

NANO-2024: “Quo Vadis– Ethics of the Scientific Research”

Day 1, Monday			
15.04.2024	12 ⁰⁰ 23 ⁵⁹	ARRIVAL OF PARTICIPANTS , accommodation in the Hotel “BRISTOL” <i>BRISTOL Central Park Hotel, 32, A. Puskin Street, Chisinau</i>	
	15 ⁰⁰ 19 ⁰⁰	REGISTRATION , Distribution of the Conference materials <i>In the lobby of hotel “BRISTOL”</i>	
	18 ⁰⁰ 19 ⁰⁰	MEETING OF THE ORGANIZING COMMITTEE	
	19 ⁰⁰ 21 ³⁰	WELCOME RECEPTION <i>Bar of hotel “BRISTOL”</i>	
Day 2, Tuesday			
16.04.2024	8 ³⁰ 9 ⁰⁰	REGISTRATION , Distribution of the Conference materials in the lobby of campus no. 1 of TUM <i>Bd. Stefan cel Mare 168, Chisinau</i>	
	9 ¹⁰ 10 ⁰⁰	CONFERENCE OPENING, WELCOME SPEECHES	
	10 ⁰⁰ 11 ⁰⁰	PLENARY SESSION PL Anatolie SIDORENKO; Viorel BOSTAN; Ion TIGHINEANU <i>Room 1-205, TUM</i>	
	11 ⁰⁰ 11 ³⁰	COFFEE BREAK	
	11 ³⁰ 12 ³⁰	Ashok VASEASHTA; Leonid BOSHKOV <i>Room 1-205, TUM</i>	
	13 ⁰⁰ 14 ⁰⁰	LUNCH	
	14 ³⁰ 16 ³⁰	SECTION 2-1 Environmental protection from CBRN <i>Room 1-205, TUM</i>	POSTER SECTION Young researchers forum
	16 ⁰⁰ 17 ³⁰	SECTION 2-2 Podium discussion 1: Ethical problems of implementation of the results of research <i>Room 1-205, TUM</i>	
	17 ³⁰ 18 ⁰⁰	The best posters award and appreciation of young researchers-winners of the posters competition	
	19 ⁰⁰ 22 ⁰⁰	CONFERENCE DINNER – <i>Restaurant of hotel “BRISTOL”</i> Presentation of the best posters of young researchers at the NANO-2024 Humboldt Kolleg, prizes award	

Day 3, Wednesday		
17.04.2024	9 ³⁰ 11 ⁰⁰	SECTION 3-1 Limits of Novel Technologies <i>Conference room of hotel "BRISTOL"</i>
	11 ⁰⁰ 11 ³⁰	COFFEE BREAK
	11 ⁰⁰ 12 ³⁰	SECTION 3-2 Limits of Novel Technologies <i>Conference room of hotel "BRISTOL"</i>
	14 ⁰⁰ 18 ⁰⁰	EXTERNAL SECTION 4 Limits of Novel Technologies (<i>bus transfer to the External Session in "Milești Mici"</i>) Podium discussions. Networking and international Collaboration: experience, new forms and perspectives
Day 4, Thursday		
18.04.2024	9 ³⁰ 11 ⁰⁰	SECTION 5-1 Novel technologies <i>Conference room of hotel "BRISTOL"</i>
	11 ⁰⁰ 11 ³⁰	COFFEE BREAK
	11 ³⁰ 13 ⁰⁰	SECTION 5-2 Novel technologies <i>Conference room of hotel "BRISTOL"</i>
	13 ⁰⁰ 14 ⁰⁰	LUNCH
	14 ⁰⁰ 15 ³⁰	SECTION 6 Health and Environment - Limits of Nanotechnologies <i>Conference room of hotel "BRISTOL"</i>
	16 ⁰⁰ 16 ³⁰	COFFEE BREAK
	16 ³⁰ 17 ⁰⁰	SUMMING-UP SECTION Discussion about networking, collaboration strengthening, and Memorandum elaboration <i>Conference room of hotel "BRISTOL"</i>
	17 ⁰⁰ 23 ⁰⁰	DEPARTURE OF PARTICIPANTS



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Program of the Humboldt-Kolleg
NANO-2024: “Quo Vadis – Ethics of the Scientific Research”
Chişinău, Republic of Moldova, 15-18 April 2024

The event dedicated to the Jubilee: 60 Years of the Technical University of Moldova

organized by Technical University of Moldova, Moldavian Physical Society (SFM), State University of Medicine and Pharmacy “Nicolae Testemitanu”, Academy of Sciences of Moldova, Humboldt Club Moldova, with financial support of Alexander von Humboldt Foundation, Germany.

Day 1, Monday, 15.04.2024

- 12:00-24:00** **Arrival of participants**, accommodation in the hotel “BRISTOL” (“BRISTOL Central Park Hotel” 32, A. Puskin Street, MD-2012, Chisinau).
- 15:00-19:00** **Registration of participants** in the lobby of hotel “BRISTOL”.
- 18:00-19:00** **Meeting of the Organizing Committee.**
- 19:30-21:00** **Welcome reception** in the Bar of hotel “BRISTOL”.

Day 2, Tuesday, 16.04.2024

SESSION 1.

OPENING SESSION OF THE HUMBOLDT KOLLEG IN THE SENAT HALL OF THE TECHNICAL UNIVERSITY OF MOLDOVA

Chişinău, Republic of Moldova, MD-2004, Bd. Stefan cel Mare, 168, room 205

9:00-10:00 Welcome addresses of Director of the Humboldt Kolleg, President of the “Humboldt Club Moldova” **Anatolie Sidorenko**, Minister of Education of Moldova **Dan Perciun**, Rector of the Technical University of Moldova **Viorel Bostan**, President of the Academy of Sciences of Moldova **Ion Tighineanu**, Deputy Head of Mission – Embassy of the Federal Republic of Germany in Moldova **Peter Buschmann**, Representative of the Alexander von Humboldt Foundation **Steffen Mehlich**.

10:00-12:30 PLENARY SESSION PL

- 10:00-10:20** **PL1. Prof. Anatolie Sidorenko.** Goals and programs of the Alexander von Humboldt Foundation and Humboldtians at the Technical University of Moldova.
- 10:20-10:40** **PL2. Prof. Viorel Bostan.** 60 Years of Technical University of Moldova: achievements, prospects.
- 10:40-11:00** **PL3. Prof. Ashok Vaseashta.** Quo Vadis - Artificial Intelligence Internet of things, Internet of Behaviors and Nano-generators: Opportunities, Challenges and Ethical Concerns. International Clean Water Institute, Manassas, USA.

11:00-11:30 COFFEE BREAK

- 11:30-12:00** **PL4. Ion Tighineanu.** Nanotechnologies development and ethics of their implementation (goals, impact, perspectives and limits of implementation). Academy of Sciences of Moldova, Chisinau, Moldova.
- 12:00-12:30** **PL5. Prof. Leonid Boshkov.** Sustainable Development: A New Paradigm, Theoretical Fundamentals and Integrated Ethics. Odessa State Academy of Refrigeration, Ukraine.
- 12:30** **Press-Conference** TV: Moldova-1, Publica-TV; Radio: Radio-Moldova; Newspapers: Moldova News, and other Mass media (40 min). Moderators: Prof. Anatolie Sidorenko, Prof. Adam Łukaszewicz, Prof. Mikhail Zveryakov.

13:00-14:00 LUNCH

14:30-16:30 YOUNG RESEARCHERS FORUM: POSTER SESSION

Chairs: Prof. Eduard Monaico, Prof. Marian Jaskula, Prof. Mousa Marwan, Prof. Mikhail Zveryakov

Presentation of young researchers reports and selection of the winners with the best presentations

- PS1. DEVICE FOR CONTROLLED HYPOTHERMIA ON FUZZY LOGIC ALGORITHMS.** V. Cojocaru, T. Fedorisin, R. Galus. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies, Academiei str., 3/3, Chisinau, Moldova.
- PS2. STUDYING THE EFFECT OF VARIOUS GASES ON THE OUTPUT CHARACTERISTICS OF THERMOCOUPLE PRESSURE TRANSDUCERS.**
I. Belotserkovskij, A. Sibaev and A. Sidorenko. Technical University of

- Moldova, Institute of Electronic Engineering and Nanotechnologies, Chisinau, Moldova.
- PS3. ENHANCED MICROBIOLOGICAL DEGRADATION OF POLYETHYLENE.** Serghei Corcimaru, Lilia Mereniuc, Feodora Sitnic. Technical University of Moldova, Institute of Microbiology and Biotechnology.
- PS4. APPLICATION OF CoFe₂O₄/PEG NANOCOMPOSITE AS A PEROXIDASE MIMETIC IN THE COLORIMETRIC DETECTION OF GLYPHOSATE.** Tatiana Gutsul, Andrei Sirbu, Maria Lupu, Anatolie Sidorenko. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies, Chisinau, Moldova.
- PS5. SENSORS FOR BATTERY SAFETY APPLICATIONS.** Nicolai Ababii, Oleg Lupan. Technical University of Moldova, Department of Microelectronics and Biomedical Engineering, Chisinau, Moldova.
- PS6. PREVALENCE OF SOME PIK3CA MUTATIONS IN PATIENTS WITH CERVICAL SQUAMOUS CARCINOMA FROM THE REPUBLIC OF MOLDOVA.** Cristina Popa, Valentina Stratan, Valeri Tutuianu, Victor Sitnic, Veronica Balan, Novac Mihail, Mariana Sprincean, Neonila Casian. Institute of Oncology, Scientific Laboratory of Cancer Biology, Chisinau, Republic of Moldova, “Nicolae Testemitanu” State University of Medicine and Pharmacy, Department of Molecular Biology and Human Genetics, Chisinau, Moldova.
- PS7. MIXED METAL OXIDE BASED GAS SENSOR.** Rajat Nagpal. Technical University of Moldova, Department of Microelectronics and Biomedical Engineering, Center for Nanotechnology and Nanosensors, Chisinau, Moldova.
- PS8. SEMICONDUCTING METAL OXIDES IN BIOMARKER DETECTION FOR MEDICAL APPLICATIONS.** Mihai Brînză. Technical University of Moldova, Center of Nanotechnologies and Nanosensors, Chisinau, Moldova.
- PS9. PHOTOCATALYTIC DEGRADATION OF TETRACYCLINE USING AERO-TiO₂.** Vladimir Ciobanu, Tatiana Galatonova. National Center for Materials Study and Testing, Technical University of Moldova, Chisinau, Moldova.
- PS10. GOLD DECORATED GALIUM OXIDE NANOWIRES FOR MULTIFUNCTIONAL APPLICATIONS.** Elena I. Monaico, Eduard V. Monaico, Veaceslav V. Ursaki, Ion M. Tiginyanu. National Center for Materials Study and Testing, Technical University of Moldova, Republic of Moldova.

- PS11. OBSOLETE PESTICIDES DECOMPOSITION IN SOIL USING MAGNETITE NANOPARTICLES.** Inna Rastimesina, Tatiana Gutul, Olga Postolachi, Alexandr Sibaev. Technical University of Moldova, Institute of Microbiology and Biotechnology, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, Chisinau, Moldova.
- PS12. USING OF THE MEAM MODEL FOR ADJUSTING THE TECHNOLOGICAL PARAMETERS OF MAGNETRON DEPOSITION OF NB/CO NANOLAYERS.** Vladimir Boian, Eugen Boian. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, Chisinau, Moldova.
- PS13. COMPLEXES OF SILVER NANOPARTICLES WITH ANTIBIOTICS OF VARIOUS CLASSES AGAINST RESISTANT STRAIN OF BACTERIA ESCHERICHIA COLI KO11.** Chakhoyan, S. Oganian, Sh. Kazaryan, A. Hovhannisyanyan. Institute of biomedicine and pharmacy Russian-Armenian University, Erevan, Armenia.
- PS14. GAS SENSING DEVICES BASED ON $A_{II}B_{VI}$ SEMICONDUCTING OXIDE FILMS AND SINGLE NANOWIRE.** . Cristian Lupan. Technical University of Moldova, Department of Microelectronics and Biomedical Engineering, Center for Nanotechnology and Nanosensors, Chisinau, Moldova.
- PS15. FUNCTIONALIZED NANOMATERIALS ZnO:PdO FOR GAS SENSORS.** Alexandr Sereacov, Nicolae Magariu, Oleg Lupan. Technical University of Moldova, Department of Microelectronics and Biomedical Engineering, Center for Nanotechnology and Nanosensors, Chisinau, Moldova.
- PS16. SYNTHESIS OF SnSe FILMS OBTAINED BY MAGNETRON SPUTTERING.** Victor Suman, Vadim Morari, Victor Zalamai , Eduard Monaico, Emil Rusu. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, National Center for Materials Study and Testing, Chisinau, Moldova.
- PS17. STUDY OF Ga₂O₃ THIN FILMS OBTAINED BY AEROSOL SPRAY PIROLYSIS.** Vadim Morari, Emil Rusu , Victor Zalamai, Alexei Meshalkin. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, National Center for Materials Study and Testing, Technical University of Moldova, State University of Moldova, Institute of Applied Physics, Moldova.
- PS18. MOLECULAR GENETIC APPROACHES IN THE TREATMENT OF AMYOTROPHIC LATERAL SCLEROSIS.** Rintu Ann Reiji, Ludmila

Sidorenko. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova.

- PS19. TECHNOLOGY OF FABRICATION AND APPLICATIONS OF 3D MICRO-NANO-ARCHITECTURES BASED ON AERO-GaN.** Tudor Braniste. National Center for Materials Study and Testing, Technical University of Moldova.
- PS20. THERMOELECTRIC PROPERTIES OF A THERMOELECTRIC MODULE MADE OF TTT₂I₃ AND TTT(TCNQ)₂ ORGANIC CRYSTALS.** Ionel Sanduleac, Silvia Andronic. Faculty of Electronics and Telecommunications, Technical University of Moldova, Chişinău, Moldova.
- PS21. SUPERCONDUCTOR-INSULATOR TRANSITION IN SUPERCONDUCTING NANOWIRES.** Andrei Zaikin. Institute for Quantum Materials and Technologies, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany.
- PS22. FUNCTIONAL CAPABILITIES OF TWO-BARRIER SEMICONDUCTOR STRUCTURES.** Mane Khachatryan, Elya Makaryan, Surik Khudaverdyan. Armenian National Polytechnic University, Teryan str., 105, Yerevan, Armenia.
- PS23. THE USE FLOATING MULTICHANNEL ELECTRODE FOR MONITORING THE ELECTRICAL ACTIVITY OF THE MYOCARDIUM.** Oksana Vlasenko, Ihor Rokunets, Olga Chaikovska, Viktor Chechel, Ludmila Sidorenko, Svetlana Sidorenko, Oleg Vlasenko. National Pirogov Memorial Medical University, Vinnytsya, Ukraine, State Medical University of Medicine and Pharmacy Nicolae Testemitsanu, Chisinau, Moldova.
- PS24. IS IT POSSIBLE TO AVOID TERMINOLOGICAL ERRORS IN SCIENTIFIC TEXTS? (ON EXAMPLE OF MINERALOGICAL TERMS IN A.C. CELSUS' TREATISE DE MEDICINA).** PhD Natalia Kulikova. Jagiellonian University, Krakow, Poland.
- PS25. SUPERCURRENT REVERSAL IN ZEEMAN-SPLIT JOSEPHSON JUNCTIONS.** A.A. Golubov, S.-I. Suzuki, Y. Asano. Faculty of Science and Technology and + Institute MESA for Nanotechnology, University of Twente, Enschede, The Netherlands.
- PS26. MEDICINES BASED ON NANOSIZED SILICA – ACHIEVEMENTS AND PROSPECTS.** Igor Gerashchenko. Chuiko Institute of Surface Chemistry of NAS of Ukraine, Kyiv, Ukraine.
- PS27. QUANTUM OSCILLATIONS IN TOPOLOGICAL INSULATOR MICROWIRES CONTACTED WITH SUPERCONDUCTING In₂Bi LEADS.** Leonid Konopko,

Albina Nikolaeva, Tito Huber. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies, Chisinau, Moldova.

- PS28. BASIC ASPECTS OF BACTERIAL TRANSFORMATION.** Niconova Tatiana, Costeva Anastasia, Sidorenko Svetlana, Sidorenko Ludmila. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova, Rehabilitation Clinic Valens, Bad Ragaz, Switzerland
- PS29. METHODOLOGY FOR THE FORMATION OF ANN’S ELEMENTS.** Maria Lupu. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, Chisinau, Moldova.
- PS30. SUPERCONDUCTING PROPERTIES OF NANOSTRUCTURES SUPERCONDUCTOR/FERROMAGNET.** Andrei Prepelita. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, Chisinau, Moldova.
- PS31. THE CRITICAL MAGNETIC FIELDS OF SUPERCONDUCTING NANOSTRUCTURES BASED ON NB AND CU-NI – ALLOY LAYERS.** Evgheni Antropov. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies “D. Ghitu”, Chisinau, Moldova.
- PS32. RE-ENTRANCE SUPERCONDUCTIVITY IN NANOSTRUCTURES BASED ON NB AND CU-NI – ALLOY LAYERS.** Roman Morari. Technical University of Moldova, Institute of Electronic Engineering and Nanotechnologies, Chisinau MD2028 Moldova.
- PS33. APPLICATION OF NARROW BAND IMAGING FOR EARLY DIAGNOSTIC OF URINARY BLADDER TUMORS.** Ivan Vladanov, Alexei Plesacov, Ludmila Sidorenko, Ghenadie Scutelnic, Vitalii Ghicavii. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Republic of Moldova.
- PS34. AN INSIGHT INTO TECHNOLOGIES AIDED IN THE ENCODE PROJECT.** Anaswara Kuzhipurayidathil Vijayakumar, Ludmilla Sidorenko. State University of Medicine and Pharmacy Nicolae Testemitanu, Chisinau Republic of Moldova.
- PS35. MOLECULAR AND GENETIC APPROACH TO ALZHEIMER’S DISEASE.** Mohamed Azhar, Svetlana Sidorenko, Ludmila Sidorenko. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Republic Moldova, Rehabilitation Clinic Valens, Bad Ragaz, Switzerland.
- PS36. MOLECULAR TRIGGER MECHANISMS FOR NEURODEGENERATION PROCESS VIA MITOPHAGY IN PARKINSON’S DISEASE.** Alexandra Sochirca, Ludmila Sidorenko, Svetlana Sidorenko. State University of

Medicine and Pharmacy “Nicolae Testemitanu”, Chişinău Republic of Moldova, Rehabilitation Clinic Valens, Bad Ragaz, Switzerland.

- PS37. ADVANCES IN RECENT TECHNIQUES OF SOFT TISSUE TRAUMA IN CHILDREN.** Tatiana Cozariz, Egor Porosencov, Ludmila Sidorenko. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova.
- PS38. COMBINATION OF KINETOTHERAPY AND NANOPLASMA TECHNOLOGIES: IMPACT ON IMPROVING THE GENERAL HEALTH INDEX IN THE THERAPY OF PAIN CONDITIONS OF THE SPINE.** Rodion Uzun, Ralii Babanu, Alla Pogorleţchi, Svetlana Sidorenko, Ludmila Sidorenko. Physical Rehabilitation Clinic “Kineto Plus”, Chisinau, Moldova. Rehabilitation Clinic Valens, Bad Ragaz, Switzerland. State University of Medicine and Pharmacy “Nicolae Testemitsanu”.
- PS39. GENETIC PREDISPOSITIONS IN ATRIAL FIBRILLATION: IMPLICATIONS FOR PRECISION MEDICINE.** Wesam Elabid, Ludmila Sidorenko. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova.
- PS40. EFFECTS OF BETA-BLOCKERS ON CARDIAC PHENOTYPES.** Rahul Rejimon Nair, Sidorenko Ludmila. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova.
- PS41. THE APPROACH OF MOLECULAR MEDICINE TO THE TREATMENT OF GAUCHER DISEASE.** Ludmila Rotaru, Ludmila Sidorenko, State University of Medicine and Pharmacy “Nicolae Testemitsanu”, Chisinau, Moldova

14:30-18:00

SESSION 2. ENVIRONMENTAL PROTECTION FROM CBRN

Chairs: Prof. Ioana IONEL, Prof. Leonid BOSHKOV

- 14:30** Prof. Ildiko Tulbure. “1 Decembrie 1918” University of Alba Iulia. Quo vadis technology advance – prospects and provocations.
- 14:55** Prof. Ioana Ionel. West University of Timișoara, Romania. Research in the field of air quality control. Ethics and results.
- 15:20** Karam Al Qalawi. “1 Decembrie 1918” University, Faculty of Engineering, Unirii-Str., 15-17, Alba Iulia, Romania. Usage perspectives of renewable energy resources in Jordan.
- 15:35** Prof. Mikhail Zveriyakov. Odessa State Economic University, Odessa, Ukraine. Theoretical Paradigm of Sustainable Development and Ukrainian Realities.

16:30-17:30

PODIUM DISCUSSION 1: ETHICAL PROBLEMS OF IMPLEMENTATION OF THE RESULTS OF RESEARCH

Moderators: Prof. Vladimir Fomin, Prof. Pavel Donec, Prof. Mikhail Zveryakov

17:30-18:00

THE BEST POSTERS AWARD AND APPRECIATION OF YOUNG RESEARCHERS-WINNERS OF THE POSTERS COMPETITION

Commission members: Prof. Eduard Monaico, Prof. Marian Jaskula, Prof. Marwan Mousa, Prof. Mikhail Zveryakov

19:00-22:00 CONFERENCE DINNER

Presentation of the best posters of young researchers at the NANO-2024 Humboldt Kolleg, prizes award. Recommendations for application to the Alexander von Humboldt fellowship.

Day 3, Wednesday, 17.04.2024

9:00-13:00

SESSION 3. LIMITS OF NOVEL TECHNOLOGIES

Chairs: Prof. Eduard Monaico, Prof. Leonid Boshkov

- 9:00** Prof. Eduard Monaico. Technical University of Moldova, Chisinau. Controlled engineering of gold nanodots deposition using hopping electrodeposition.
- 9:30** Prof. Vasile Tronciu. Technical University of Moldova, Chisinau. Theoretical studies of the dynamics of two section blue-violet semiconductor lasers.
- 9:50** Prof. Mihai Macovei. Institute of Applied Physics, Moldova. Quantum hybrid system's dynamics via environmental thermostat.
- 10:10** Dr. Aurelian Buzdugan. State University from Moldova. Risks associated with nanoengineering and researchers responsibility.
- 10:30** Prof. Vadim Sirkeli. State University from Moldova. High performance ZnSe-based ultraviolet photodetectors with Cr/Au, Ni/Au and hybrid Ag-nanowire contacts.

11:00-11:30 COFFEE BREAK

- 11:30** Prof. Sawłowicz Zbigniew. Institute of Geological Sciences, Jagiellonian University, Kraków, Poland. Advancing Geological Education Through Artificial Intelligence: Opportunities, Challenges, and Future Directions.

- 11:50** Prof. Marian Jaskula. Faculty of Chemistry at Jagiellonian University, Kraków, Poland. Silver Nanowire Array Sensor for Sensitive and Rapid Detection of H₂O₂.
- 12:10** Prof. Leonid Boshkov. Odessa State Academy of Refrigeration, Ukraine. Types and Stages of Ethnogenesis and the Origins of Ethnic Passionarity.
- 12:40** Dr. Gheorghe Para. Institute of Electronic Engineering and Nanotechnologies “D. Ghitu” of Technical University of Moldova. Topological surface state in the thermoelectric properties of Bi₂Te₃ layers.

14:00-18:00

EXTERNAL SESSION 4. LIMITS OF NOVEL TECHNOLOGIES

bus transfer to the External Session in “Milești Mici”

Podium discussions. Networking and international Collaboration: experience, new forms and perspectives. Moderators: Prof. Adam Łukaszewicz, Prof. Anatolie Sidorenko, Prof. Leonid Boshkov.

Day 4, Thursday, 18.04.2024

9:00-13:00 SESSION 5. NOVEL TECHNOLOGIES

Chairs: Prof. Marwan Mousa, Prof. Detlef Beckmann

- 9:00** Prof. Vladimir Fomin. Institute for Emerging Electronic Technologies, Leibniz IFW, Dresden, Germany. Superconductor 3D Nanoarchitectures.
- 9:30** Prof. Detlef Beckmann. Institute for Quantum Materials and Technologies, Karlsruhe Institute of Technology, Germany. Spin transport in high-field superconductors.
- 10:00** Dr. Svitlana Kondovych. Institute for Theoretical Solid State Physics, IFW Dresden, Germany. Strain-driven topological textures in ferroic materials.
- 10:30** Prof. Marwan S. Mousa. Jadara University, Jordan. Advanced Analysis of Copper Nano-tips as Cold Field Emission Electron Sources.

11:00-11:30 COFFEE BREAK

- 11:30** Dr. Zalamai Victor. National Center for Materials Study and Testing, UTM, Chisinau, Republic of Moldova. Excitonic states in layered semiconductor singlecrystals.
- 11:50** PhD stud. Litra Dinu. Technical University of Moldova. Sensors based on metal oxides for medical applications.
- 12:10** PhD stud. Lupan Cristian. Technical University of Moldova, Department of Microelectronics and Biomedical Engineering. Nanodevices based on AlIBVI semiconducting oxide nanowire.

12:30 Prof. Pavel Donec. Ukrainian State University of Railway Transport, Kharkiv, Ukraine. Rationalization as a principle of civilization process and the problem of “common sense”.

13:00-14:00 LUNCH

14:00-15:30

SESSION 6. HEALTH AND ENVIRONMENT - LIMITS OF NANOTECHNOLOGIES

Chairs: Prof. Ionel Ioana, Prof. Gerd Antes

14:00 Prof. Gerd Antes. Freiburg, Germany. From Randomized Clinical Trials (RCTs) to Artificial Intelligence (AI) – History and Methodological Challenges.

14:30 Dr. Ludmila Sidorenko. State Medical and Pharmaceutical University “Nicolae Testemitanu”, Chisinau, Moldova. Pathologically increased central regulation of the heart rhythm – a diagnostic biomarker.

14:50 Prof. Mariana Sprincean. State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova. Bioethical principles in prenatal diagnostics and genetic counseling

15:10 Dr. Oleksii Chepliaka. Vinnitsa National Pyrohov Memorial Medical University, Vinnitsa, Ukraine. Hemostatic effect of nanosilica-alginate composition vs kaolin on model of parenchymal bleeding in rats.

15:30 Dr. Shushanik Kazaryan. Institute of biomedicine and pharmacy Russian-Armenian University, Erevan, Armenia. Comparative analysis of biocompatibility of chemical and biogenic Fe₃O₄ nanoparticles.

15:50 Dr. Roman Chornopischuk. Vinnitsa Medical University, Ukraine. Use of computer morphometry in the complex diagnostic program of patients with burn injuries.

16:00 Prof. Oleg Vlasenko. National Pirogov Memorial Medical University, Vinnytsa, Ukraine. The use of floating multichannel electrodes for monitoring the electrical activity of the myocardium.

16:20-16:40 COFFEE BREAK

16:40-17:30 SUMMING-UP SESSION: DISCUSSION ABOUT NETWORKING, COLLABORATION STRENGTHENING, AND MEMORANDUM ELABORATION

Moderators: Prof. Anatolie Sidorenko, Prof. Eugen Sava, Prof. Detlef Beckmann, Prof. Marian Jaskula

18:00-23:00 DEPARTURE OF PARTICIPANTS