. Webster et al. (EC Research Directorate-General, Directorate J – Energy) – Belgium</i></p>
10:00	Refreshment break (marquee and lower ground)	
10:30		

	Q aula A	Q satellite B	Q satellite C	
10:30	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 19.1.1</p> <p>Plant Life Extension <i>chair: A. Versteegh, co-chair: P. Contri</i></p> <p>Maintenance issues in relation to plant life management models <i>P. Contri (European Commission – JRC Petten) – the Netherlands</i></p> <p>Plant life extension (PLEX) & repowering study for embalse nuclear power plant <i>M. Teglia et al. (Ansaldo Nucleare) – Italy</i></p> <p>Change of a component's importance value according to initiating event modelling and probabilistic safety assessment quantification method <i>Meejeong Hwang et al. (KAERI) – Korea</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 19.2.1</p> <p>Waste and transport <i>chair: J.-P. Minon, co-chair: D. Schumann</i></p> <p>WDC - Advanced system for characterization of alpha-bearing waste contained in 200L and 400L drums: Performances and lessons learned from the first industrial measurement campaigns <i>M. Vandorpe et al. (Tecnubel – Belgonucleaire) – Belgium</i></p> <p>The packaging and transportation of Futurix-FTA fuel pins. <i>L. Mariette et al. (Areva) – France</i></p> <p>Radiochemical characterization of accelerator waste <i>D. Schumann et al. (Paul Scherrer Institute) – Switzerland</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 19.3.1</p> <p>Human performance in safety and maintenance <i>chair: F. Hardeman, co-chair: T. Bilić Zabric</i></p> <p>Man, technology and organisation in current utility operation and perspective for future <i>T. Bilić Zabric and M. Černilogar Radež (Nuclear Power Plant Krško) – Slovenia</i></p> <p>Human performance to avoid failures and to improve reliability <i>G. Bāro et al. (Westinghouse) – Germany</i></p> <p>Monitoring the effectiveness of maintenance programmes through use of performance indicators <i>P. Vaisnys et al. (European Commission, JRC Petten) – The Netherlands</i></p>	<p>Topical workshop 4</p> <p>Politics of SD</p>
11:30	Break			
11:45				

	Q aula A	Q satellite B	Q satellite C	
11:45	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 19.1.2</p> <p>Maintenance and operation <i>chair: P. Contri, co-chair: xxx</i></p> <p>The effect of sea salt aerosols in the Japan sea coast facilities <i>F. Nakayasu et al. (Fukui University of Technology) – Japan</i></p> <p>Oskarshamn 2 bottom nozzle inspection/repair <i>P. Odin et al. (Westinghouse) – Sweden</i></p> <p>Collaborative machining solution extends the operating life of a nuclear power plant <i>A. Becker et al. (Climax Portable Machine Tools) – USA</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 19.2.2</p> <p>Waste and transport <i>chair: H. Bonet, co-chair: M. Vandorpe</i></p> <p>Multiple water barriers: An alternative to the assessment of the fuel assemblies during accident conditions of transport. <i>P. Malesys and Y. Chanzy (Areva) – France</i></p> <p>CASTOR 1000/19 – a new cask for spent fuel assemblies of Temelin NPP <i>T. Funke et al. (GNS) - Germany</i></p> <p>Eurofab project:: An example of international transport of plutonium and Mox fuels <i>T. Lallemand et al. (Areva) – France</i></p>	<p>Track 2 The nuclear fuel cycle / Nuclear operations</p> <p>session 19.3.2</p> <p>Waste <i>chair: J. Earp, co-chair: I. Cañamón</i></p> <p>Radioactive waste plants – Back to the future <i>J. E. Earp et al. (Aker Kvaerner Engineering Services Limited) – UK</i></p> <p>A 3-dimensional homogenized model of coupled thermo-hydro-mechanics in a nuclear waste disposal <i>I. Cañamón Valera et al. (UPM Madrid and Institut National Polytechnique de Toulouse) - Spain</i></p> <p>Use of inorganic highly selective ion exchange materials for minimization of liquid waste volumes at the Loviisa NPP in Finland <i>E. Tusa (Fortum Nuclear Services Ltd) - Finland</i></p>	<p>Topical workshop 4</p> <p>Politics of SD</p> <p>Cont'd</p>
12:45	Lunch (marquee)			

Q satellite D

Topical workshop 4

intro

Today, sustainable development is widely used as a guiding concept for political action. Although there is some common sense in this, there is a spectrum of diverging views in the scientific and political arenas as to how this should be realised 'in practice'.
 The question on which technological and social approaches are justified 'in the framework of sustainable development' has scientific as well as economic and ethical aspects and more and more, there is a general understanding that all these aspects need to be integrated in both assessment and negotiation. Starting from a more philosophical angle, the workshop will address the issue of sustainable development 'in the real world' by discussing the various aspects of justification and its under-lying driving principles and of involvement of civil society. Our playing field will obviously be energy policy and the role of nuclear, but one of the keynote speakers will also discuss nanotechnology. During the debate, you will be able to share your insights with the group and to refresh your mind about sustainable development.

10:00

Refreshment break (marquee and lower ground)

10:30

Topical workshop 4

The politics of sustainable development *chair: G. Meskens, co-chair: H. Korteweg*
 Sustainable development in practice in the EU arena
H. Korteweg (FORATOM) - Belgium

11:30

Break

11:45

Topical workshop 4 (cont'd)

The politics of sustainable development *chair: G. Meskens, co-chair: H. Korteweg*
 Round table

12:45

Lunch (marquee)

Q satellite D

day 3 Programme **Wednesday 19 September 2007 – afternoon – plenary**

	Q aula A	
13:45	Plenary briefing session	<p>YG reporters' briefing & topical workshops briefing <i>chair: J. Sheperd</i></p> <p>YG reporters – briefing of the YG reporters (15 min.) Workshop organisers – conclusions of the slow tracks to be presented by the workshop organisers (M. Coeck, W. Janssens, G. Meskens and I. Vuković)</p>
14:45	Refreshment break (marquee and lower ground)	
15:15	Plenary panel debate	<p>Science and society <i>moderator: M. Maris</i></p> <p>panel member 1 – N.N.: A politician's view panel member 2 – Rector B. Van Camp: An academician's view panel member 3 – M.- L. Franciosi: A science communicator's view</p>
16:15	Closing	<p>Conclusions of the conference F. Deconinck and M. Maris</p>
16:30	Farewell drink	

Q satellite D

13:45	Satellite seminar	<p>Gen IV LFR/ADS and synergetic R&D in Europe</p> <p>GUINEVERE, the first zero-power LFR coupled to a 14 MeV neutron generator <i>G. Granget (CEA) - France</i></p> <p>KALLA HLM Technology at the Karlsruhe lead laboratory <i>J. Knebel (or substitute Concetta Fazio/Robert Stieglitz) (FZK) - Germany</i></p> <p>VELLA the virtual European lead laboratory <i>G. Benamatti (ENEA) - Italy</i></p>
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14:45	Refreshment break (marquee and lower ground)	coffee break
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15:15	Satellite seminar	<p>Gen IV LFR/ADS and synergetic R&D in Europe</p> <p>ELSY Project the European Lead cooled system <i>L. Cinotti (Del Fungo Giera Energia) - Italy</i></p> <p>WebExplr, the windowless electron beam experimental irradiation experiment <i>D. Vandeplassche (IBA) – Belgium</i></p> <p>MYRRHA, the basis for the European accelerator driven system for the experimental demonstration of transmutation <i>H. Ait Abderrahim (SCK-CEN) - Belgium</i></p>
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16:15	Closing	
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16:30	Farewell drink	
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central hallways

Posters -
Track I:
New reactor
and energy
technologies

- On the possibility of an accelerator based ^3He -laser
F. Çetin, H. Saygın (Istanbul Technical University) – Turkey
- SPES-3 experimental facility design for IRIS reactor: Integral testing
F. Bianchi and al. (Westinghouse, Science & Technology Center, Pittsburgh and others) – USA and Italy
- Economic features of smaller size, integral reactors
M.D. Carelli, B. Petrovic et al. (Westinghouse, Science & Technology Center, Pittsburgh and others) – USA and Italy
- Strategy for utilization of the research reactor IRT in Sofia after its refurbishment
K. Ilieva and T. Apostolov (Institute for Nuclear Research and Nuclear Energy of Bulgarian Academy of Science) - Bulgaria
- Development of an ITER relevant inspection robot
M. Houry et al. (CEA) – France
- Concept for a future high pressure – boiling water reactor (HP-BWR)
F. Reisch (KTH, Royal Institute of Technology) - Sweden

Posters -
Track II:
The nuclear
fuel cycle/
Nuclear
operations

- Development of the sampling and nuclide analysis methods for the regulatory clearance of spent filter wastes
Y.Y. Ji et al. (Korea Atomic Energy Research Institute) – Korea
- A Study on the determination of disposal priority for low and intermediate level radioactive wastes (LILW) in Korea
Min Ho Ahn, Sang Chul Lee, Kun Jai Lee (Department of Nuclear and Quantum Engineering, Korea advanced Institute of Science and Technology) – Korea
- The primary and secondary system water regime at PAKS nuclear power plant during the extended service life
Á. Doma et al. (PAKS Nuclear Power Plant) - Hungary
- Separation and recovery of thorium and rare earths from an industrial waste by the solvent extraction chromatography with anchored undiluted TBP on XAD®-16
J. Zini et al. (Institute of Energy and Nuclear Research – National Commission of Nuclear Energy) – Brazil

central hallways

Posters -
Track II:
 The nuclear
 fuel cycle/
 Nuclear
 operations

- Best radiotoxicity indices for origin 2.2 (ORNL) code, in the frame of research activities on ADS systems
B. Calgaro et al. (DIMNP-University of Pisa, Italy and SCK-CEN in Mol) - Belgium
- Profiling the γ -ray distribution of the cement lining of an established nuclear pond as a function of depth
A. Shippen and M. Joyce (Department of Engineering, Lancaster University) - UK
- MAESTRO, a hydraulic manipulator for maintenance and decommissioning applications
Y. Maesson et al. (CEA-LIST) - France
- CANBERRA solutions for source location and activity determination for investigations of ORCADE dismantling project at AREVA NC La Hague site
H. Toubon, C. Cordier, B. Fere (AREVA/CANBERRA and AREVA NC) - France
- Approach to radiation monitoring at Kudankulam NPP
N. Ryzhov et al. (PROM Engineering) - Russia
- Monitoring systems for hot spot detection in radioactive waste
G.G. Simon, M. Sokcic-Kostic (NUKEM Technologies GmbH) - Germany
- Decommissioning of an uranium hexafluoride pilot plant
I. Santos et al. (Instituto de Pesquisas Energéticas e Nucleares IPEN-CNEN/SP) - Brazil
- Determination of Pm-147 in spent fuel samples in the framework of the MALIBU programme
L. Adriaensen et al. (SCK-CEN) - Belgium
- Perception of management options for contaminated milk and implications for the decision-making process
C. Turcanu et al. (SCK-CEN) - Belgium
- Ensuring security of supply through partnership
J. González Jimenez (ENUSA Industrias Avanzadas, S.A) - Spain
- TRIMATEC – Working skills and methods on confinement systems competence center
J. Blancher (AREVA) - France
- Advanced solutions for mitigating hydrogen risk during transportation of radioactive materials
V. Rohr and H. Issard (Areva) - France
- Methods for fabricating Gamma-Uranium-Molybdenum (γ -Umo) alloys and their influence on powder obtention by the HDH Technique
F.B.V. Oliveira et al. (IPEN) - Brazil
- Studies on the aging and corrosion behaviour of simulated spent nuclear fuel
C. Kütahyalı et al. (European Commission JRC) - Germany
- The current status and further development of radiation engineering for nuclear power, industry and medicine
N.R. Kuzelev et al. (Russian National Technical Physics and Automation Research Institute (VNIITFA)) - Russia

- Long term retention of D- and L- [123I]-2-iodo-Phenylalanine in R1M tumor bearing rats: A potential for radionuclide therapy

M. Bauwens et al. (BEFY, Vrije Universiteit Brussel) – Belgium

- Results 90Y/177Lu-DOTA TATE therapy in patients with neuroendocrine tumors - own experience of 6 months therapy

J. Kunikowska et al. (Nuclear Medicine Department Medical University of Warsaw, Collegium Medicum Cracow and ORBI POLATOM) – Poland

- Early detection of delayed Gastric emptying in patients with Parkinson's disease

B. Chaushev et al. (Laboratory of Nuclear Medicine, "St Marina" Hospital; Department of Imaging Diagnostics and Radiotherapy, Medical University; Neurologic Clinic, "St Marina" Hospital and Department of Neurology, Medical University) – Bulgaria

- Optimization of production of medically radioisotopes through cross section determination

Hermanne (Cyclotron department, Vrije Universiteit Brussel and Atomki, Hungarian Academy of Science) – Belgium/Hungary

- Optimizing injected dose in equilibrium gated radionuclide ventriculography by using a three cluster model and linear discriminant analysis

M. Perez Diaz and O. Diaz Rizo (Central University of las Villas and Institute for Applied Science and Technologies, Nuclear Physics Department) – Cuba

- Thermal flux analysis of the PFMA-1 device

D. Mostacci et al. (DIENCA, University of Bologna) – Italy

- Monte Carlo calculation for the development of a BNCT neutron source (1eV – 10KeV) using MCNP code

F. El Moussaoui et al. (Université Abdelmalek Essaadi, Faculté des Sciences, Département de Physique) – Morocco

central hallways

Posters -
WS I:
Education,
training
and
knowledge
management

- VELLA Project: an initiative to create a common European research area on lead technologies for nuclear applications

S. De Grandis et al. (ENEA et al.) – Italy

Posters -
WS II:
Safeguards
and terrorism

- Digital advances in pulsed fast neutron analysis for use in counter terrorism

M. Aspinall et alii (Department of Engineering, Lancaster University) – UK

- Megaports: detection of nuclear smuggling in the port of Antwerp

P. Fias et al. (Nucleair Technologisch Centrum, XIOS Hogeschool Limburg) – Belgium

- After the Bush doctrine of pre-emptive self-defense: A step closer to nuclear pre-emption?

K. Chainoglou (School of Law, King's College London) - UK