



RRFM 2008 is organised

in cooperation with the
research centre GKSS



in association with
the IAEA



Programme

SUNDAY 02 March 2008

17:00

Pre-registration

19:30

18:30

Welcome reception at the Sofitel Hotel

20:00

The welcome reception is organised
thanks to the contribution of





Monday 03 March 2008

08:30	Plenary	<p>Opening session</p> <p>Welcome address - S. San Antonio (ENS Secretary General)</p> <p>Welcome presentation</p> <p>•50 YEARS OF NEUTRON RESEARCH AT GKSS A. Schreyer and P. Schreiner et al. (GKSS) – Germany</p>
09:00		<p>Session I – Part 1 International topics and overview on new projects and fuel developments <i>Chairmen: H. Böck (TU Vienna) and P. Beeley (UK Ministry of Defence)</i></p> <p>•EPR – MEETING THE CHALLENGE OF A NUCLEAR RENAISSANCE R. Leverenz (AREVA NP GmbH) – Germany</p> <p>•KARLSRUHE INSTITUTE OF TECHNOLOGY (KIT): RESEARCH, TEACHING AND INNOVATION J. Knebel (Karlsruhe Institute of Technology) – Germany</p> <p>•THE GLOBAL THREAT REDUCTION INITIATIVE A. Bieniawski (National Nuclear Security Administration) – USA</p> <p>•RESEARCH REACTOR COALITIONS – FIRST YEAR PROGRESS REPORT I. Goldman et al. (IAEA and International Nuclear Enterprise Group) – Austria/USA</p>
<p>Coffee break</p>		
11:00	Plenary	<p>Session I – Part 2 International topics and overview on new projects and fuel developments <i>Chairmen: H. Böck (TU Vienna) and P. Beeley (UK Ministry of Defence)</i></p> <p>•OVERVIEW ON HIGH DENSITY UMO FUEL IN-PILE EXPERIMENTS IN OSIRIS M. Ripert et al. (CEA – SCK-CEN – TU Munich – AREVA Cerca) – France/Belgium/Germany</p>



Monday 03 March 2008

Plenary

•PROGRESS IN US LEU FUEL DEVELOPMENT

D. Wachs (INL) – USA

•CURRENT STATUS OF THE DEVELOPMENT OF HIGH DENSITY LEU FUEL FOR RUSSIAN RESEARCH REACTORS

I. Dobrikova et al. (VNIIMM) – Russia

•2008 CNEA REPORT ON PROGRESS ON THE DEVELOPMENT OF LEU FUELS AND TARGETS IN ARGENTINA

H. Taboada et al. (CNEA) – Argentina

•HOMOGENEOUS AQUEOUS SOLUTION NUCLEAR REACTORS FOR THE PRODUCTION OF 99MO AND OTHER SHORT-LIVED RADIOISOTOPES

E. Bradley et al. (IAEA) – Austria

12:40

Lunch break

14:00

Plenary

Session I – Part 3

International topics and overview on new projects and fuel developments

Chairmen: H. Böck (TU Vienna) and P. Beeley (UK Ministry of Defence)

•TRIGA MARK II – FIRST MOROCCAN RESEARCH REACTOR FACILITY

N. Bouzekri et al. (CNESTEN) – Morocco

•STATUS OF RESEARCH REACTORS IN INDIA

S. B. Chafle and S. Duraisamy (Bhabha Atomic Research Centre) – India

•PALLAS, THE NEW PETTEN RESEARCH AND ISOTOPE REACTOR

B. van der Schaaf et al. (NRG PETTEN) – The Netherlands

• DEVELOPMENT STATUS OF IRRADIATION DEVICES FOR THE JULES HOROWITZ REACTOR

D. Parrat et al. (CEA) – France

15:20

Session II – Part 1

Fuel development & fabrication

Chairmen: M. Ripert (CEA/DEC) and D. Wachs (INL)

•PIE RESULTS OF THE KOMO-3 IRRADIATION TEST

J. M. Park et al. (Korea Atomic Energy Research Institute) – Korea



Monday 03 March 2008

Plenary

•POSTIRRADIATION ANALYSIS OF THE LATEST HIGH URANIUM DENSITY MINIPLATE TEST – RERTR-8

G. Hofman et al. (ANL – INL) – USA

16:00

Coffee break

16:20

Plenary

Session II – Part 2

Fuel development & fabrication

Chairmen: M. Ripert (CEA/DEC) and D. Wachs (INL)

•LATEST DISPERSED UMO FUEL PLATE MANUFACTURING RESULTS AT AREVA-CERCA

C. Jarousse et al. (AREVA-Cerca) – France

•RESULTS OF RECENT MICROSTRUCTURAL CHARACTERISATION OF IRRADIATED DISPERSION UMO FUELS WITH AL ALLOY MATRICES THAT CONTAIN SI

D. D. Keiser et al. (INL) – USA

•RESULTS OF UMO DISPERSIVE FUEL PLATES IRRADIATIONS FOR FRM-II

W. Petry and A. Röhrmoser (TU Munich) – Germany

•CURRENT STATUS AND DEVELOPMENTS OF FUEL FOR RESEARCH REACTORS IN CHILE

G. Torres-Oviedo et al. (Chilean Commission for Nuclear Energy) – Chile

17:40

20:00

AREVA dinner at the Museum of Ethnology



24:00



Tuesday 04 March 2008

08:30

Plenary

Session II – Part 3

Fuel development & fabrication

Chairmen: M. Ripert (CEA/DEC) and D. Wachs (INL)

•MICROSTRUCTURAL ANALYSIS OF IRRADIATED ATOMIZED U(MO) DISPERSION FUEL IN AN AI MATRIX WITH SI ADDITION

A. Leenaers et al. (SCK-CEN – CEA) – Belgium/France

•ABOUT THE EFFECTS OF SILICON AND/OR TITANIUM ADDITIONS ON THE UMO/AL INTERACTIONS

X. Iltis et al. (CEA) – France

•UPDATE ON MECHANICAL ANALYSIS OF MONOLITHIC FUEL PLATES

D. E. Burkes (Idaho National Laboratory) – USA

•MONOLITHIC UMO PLATES WITH ZIRCALOY CLADDING

E. E. Pasqualini (CNEA) – Argentina

•CHARACTERISATION OF U-MO FISSION GAS BUBBLES ON GRAIN BOUNDARIES

J. Rest (Argonne National Laboratory) – USA

•NEW SILICIDE FUEL PLATE DEVELOPMENTS AT AREVA-CERCA

I. Caillièrè et al. (AREVA-Cerca) – France

10:30

Coffee break

11:00

Plenary

Session II – Part 4

Fuel development & fabrication

Chairmen: M. Ripert (CEA/DEC) and D. Wachs (INL)

•STUDY OF THE CORROSION OF AN ALUMINIUM ALLOY USED FOR THE FUEL CLADDING OF THE JULES HOROWITZ MATERIAL TESTING REACTOR: OXIDE MICROSTRUCTURE AND IRRADIATION EFFECTS

M. Wintergerst et al. (CEA – Institut de Physique Nucléaire) – France

•AREVA-CERCA TEN YEARS LICENSE FOR FUEL FABRICATION

T. Pin and E. Torlini (AREVA-Cerca) – France

11:40



Tuesday 04 March 2008

11:40

Plenary

Session III – Part 1

Reactor operation, fuel safety and **core conversion**

Chairman: J.G. Marques (Instituto Tecnológico e Nuclear)

•**THE CONVERSION PROGRAMME: AUTHORITIES, ACTIVITIES AND PLANS FOR THE MININIZATION OF HIGH ENRICHED URANIUM THROUGH THE GLOBAL THREAT REDUCTION INITIATIVE**

P. Staples and N. Butler (National Nuclear Security Administration) – USA

•**COMMISSIONING OF THE NEW LEU CORE OF THE PORTUGUES RESEARCH REACTOR**

J. G. Marques et al. (Instituto Tecnológico e Nuclear – ANL) – Portugal/USA

•**LESSONS LEARNED FROM U.S. DOMESTIC REACTOR CONVERSION PROGRAMME**

E. C. Woolstenhulme and D. Meyer (INL) – USA

12:40

Lunch break

14:00

Plenary

Session III – Part 2

Reactor operation, fuel safety and **core conversion**

Chairman: A.M.A. Shokr (IAEA)

•**SAFETY ASPECTS OF RESEARCH REACTOR CORE FUEL CONVERSION FROM HIGHLY ENRICHED URANIUM TO LOW ENRICHED URANIUM**

A.M.A. Shokr and H. A. Yehia (IAEA) – Austria

•**IMPACT ON FUEL CYCLE COSTS OF CONVERSION TO LOW ENRICHED URANIUM FUELS**

K. Alldred and N. Mote (International Nuclear Enterprise Group) – USA

•**OPTIMIZATION STUDIES FOR CONVERSION OF THE MIT REACTOR TO LEU FUEL**

T. H. Newton et al. (MIT – ANL) – USA

•**OPTIMIZED CONTROL ROD DESIGN OF THE REACTOR BR2**

S. Kalcheva and E. Koonen (SCK-CEN) – Belgium

•**STEP REACTIVITY TRANSIENT THERMAL HYDRAULIC AND SAFETYANALYSES OF A PROPOSED HEU & LEU CORE FOR SAFARI-1 RESEARCH REACTOR**

A. Sekhri et al. (NECSA) – South Africa

15:40



Tuesday 04 March 2008

15:40

Coffee break

16:20

Plenary

Session III – Part 3

Reactor operation, fuel safety and core conversion

Chairman: W. Knop (GKSS)

•THE FIRST EUROPEAN FOCUSSED COLD NEUTRON SOURCE – OPERATIONAL EXPERIENCE AND NEUTRONICS RESULTS

W. Knop and P. Schreiner et al. (GKSS) – Germany

•THE ENERGY RELEASE AND FUEL BURN-UP DETERMINATION METHODS IN THE MIR REACTOR

A. I. Izhutov et al. (Research Institute of Atomic Reactors) – Russia

•REACTOR UPGRADE OF AGN-201 in KHU, KOREA

M.H. Kim (Kyung Hee University) – South Korea

• ANALYSIS OF THE CALCULATIONAL TECHNIQUES OF HEAT DEPOSITION VIA MCNP IN COMPARISON WITH A CALORIMETER EXPERIMENT AT SAFARI-1 RESEARCH REACTOR

M. Belal and B. Makgopa (NECSA) – South Africa

•SAFETY ANALYSIS OF REACTIVITY INITIATED ACCIDENTS (RIA) AND ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) OF THE BUDAPEST RESEARCH REACTOR

A. Keresztúri et al. (KFKI – Atomic Energy Research Institute) – Hungary

18:00

20:00

Conference dinner at historic storage house in port district
(*Speicherstadt*)

24:00



Wednesday 05 March 2008

<p>08:30</p>	<p>Plenary</p>	<p>Session IV Fuel back-end management <i>Chairman: G. Gruber (Nukem GmbH)</i></p> <ul style="list-style-type: none"> •DEMONSTRATION OF THE EMPLACEMENT TECHNOLOGY FOR THE DIRECT DISPOSAL OF SPENT FUEL INTO DEEP VERTICAL BOREHOLES W. Filbert et al. (DBE Technology) – Germany •CORROSION OF SPENT ALUMINIUM –CLAD RESEARCH REACTOR FUEL – SYNERGISM IN THE ROLE OF SPENT FUEL STORAGE BASIN WATER PARAMETERS L. Ramanathan et al. (IPEN – CNEA – IAEA) – Brasil/Argentina/Austria •SPENT FUEL MANAGEMENT AT LVR-15 REACTOR J. Podlaha et al. (NRI et al.) – Czech Republic •PREPARING ANSTO’s FINAL HIFAR RESEARCH REACTOR MTR SPENT FUEL SHIPMENT M. Anderson and L. Dimitrovski (ANSTO) – Australia •AREVA NETWORK FOR INTERNATIONAL TRANSPORTATION PROJECTS C. Anne et al. (AREVA Group) – France/Japan/USA •GLOBAL THREAT REDUCTION INITIATIVE: U.S. NUCLEAR REMOVE PROGRAM C. E. Messick and J. L. Taylor (US Department of Energy) – USA
<p>10:30</p>		

↓ Parallel sessions ↑

<p>08:30</p>	<p>Meeting room</p>	<p>Session V Innovative methods in research reactor analysis <i>Chairman: R. Nabbi (Research Centre Jülich)</i></p> <ul style="list-style-type: none"> •MONTE CARLO CORE CALCULATION FOR A MIXED TRIGA HEU/LEU CORE M. Stummer et al. (Atomic Institute of Vienna) – Austria
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Wednesday 05 March 2008

Meeting room

•**MONTE CARLO SIMULATION OF FISSION ENERGY DEPOSITION IN BERYLLIUM REFLECTORS OF MNSR REACTORS**

S. Anim-Sampong et al. (Ghana Atomic Energy Commission – Kwame Nkrumah University of Science & Technology) – Ghana

•**HIGHLY DETAILED TRIANGULAR MESH DIFFUSION THEORY VS. MONTE CARLO: MODELLING THE MIT RESEARCH REACTOR**

A. P. Olson and T. H. Newton Jr. (ANL – MIT Nuclear Reactor Laboratory) – USA

•**SOPHISTICATED NEUTRONIC CALCULATION OF THE ITER UPPER PORT DIAGNOSTIC SYSTEM USING MONTE CARLO METHOD**

P. Bourauel and R. Nabbi (Research Centre Jülich) – Germany

•**APPROACH TO CRITICALITY IN THE BR2 REACTOR: MCNP VS. POINT KINETICS METHOD**

S. Kalcheva and E. Koonen (SCK-CEN) – Belgium

•**MODELLING OF A PROMPT GAMMA NEUTRON ACTIVATION SYSTEM FOR CHARACTERISATION OF RADIOACTIVE MATERIALS**

J. Kettler et al. (Research Centre Jülich) – Germany

•**IAEA PROPOSAL FOR A NEW COORDINATED RESEARCH PROJECT ON INNOVATIVE METHODS IN RESEARCH REACTORS ANALYSIS**

P. Adelfang et al. (IAEA) – Austria

10:50

Coffee break

11:20

Plenary

Closing session

Chairman: E. Koonen (SCK-CEN)

Round table – Conclusions of the chairpersons

12:00

Lunch break

13:00

Technical tours

18:00



Poster Gallery

(Posters will be on display throughout the entire conference)

All day

Foyer

Track 2

Fuel development & fabrication

•**DEVELOPMENT OF LEU SILICIDE FUEL ELEMENT FOR THE IPEN RESEARCH REACTOR**

H.G. Riella et al. (IPEN) – Brazil

•**DEVELOPMENT OF LEU METALLIC URANIUM FABRICATION FOR RESEARCH REACTOR FUEL ELEMENT**

A. M. Saliba-Silva et al. (Instituto de Pesquisas Energéticas e Nucleares – Universidade Federal de Santa Catarina) – Brazil

•**DIFFERENT APPROACHES FOR STUDYING TI EFFECTS ON UMO/AI SYSTEM**

M. Rodier et al. (CEA) – France

•**RESULTS OF PRE-REACTOR EXAMINATION OF THE U-9MO-UO₂-AI FUEL ELEMENTS FABRICATED BY THE EXTRUSION METHOD**

V. V. Popov et al. (IPPE) – Russia

•**RADIATION EFFECT ON MICROSTRUCTURAL STABILITY OF RERTR FUEL**

J. Gan et al. (INL – University of Wisconsin) – USA

•**THERMAL AND CHEMICAL STABILITY OF SOME HYPOEUTECTIC γ -UMo ALLOYS**

F. Branco Vaz de Oliveira et al. (IPEN – Federal University of Santa Catarina) – Brazil

•**DISTINCTIVE FEATURES OF INTERACTION OF THE U-MO FUEL COMPOSITION FISSION PRODUCTS AND THE AI MATRIX WITH BARRIER COATING**

D. Shornikov (Moscow Engineering Physics Institute) – Russia

•**PROGRESS IN HEAVY ION BOMBARDMENT OF U-MO/AI DISPERSION FUEL**

J. Jungwirth et al. (Technical University of Munich – MLL – University of the German Bundeswehr) – Germany

•**MANUFACTURING OF THICK MONOLITHIC LAYERS BY DC-MAGNETRON SPUTTERING**

W. Schmid et al. (MLL – Technical University of Munich) – Germany

•**THE EFFECT OF FUEL BURN-UP FOLLOWED BY ANNEALING ON CHANGES IN STRUCTURE AND STRUCTURAL PARAMETERS OF U-9% Mo DISPERSION FUEL**

A. Golosov (Institute for Nuclear Materials) – Russia



Poster Gallery

(Posters will be on display throughout the entire conference)

All day

Foyer

Track 3

Reactor operation, fuel safety and core conversion

• **ZIRCALLOY EFFECT ON THE LEU FUEL ENRICHMENT OF THE SYRIAN MNSR**

M. Albarhoum (Atomic Energy Commission) – Damascus-Syria

• **STUDY OF AI FUEL PLATE OXIDATION**

R. Haddad et al. (CNEA) – Argentina

• **STUDY OF NUCLEAR FUEL BURN-UP IN A LOW POWER REACTOR**

L. Heraltová and A. Kolros (Faculty of Nuclear Sciences and Physical Engineering) – Czech Republic

• **MODELLING OF NUCLEAR BEHAVIOUR IN RESEARCH REACTORS**

T. Totev and P. Lemoine (ANL – CEA) – USA/France

• **RESULTS OF THE REACTOR CONTROL SYSTEM REPLACEMENT AND REACTOR CORE CONVERSION AT THE DALAT NUCLEAR RESEARCH REACTOR**

Pham Van Lam (Nuclear Research Institute Dalat) – Vietnam

Track 4

Fuel back-end management

• **SPENT FUEL ASSEMBLIES MANAGEMENT AT IEA-R1 RESEARCH REACTOR**

R. Frajndlich (IPEN) – Brazil

• **TOPICS ON GAMMA-RAY CONTROL OF THE COMPOUND METAL AND CONCRETE PROTECTION QUALITY (NUCLEAR FUEL TRANSPORTING CASK)**

N. Shchigolev (SPb Nuclear Physics Institute RAS) – Russia

• **RESEARCH REACTOR DAMAGED SPENT FUEL MANAGEMENT**

O. Barinkov et al. (R&D Company SOSNY) – Russia

• **PREPARATION AND ORGANISATION EXPERIENCE OF SFA TRANSPORTATION FROM LVR-15 RESEARCH REACTOR (NRI, REZ, CZECH REPUBLIC) TO THE RUSSIAN FEDERATION**

A. Dorofeev et al. (R&D Company SOSNY) – Russia

• **ŠKODA TRANSPORT AND STORAGE SYSTEM UTILIZING THE ŠKODA VPVR/M CASK**

M. Píček and P. Ružička (Škoda JS a.s.) – Czech Republic



Poster Gallery

(Posters will be on display throughout the entire conference)

All day

Foyer

•PROGRESS IN THE SHIPPING ACTIVITIES OF THE SPENT NUCLEAR FUEL FROM IRT-2000 FACILITY, SOFIA, BULGARIA

T. Apostolov et al. (Institute for Nuclear Research and Nuclear Energy of Bulgarian Academy of Science) – Bulgaria

•ADOPTION OF THE BUDAPEST RESEARCH REACTOR FACILITY FOR SNF SHIPMENT

J. N. Dewes and S. Tózsér (Washington Savannah River Co – Atomic Energy Research Institute) – USA/Hungary

Track 5

Innovative methods in research reactor analysis

•CALCULATION OF NEUTRON FLUX TRANSIENTS

F. Reisch (KTH, Royal Institute of Technology) – Sweden

•USING MONTE CARLO INSTRUMENTATION CODES FOR THE OPTIMISATION OF HIGH FLUX RESEARCH REACTORS

M. Englert and W. Liebert (IANUS-University of Darmstadt) – Germany