
CONFERENCE PROGRAM

SUNDAY, September 21

Hotel Park, 4 Njegoševa street, Belgrade

15:00 – 17:00 City Tour (meeting point – Hotel Park)

16:00 – 19:00 Registration at Hotel Park

19:00 – 20:00 Welcome Reception at Hotel Park

MONDAY, September 22

Chamber of Commerce of the Republic of Serbia, 15 Resavska Street, Belgrade

10:00 Opening Ceremony

60th Anniversary of the Vinča Institute of Nuclear Sciences
(Dr. Jovan Nedeljkovic, director general)

50th Anniversary of the RB Reactor (First Controlled Nuclear
Fission Chain Reaction) in Serbia (Miodrag Milosevic)

11:30 *Break*

11:30 NSS Management Board Meeting (members only)

12:00 **Session A1:**

Nuclear Investigations in Region

Chairmen: Volodymyr Pavlovich (Ukraine), Andrej Stritar (Slovenia)

12:00 J. Stamenov (Bulgaria): INSTITUTE FOR NUCLEAR
RESEARCH AND NUCLEAR ENERGY, BULGARIAN
ACADEMY OF SCIENCE: PRESENT STATE (2008) AND
FUTURE PROSPECTS

12:30 Ioan Ursu (Romania): THE CURRENT ROLE OF A NUCLEAR
INSTITUTE IN ROMANIA

13:00 A. Stritar (Slovenia): NUCLEAR REGULATORY SYSTEM
IN SLOVENIA

13:30 *Break* (NSS Annual Meeting, members only)

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- 14:30 **Session A2:**
Nuclear Fusion
Chairmen: Jean Jacquinot (France), Miloš Škorić (Japan)
- 14:30 J. Jacquinot (France): FUSION AND ITER: STATUS AND ROADMAP
- 15:00 M.M. Škorić and Sh. Sudo (Japan): TOWARD AN INTEGRATED SIMULATION OF FUSION PLASMAS
- 15:30 D. Mijuca (Serbia): ON THE MULTISCALE SIMULATIONS BY MIXED FINITE ELEMENT METHOD IN THERMOELASTICITY
- 16:00 *Break*

- 16:30 **Session A3:**
Nuclear Power Plants
Chairmen: Zoran Stošić (Germany), Dragoljub Antić (Serbia)
- 16:30 Z.V. Stošić (Germany): NUCLEAR OPTION FOR SUSTAINABLE DEVELOPMENT
- 17:00 J. Lj. Vujić, D. P. Antić* and D. Djokic (USA, *Serbia): THE FUTURE OF SUSTAINABLE NUCLEAR ENERGY
- 17:30 M. MESAROVIĆ (Serbia): NUCLEAR FUEL CYCLE COSTS RELATED TO RISING OIL PRICES
- 18:00 *Close of Day 1*

20:00 Reception at City Hall

TUESDAY, September 23

Chamber of Commerce of the Republic of Serbia, 15 Resavska Street, Belgrade

- 09:00 **Session A4:**
Nuclear Power Plants and Reactor Safety&Security
Chairmen: Marina Šokčić-Kostić (Germany),
Vladan Ljubenov (Serbia)
- 09:00 F. d'Auria, A. Petruzzi (Italy): APPROACHES AND METHODS TO EVALUATE THE UNCERTAINTY IN SYSTEM THERMAL-HYDRAULICS CALCULATIONS. KEY APPLICATIONS BY CIAU METHOD
- 09:20 G. Manna, L. Debarberis, A. Bucalossi, M. Bieth, G.F. de Santi (Netherlands): JRC ACTIVITIES ON NUCLEAR SAFETY

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- 09:40 E. Hrneck (Germany): COMBATING ILLICIT
TRAFFICKING OF NUCLEAR MATERIALS
- 10:00 D. Nikolić (Serbia): NON - PROLIFERATION OF WMD
PROGRAMME AT THE VINCA INSTITUTE OF NUCLEAR
SCIENCES
- 10:20 *Break*
- 10:30 **Session B1:**
Research Reactors and Reactor Physics
Chairmen: Jordan Stamenov (Bulgaria),
Miodrag Milošević (Serbia)
- 10:30 D. Jinchuk, P. Adelfang, I. Goldman, E. Bradley (IAEA): ACTI-
VITIES OF IAEA'S PROGRAMMES ON RESEARCH
REACTORS
- 11:00 V. M. Pavlovych, V. M. Khotyayintsev, O. M. Khotyayintseva
(Ukraine): SLOW NUCLEAR FISSION WAVE REACTOR
- 11:30 M. Iqbal (Pakistan): ESTIMATION OF U-235
PERCENTAGE IN FRESH PLATE TYPE FUEL ELEMENT
- 11:55 János Gadó, Sándor Tózsér (Hungary): THE BUDAPEST
RESEARCH REACTOR IS 50 YEARS OLD
- 12:20 *Break*
- 13:30 **Session C:**
Ion Beam Facilities
Chairmen: Srdjan Petrović (Serbia), Masood Iqbal (Pakistan)
- 13:30 J.L. Ristić-Djurović, S. Ćirković, A.Ž. Ilić, Đ. Košutić, and N.B.
Nešković (Serbia): SOME CONTRIBUTIONS OF THE TESLA
TEAM TO ACCELERATOR PHYSICS AND TECHNOLOGIES
- 13:50 N.B. Nešković, A. Dobrosavljević, V. Vujović, Z. Laušević, Z.
Kačarević-Popović, and S. Petrović (Serbia): FACILITY FOR
MODIFICATION AND ANALYSIS OF MATERIALS WITH ION
BEAMS (FAMA)
- 14:10 D. Mostacci (Italy): PLASMA FOCUS AS A NEUTRON
SOURCE
- 14:30 M. Jakšić (Croatia): ACCELERATORS OF THE RUĐER
BOŠKOVIĆ INSTITUTE: FROM SUCCESSFUL HISTORY TO
PROMISSING FUTURE
- 14:50 V. Milinović, M. Milosavljević, D. Peruško, C. Jeynes*, S. Klau-
münzer**, K.P. Lieb** (Serbia, *United Kingdom, *Germany):
THIN FILM ANALYSIS USING NUCLEAR METHODS
- 15:10 *Break*
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- 15:30 **Session F:**
Biomedical Engineering and Medical Physics
Chairmen: Ioan Ursu (Romania), Erich Hrncek (Germany)
- 15:30 N.M. Sobolevsky, L.N. Latysheva (Russia): APPLICATION OF THE SHIELD TRANSPORT CODE IN THE FIELD OF HADRON THERAPY
- 15:55 S. Akulinichev (Russia): MEDICO-PHYSICAL RESEARCHES AT THE RADIOLOGICAL CENTER IN TROITSK
- 16:20 *Break*
- 16:30 **Round Table 1:**
Biomedical Engineering and Medical Physics in Clinical Praxis
Moderators: Vesna Spasić-Jokić (Serbia),
Predrag Marinković (Serbia)
- Introduction to Round Table:**
- 16:30 V. Spasić-Jokić (Serbia): THE NEW TRENDS IN NUCLEAR KNOWLEDGE MANAGEMENT: ROLE OF THE UNIVERSITIES
- 18:30 *Close of Day 2*

WEDNESDAY, September 24

Chamber of Commerce of the Republic of Serbia, 15 Resavska Street, Belgrade

- 09:00 **Session D:**
Nuclear Methods in Science and Technology
Chairmen: Yuri Teterin (Russia),
Djordje Bek-Uzarov (Serbia)
- 09:00 Yu.A. Teterin, M.V. Ryzhkov, A.Yu.Teterin, L. Vukčević*, V.A. Terekhov, K.I. Maslakov, K.E. Ivanov (Russia): THE FEATURES OF THE ELECTRONIC STRUCTURE OF THORIUM DIOXIDE
- 09:20 K.E. Ivanov, N.N. Ponomaryev-Stepnoi, B.S. Stepenov, Yu.A. Teterin, A.Yu. Teterin, and V.V. Kharitonov (Russia): LOCALIZATION OF THE GAMMA-RADIATION SOURCES USING THE GAMMA-VISOR

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- 09:40 A.N. Veleshko, I.E. Veleshko, A.Yu.Teterin, K.I. Maslakov, L. Vukčević, Yu.A. Teterin, K.E. Ivanov (Russia, *Montenegro): THE XPS STUDY OF THE FORMATION OF THE URANYL–CHITOSAN COMPLEXES
- 10:00 Sh. R. Malikov, V. P. Pikul, E.A.Danilova, N. M. Mukhamedshina and V. N. Mironenko (Uzbekistan): APPLICATION OF NUCLEAR FILTERS FOR PURIFICATION OF TECHNOLOGICAL WASTE SOLUTIONS OF COPPER-SMELTING INDUSTRY
- 10:20 *Break*
- 10:30 Round Table 2:
Technical, Administrative and Regulatory Issues Related to SNF
Moderators: Aleksey Smirnov (Russia), Laszlo Koblinger (Hungary), Milan Pešić (Serbia)
- Introduction to Round Table:
- 10:30 A. Nacic, J. Kelly (IAEA): VIND PROGRAM REVIEW
- 11:00 B. Kanashov, S. Komarov, M. Pešić*, A. Smirnov, O. Šotić* (Russia, *Serbia): EXPERIENCE IN PREPARATION AND TRANSPORTATION OF NUCLEAR FUEL OF RESEARCH REACTOR OF “VINCA” INSTITUTE (SERBIA) TO RUSSIA
- 11:30 L. Koblinger and J. Sáfár (Hungary): SOME LEGAL AND LICENSING ASPECTS OF THE REPATRIATION OF HEU-SF FROM THE BUDAPEST RESEARCH REACTOR
- 12:00 Discussion
- 13:00 *Break*
- 14:00 Round Table 3:
Experiences in Preparation and Implementation of Decommissioning of Nuclear Facilities
Moderators: Franz Meyer (Austria), Adriana Nacic (IAEA), Dragana Nikolić (Serbia)
- Introduction to Round Table:
- 14:00 F. Meyer, R. Steininger, M. Djuricic (Austria): THE DECOMMISSIONING OF THE ASTRA-MTR RESEARCH REACTOR FACILITY NUCLEAR ENGINEERING SEIBERSDORF GMBH – NES
- 14:20 D.Craig, L.Fecit, Yu.E.Gorlinsky*, N.F.Harman, R.Jackson, V.I. Kolyadin*, Yu.N.Lobach**, V.I.Pavlenko* (United Kingdom, Russia, Ukraine): TECHNICAL FEATURES DECOMMISSIONING THE MR REACTOR
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14:40 Discussion

15:30 *Break*

16:00 Round Table 4:

**Material and Waste Management in SNF and
Decommissioning Related Activities**

Moderators: Ilija Plečaš (Serbia), Marina Šokčić-Kostić
(Germany), Domiziano Mostacci (Italy)

Introduction to Round Table:

16:00 I. Plečaš (Serbia): SOLIDIFICATION OF RADIOACTIVE
SLUDGE PRODUCED BY A RESEARCH REACTOR

16:20 M. Šokčić-Kostić (Germany): RADIOLOGICAL MONITORING
SYSTEMS FOR WASTE CHARACTERISATION IN THE
ENVIRONMENT OF DECOMMISSIONING– NUKEM
TECHNOLOGIES SOLUTIONS

16:40 Discussion

18:00 *Close of Day 3*

20:00 Conference Dinner at Tri šešira Restaurant

THURSDAY, September 25

09:15 Departure for Vinča Institute of Nuclear Sciences

10:15 Visit to the site (RA and RB reactors)

12:00 Visit to Vinča Archaeological Site

13:30 *Break*

14:00 Poster Review and Discussion

Reviewers: A. Petruzzi (Italia), Milijana Steljić (Serbia)

**14:30 Conference Review
and Closing Ceremony**

Chairmen: Milan Pešić (Serbia), Dragoljub Antić (Serbia)

Reviewer: Djordje Bek-Uzarov (Serbia)

POSTER SESSIONS

A. NUCLEAR ENERGY

- A.1.** B.R.Bergelson, A.S.Gerasimov, and G.V. Tikhomirov (Russia): THORIUM SELF-SUFFICIENT FUEL CYCLE OF CANDU POWER REACTOR
- A.2** B.R.Bergelson, A.S.Gerasimov, and G.V. Tikhomirov (Russia): OPTIMIZATION OF FUEL LOAD FOR CANDU POWER REACTOR IN THORIUM SELF-SUFFICIENT FUEL CYCLE
- A.3** B.R.Bergelson, A.S.Gerasimov, and G.V. Tikhomirov (Russia): DECAY HEAT POWER AND RADIOTOXICITY OF SPENT FUEL OF THE CANDU TYPE REACTOR AT LONG-TERM STORAGE
- A.4** B.R.Bergelson, A.S.Gerasimov, and G.V. Tikhomirov (Russia): NUCLEAR SAFETY OF HEAVY-WATER POWER REACTOR OPERATING IN SELF-SUFFICIENT THORIUM CYCLE
- A.5** M. Milošević¹, E. Greenspan², J. Vujić² (¹Serbia, ²USA): INFLUENCE OF LEAD CROSS SECTION DATA ON THE RBEC-M FAST REACTOR FUEL BURNUP ANALYSIS
- A.6** M. Milošević (Serbia): FUEL BURNUP MEASUREMENTS AND CALCULATIONS OF THE RA REACTOR SPENT FUEL ELEMENTS WITH HIGH ENRICHED UO₂
- A.7** M. Milošević (Serbia): ²⁰⁸Pb NEUTRON ELASTIC SCATTERING ANGULAR DISTRIBUTION AND IMPROVED INTEGRAL TESTS
- A.9** M.P Orlić, S.Dj.Pavlović, M.D.Gajić-Kvaščev, M.Jovanović, D.Krklijuš and S.Ljubinković (Serbia): NUCLEAR SAFETY AND SECURITY SINERGISM IN VINCA INSTITUTE
- A.10** M. Gajić-Kvaščev, M. Veselinović*, M. Orlić and S. Pavlović (Serbia, *IAEA): QUALITY MANAGEMENT SYSTEM IMPLEMENTATION FOR NUCLEAR FACILITIES AND ACTIVITIES IN VINCA INSTITUTE

B. RESEARCH REACTORS AND REACTOR PHYSICS

B.1. Research Reactors Decommission

- B.2** M. Milošević (Serbia): METHODS AND MODELS FOR RADIOLOGICAL SAFETY ANALYSIS OF THE RA REACTOR SPENT FUEL ELEMENTS REPACKAGING AND TRANSPORTING AND THEIR EXPERIMENTAL VALIDATION
- B.3** M. Milošević (Serbia): RADIOLOGICAL SAFETY ASSESSMENT OF THE RA REACTOR SPENT FUEL ELEMENTS REPACKAGING MANIPULATIONS
- B.4** M. Milošević (Serbia): RADIOLOGICAL SAFETY ANALYSIS OF THE RA REACTOR SPENT FUEL ELEMENTS TRANSPORTING OPERATIONS
- B.5** M. Steljić, V. Ljubenov, D. Nikolić (Serbia): DETERMINATION OF SURFACE ACTIVITY IN RA REACTOR SURVEY UNITS FOR DECOMMISSIONING PURPOSES
- B.6** D. Nikolić, M. Steljić, M. Milošević, V. Ljubenov, (Serbia): SURVEY OF THE EQUIPMENT, COMPONENTS AND MATERIALS AT THE RA REACTOR HALL – THE APPROACH AND EXPERIENCES

B.2. Research Reactors and Reactor Physics

- B.7** S.Dž. Avdić (Bosnia and Herzegovina): INVESTIGATION OF SOURCE-SHIELDING CONFIGURATIONS BY CORRELATION ANALYSIS AND 2D FOURIER TRANSFORM
- B.8** P. Beličev, M. Milošević, R. Ilić, S. Mayer*, V. Spasić-Jokić, Milan Pešić (Serbia, *Switzerland): INFLUENCE OF KOVAR CAP TO ENERGY RESPONSE OF A RADFET RADIATION DETECTOR
- B.9** M. Miletić (Czech Republic): RESEARCH REACTOR VR-1 AND ITS APPLICATIONS

C. ADS AND ACCELERATORS

- C.1 M. Pešić (Serbia): YALINA THERMAL SUB-CRITICAL FACILITY BENCHMARK CALCULATIONS

D. NUCLEAR METHODS IN SCIENCE AND TECHNOLOGY

- D.1 T. Stalevski (Serbia): MONITORING OF RADIOACTIVE GASES ACTIVITY AT THE EXHAUST STACK OF THE RA REACTOR
- D.2 S.J. Stanković, Dj. Lazarević, M. Davidović, A. Vasić-Milovanović, B. Lončar and P. Osmokrović (Serbia): CAMPBELL'S MSV METHOD OF MEASUREMENT IN THE MIXED FIELD OF ^{252}Cf MODERATED BY HEAVY WATER
- D.3 A.A. Mirsagatova, N.M. Mukhamedshina, Kh.M. Khamidova, N.M. Karimova (Uzbekistan): STUDY OF SORPTION Co AND Ni FROM SOLUTION BY DIFFERENT MICROORGANISMS WITH USING INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS (INAA)
- D.4 J.Vučina, Dj.Petrović, N.Nikolić and M.Orlić (Serbia): MEDICAL RADIOISOTOPES – PRODUCTION, AVAILABILITY AND USE
- D.5 M.B. Stakić, A.B. Nikolić (Serbia): MODELLING OF CONVECTIVE PROCESS OF WATER DESORPTION FROM POLYSTYRENE CATION RESIN CG-8
- D.6 V. Stančić, B. Šećerov (Serbia): DETECTION OF ULTRA-VIOLET RADIATION USING RADIOCHROMIC FILTERS
- D.7 A. Janićijević, D. Nikezić, D. Antić (Serbia): A METHOD FOR DETERMINATION OF BULK ETCHING RATE FOR LR-115 II AND THE APPLICATIONS FOR α -PARTICLES DETECTIONS
- D.8 A. Janićijević, M. Srećković, S. Pantelić, D. Nikolić*, D. Antić (Serbia, *United Kingdom): GENERAL APPROACH TO LASER APPLICATION IN ECOLOGICAL AND HUMAN LIFE CONSERVATION AND OPTICAL MEASUREMENT IN SPECIFIC CONDITIONS
- D.9 V. Ljubenov, R. Simović, Srpko Marković (Serbia): DEPENDENCE OF THE TOTAL ALBEDO COEFFICIENTS ON THE PROBABILITY FOR LARGE-ANGLE PHOTON SCATTERING

E. RADIATION PROTECTION

- E.1** O. Niculae, Gh. Ionita, A. Petrescu and D. Dogaru (Romania): SITING PROCESS OF THE NEW ROMANIAN NEAR SURFACE REPOSITORY. CONFIRMATION OF REPOSITORY LOCATION
- E.2** M. Petrović, M. Mandić, I. Plećaš, D. Kićević, D. Nikolić, M. Pešić (Serbia): RADIOACTIVE WASTE MANAGEMENT AT THE VINČA INSTITUTE OF NUCLEAR SCIENCES
- E.3** I. Avramović, M. Marković (Serbia): WASTE MANAGEMENT DURING DECOMMISSIONING OF RA REACTOR IN VINČA INSTITUTE
- E.4** M. Petrović (Serbia): CWID IN RADIOACTIVE WASTE MANAGEMENT OF THE VINČA INSTITUTE
- E.5** O.T. Marinković, V.M. Spasić Jokić (Serbia): TLD IN ENVIRONMENTAL MONITORING
- E.6** B. Slavata, G. Vitorović, D. Vitorović (Serbia): THE POSSIBILITY OF PROTECTION BROILER CHICKENS IN THE CASE OF ALIMENTARY CONTAMINATION WITH ¹³⁷Cs
- E.7** S.Dj.Pavlović, M.P.Orlić and M.D.Gajić-Kvašček (Serbia): SPECIFIC RADIATION SAFETY ISSUES RELATING TO RADIUM NEEDLES CONDITIONING OPERATION
- E.8** N. Tomić (Serbia): LEGISLATION ON IONIZING RADIATION PROTECTION – REALITY AND PERSPECTIVES

F. NUCLEAR AND RADIATION MEDICINE

F.1. Nuclear Medicine

- F.1.1** Lj. Župunski, F. Pizzolante*, D. Bataveljić, G. Bačić, T. Michetti* and P. Andjus (Serbia, *Italia): APPLICATION OF MRI ON THE EXPERIMENTAL MODEL OF THE LABORATORY RAT TREATED WITH THE TOXICANT TRIMETHYLTIN

F1.2 P. Sovllj, V. Vujičić (Serbia): MEASUREMENT OF EEG SIGNAL HARMONICS

F.2. Radiation Medicine

IP.F2 F. Ganda, J. Vujic, E. Greenspan and M. Milosevic* (USA, *Serbia): SUBCRITICAL NEUTRON MULTIPLIER FOR ACCELERATOR BASED BNCT

F2.1 O. Ciraj-Bjelac, E. Ateia*, M. Kovacevic, P. Beličev (Serbia, *Lybia): ACTIVATION PRODUCTS AT HIGH-ENERGY LINEAR ACCELERATOR USED FOR RADIATION THERAPY: ISOTOPE CHARACTERISATION AND DOSE ASSESSMENT

G. ENVIRONMENT

G.1 V.B. Gordanić, V.M. Spasić-Jokić, D.B. Jovanović and A.B. Ćirić (Serbia): ATMOGEOCHEMICAL RESEARCH OF NATURAL RADIOACTIVITY OF THE PART OF BUJANOVAC GRANITOIDE MASSIF

G.2 M. Steljić, M. Pešić (Serbia): PARTICIPATION OF THE CENTRE NTI IN THE IAEA-CU-2006-03 WORLD-WIDE OPEN PROFICIENCY TEST ON THE DETERMINATION OF GAMMA EMITTING RADIONUCLIDES