

HUMBOLDT KOLLEG

**“Mathematics and Life Sciences:  
Possibilities, Interlacements and Limits”**

**Organizer:** Humboldt Club Ukraine, Kyiv Institute of Mathematics NAS Ukraine, Kyiv National Taras Shevchenko University, National Technical University of Ukraine “Kyiv Polytechnic Institute”, Clinical hospital “Feofanya”.

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**P R O G R A M**



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**August 05, 2010, Thursday**  
**Embassy of Federal Republic of**  
**Germany in Ukraine,**  
**Bogdana Khmel'nyts'kogo St., 25**

<b>15:00 – 16:00</b>	<p><b>PRESS-CONFERENCE:</b> <b>«SUPPORT OF YOUNG SCIENTISTS IS THE SOLE FUTURE FOR UKRAINE»</b></p> <p><b>Participants:</b></p> <p><b>Dr. Hans-Jürgen Heimsoeth</b> <i>Ambassador of Federal Republic of Germany in Ukraine</i></p> <p><b>Dr. Gisela Janetzke</b> <i>Deputy Secretary General of the Alexander von Humboldt Foundation</i></p> <p><b>Dr. Alexandra Antoniouk</b> <i>Representative of the Humboldt Club Ukraine and Organizing Committee of the Humboldt Kolleg</i></p> <p><b>Dr. Bogdan Kyyak</b> <i>Director of the Fundamental Research State Fund</i></p> <p><b>Dr. Igor Semeniw</b> <i>Chief Doctor of the Clinical Hospital “Feofanya” of State Affairs Department, Ukraine</i></p> <p><b>Prof. Dr. Valerii Grygoruk</b> <i>Pro-Rector (Scientific work) of the Taras Shevchenko National University of Kyiv</i></p> <p><b>Prof. Dr. Timothy Clark</b> <i>Computer-Chemie-Centrum, Friedrich-Alexander- Universität Erlangen-Nürnberg, Germany</i></p> <p><b>Anna Marchenko</b> <i>GM of Materialise Ukraine Research and Development office</i></p> <p>Moderation: Dr. Kyril Savin <i>Heinrich Böll Foundation</i></p>
<b>16:00 – 16:40</b>	<b>COFFEE, INFORMAL COMMUNICATIONS</b>

17:00 – 17:30

**OPENING CEREMONY OF THE HUMBOLDT  
KOLLEG**

**«MATHEMATICS AND LIFE SCIENCES:  
POSSIBILITIES, INTERLACEMENTS AND LIMITS»**

**WELCOMING ADDRESSES:**

**Dr. Hans-Jürgen Heimsoeth**

*Ambassador of Federal Republic of Germany in  
Ukraine*

**Dr. Alexandra Antoniouk**

*Representative of the Humboldt Club Ukraine and  
Organizing Committee of the Humboldt Kolleg*

**Acad. NASU Prof. Dr. Anatoliy Samoilenko**

*Director of the Kyiv Institute of Mathematics*

**Dr. Igor Semeniv**

*Chief Doctor of the Clinical Hospital “Feofanya” of State  
Affairs Department, Ukraine*

**Prof. Dr. Valerii Grygoruk**

*Pro-Rector on Scientific work of the Taras Shevchenko  
National University of Kyiv*

**Dr. Bogdan Kyyak**

*Director of the Fundamental Research State Fund*

**Prof. Dr. Timothy Clark**

*Computer-Chemie-Centrum, Friedrich-Alexander-  
Universität Erlangen-Nürnberg, Germany*

**Representative of the Ministry of Health of Ukraine**

**Representative of the State Committee of Ukraine for Sci-  
ence, Innovation and Informatization**

**Representatives of Scientific élite and special invited  
guests**

**Dr. Gisela Janetzke**

*Deputy Secretary General of the Alexander von Humboldt  
Foundation*

<b>17:30 – 18:00</b>	<b>PLENARY LECTURE</b> <b>THE ALEXANDER VON HUMBOLDT FOUNDATION PROGRAMS</b> <b>Dr. Gisela Janetzke</b> <i>Deputy Secretary General of the Alexander von Humboldt Foundation</i>
<b>18:00 – 18:30</b>	<b>CHAMBER MUSIC CONCERT</b> <b>String quartet “Cordes”</b>
<b>18:30 – 21:00</b>	<b>OPENING RECEPTION</b>

**August 06, 2010, Friday**  
**Clinical Hospital “Feofanya”**  
**Acad. Zabolotny St., 21**

<b>08:30</b>	<b>ARRIVAL OF PARTICIPANTS TO CLINICAL HOSPITAL “FEOFANYA”</b>
<b>08:30 – 09:00</b>	<b>MORNING COFFEE , COLLECTING OF TALKS FILES, POSTERS HANGING</b>
<b>09:00 – 09:20</b> <b>Hall A.</b>	<b>OPENING CEREMONY OF THE FIRST WORKING DAY OF THE HUMBOLDT KOLLEG</b> <b>WELCOMING ADDRESSES:</b> <b>Dr. Igor Semeniv</b> <i>Chief Doctor of the Clinical Hospital “Feofanya” of State Affairs Department, Ukraine</i> <b>Representative of the Embassy of the Federal Republic of Germany in Ukraine</b> <b>Representative of the Ministry of Health of Ukraine</b> <b>Representative of the State Committee of Ukraine for Science, Innovation and Informatization</b> <b>Acad. NASU Prof. Dr. Anatoliy Samoilenko</b> <i>Director of the Kyiv Institute of Mathematics</i> <b>Dr. Gisela Janetzke</b>

	<p><i>Deputy Secretary General of the Alexander von Humboldt Foundation</i></p> <p><b>Prof. Dr. Dmitro Bazyka</b></p> <p><i>Deputy director of the Scientific Center of Radiation Medicine, AMS of Ukraine</i></p>
<b>09:20 – 11:25</b> <b>Hall A.</b>	<b>PLENARY LECTURES</b>
09:20 – 09:50	<p><b>Bazyka, Dmitro</b></p> <p><i>Scientific Center of Radiation Medicine, AMS of Ukraine, Ukraine</i></p> <p><b>MATHEMATICAL APPROACH IN RADIATION MEDICINE – A STEP FOR RADIATION EFFECTS VALIDATION.</b></p>
09:50 – 10:20	<p><b>Clark, Timothy</b></p> <p><i>Friedrich-Alexander-Universitat Erlangen-Nürnberg, Germany</i></p> <p><b>MOLECULAR-DYNAMICS SIMULATIONS ON SIGNAL TRANSDUCTION</b></p>
10:20 – 10:30	<p><b>Strokan, Andrii</b></p> <p><i>Clinical hospital "Feofaniya" of State Affairs Department, Ukraine</i></p> <p><b>MULTIPROFILE HIGHLY SPECIALIZED MEDICAL AID IN THE CLINICAL HOSPITAL "FEOFANIYA"</b></p>
10:35 – 10:55	<p><b>Lushchyk, Ulyana</b></p> <p><i>Head of Scientific Department and International Cooperation of the Clinical Hospital "Feofaniya" of State Affairs Department, Ukraine</i></p> <p><b>1) R&amp;D DEPARTMENT IN DEVELOPMENT OF UP-TO-DATE MEDICAL DEVICES AND TECHNOLOGIES IN MODERN CLINICAL HOSPITAL "FEOFANIYA"</b></p> <p><b>2) MODERN MODELS OF THE LIVING ORGANISMS FUNCTIONING AT NORMAL AND PATHOLOGICAL CONDITIONS</b></p>
10:55 – 11:25	<p><b>Kukush, Alexander</b></p> <p><i>Taras Shevchenko National University of Kyiv, Ukraine</i></p> <p><b>ESTIMATION OF RADIATION RISK ACCOUNTING FOR CLASSICAL AND BERKSON</b></p>

	<b>ERRORS IN DOSES FROM THE CHORNOBYL ACCIDENT</b>
<b>11:25 – 12:05</b>	<b>COFFEE, YOUNG SCIENTISTS POSTER SECTION “LIFE SCIENCE” (COMPETITION)</b>
<b>12:10 – 14:15</b> Hall A.	<b>SECTION: “Brain and nerves problem”</b> Moderation: Dmytro Bazyka
12:10 – 12:30	<b>Gorlov, Dmytro, Kvasnytsia, Marina</b> <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute', Ukraine</i> <b>MEDICAL IMAGE PROCESSING AND 3D TECHNOLOGIES FOR BIOMEDICAL RESEARCH AND PATIENT-SPECIFIC HEALTHCARE</b>
12:30 – 12:50	<b>Popovych, Oleksandr</b> <i>Institute of Neuroscience and Medicine - Neuromodulation (INM-7), Research Center Juelich, Germany</i> <b>MACROSCOPIC ENTRAINMENT OF NEURONAL ENSEMBLES WITH APPLICATION TO DEEP BRAIN STIMULATION</b>
12:50 – 13.20	<b>Sudakov, Oleksandr</b> <i>Radiophysics Faculty, National T.Shevchenko University of Kyiv and Centre for Medical and Biotechnical Research NAS of Ukraine, Ukraine</i> <b>PARALLEL SOFTWARE FOR MODELLING COMPLEX NONLINEAR DYNAMICS IN LARGE NEURONAL NETWORKS OF THE BRAIN</b>
13.25 – 13.45	<b>Krishtal, Oleg</b> <i>Bogomoletz Institute of Physiology, Kyiv, Ukraine</i> <b>HOW THE PAIN STARTS</b>
13.45 – 14.00	<b>Romanenko, Nataliya</b> <i>Clinical hospital “Feofania” of Ukrainian State Administration, Ukraine</i> <b>ACTUAL ISSUES IN ORGANIZATION OF NEUROLOGICAL AID IN THE CLINICAL HOSPITAL "FEOFANIYA"</b>
14.00 – 14.15	<b>Voznyak, Oleksander</b> <i>Clinical hospital “Feofania” of Ukrainian State</i>

	<p><i>Administration, Ukraine</i>  COMBINED TREATMENT OF PROLACTIN-SECRETING PITUITARY ADENOMAS</p>
<p><b>12:10 – 14:15</b>  Hall B.</p>	<p><b>YOUNG SCIENTISTS SECTION “Life Science – I” (COMPETITION)</b>  Moderation: Alexander Kukush</p>
<p>12:10 – 12:20</p>	<p><b>Bogatyrova, Olga</b>  <i>Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Ukraine</i>  <b>CREATION OF GENE EXPRESSION SIGNATURE FOR RENAL CLEAR-CELL CARCINOMAS</b></p>
<p>12:20 – 12:30</p>	<p><b>Kyselova, Olga</b>  <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute', Ukraine</i>  <b>METHODS OF NONLINEAR DYNAMICS FOR THE ANALYSIS OF HEART RATE VARIABILITY</b></p>
<p>12:30 – 12:40</p>	<p><b>Riabets, Ludmyla</b>  <i>Center for Innovative Medical Technologies "Veritas IT Med", Ukraine</i>  <b>A NEW INNOVATIVE TECHNOLOGY "SMART OPTIC CAPILLAROSCOPY" AS A MUTUAL INTELLECTUAL PRODUCT</b></p>
<p>12:40 – 12:50</p>	<p><b>Gavrilyuk, Oleg</b>  <i>Center for Innovative Medical Technologies "Veritas IT Med", Ukraine</i>  <b>DETECTION OF DYSFUNCTIONING IN THE CARDIOVASCULAR SYSTEM WITH HEMODYNAMIC LAB</b></p>
<p>12:50 – 13:00</p>	<p><b>Stukalin, Vladislav</b>  <i>Clinical hospital “Feofania” of Ukrainian State Administration, Ukraine</i>  <b>IMPLEMENTATION OF LOGICAL SCHEMES IN PHYSIOTHERAPEUTIC DEPARTMENT OF THE CLINICAL HOSPITAL "FEOFANIYA"</b></p>
<p>13:00 – 13:10</p>	<p><b>Legka, Ivanna</b>  <i>Clinic of innovative medical technologies "Victoria Veritas", Ukraine</i>  <b>METHOD OF USAGE OF COMBINATION OF MEDICINES FOR CORRECTION OF THE ARTERIAL-VEINUS-LIQUOR DISBALANCE</b></p>
<p>13:15 – 13:25</p>	<p><b>Bubnov, Rostyslav</b></p>

	<p><i>Clinical Hospital “Feofaniya” of Ukrainian State Administration, Ukraine</i></p> <p><b>MATHEMATICAL MODELING IN MODERN ULTRASONOGRAPHY</b></p>
13:25 – 13:35	<p><b>Udod, Maxim</b> <i>Clinic of innovative medical technologies "Victoria Veritas", Ukraine</i></p> <p><b>MATHEMATICAL MODELING IN THE NEUROREHABILITATION OF ACUTE PATIENTS BY WAY OF AN EXAMPLE OF EFFICIENT TREATMENT OF PATIENTS WITH APALLIC SYNDROME</b></p>
13:35 – 13:45	<p><b>Turianska, Nataliya</b> <i>Clinic of innovative medical technologies “Victoria Veritas”, Ukraine</i></p> <p><b>A MODEL OF CONVULSIVE REACTIONS OF THE BRAIN ACCORDING TO NEURODYNAMICS</b></p>
12:10 – 14:15 Hall C.	<p><b>YOUNG SCIENTISTS SECTION “Life Science – II” (COMPETITION)</b> Moderation: Tatiana Shubina</p>
12:10 – 12:20	<p><b>Glushchenko, Mykola</b> <i>T. Shevchenko National University of Kyiv, Ukraine</i></p> <p><b>EXPLORING CHEMICAL SPACE FOR THE NEED OF MEDICINAL CHEMISTRY - THEORY AND PRACTICE</b></p>
12:20 – 12:30	<p><b>Dudchenko, Nataliia</b> <i>Semenenko Institute of Geochemistry, Mineralogy and Ore Formation, National Academy of Sciences of Ukraine, Ukraine</i></p> <p><b>NANOCRYSTALS IN HUMAN BODY</b></p>
12:30 – 12:40	<p><b>Gaiday, Alexander</b> <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute', Ukraine</i></p> <p><b>COMPUTATIONAL AND EXPERIMENTAL STUDIES OF NEW CAGE COMPOUNDS - POTENTIAL ANTIVIRAL DRUGS</b></p>

12:40 – 12:50	<p><b>Grechanovsky, Alexey</b>  <i>Semenenko Institute of Geochemistry, Mineralogy and Ore Formation, National Academy of Sciences of Ukraine, Ukraine</i></p> <p><b>INFLUENCE OF ELASTIC CONSTANTS AND CHEMICAL BONDING ON RADIATION STABILITY OF SILICATES AND METAL OXIDES BY COMPUTER SIMULATIONS</b></p>
12:50 – 13:00	<p><b>Masiuk, Sergii</b>  <i>Scientific Research Center for Radiation Medicine, Ukraine</i></p> <p><b>CALCULATION OF THE STOCHASTIC MODE OF INDIVIDUAL THYROID DOSE FOR THE COHORT'S MEMBER</b></p>
13:00 – 13:10	<p><b>Korotich, Igor</b>  <i>Clinical Hospital "Feofaniya" of Ukrainian State Administration, Ukraine</i></p> <p><b>MULTIPROFILE HIGHLY SPECIALIZED MEDICAL AID IN THE CLINICAL HOSPITAL "FEOFANIYA"</b></p>
13:15 – 13:25	<p><b>Mekler, Alexey</b>  <i>The Bonch-Bruевич Saint-Petersburg State University of Telecommunications, Russia</i></p> <p><b>THE TUMOUR HISTOLOGIC SECTIONS PROCESSING WITH DIAGNOSTIC PURPOSES</b></p>
13:25 – 13:35	<p><b>Schwartz, Dmitri</b>  <i>Saint Petersburg State Polytechnic University, Russia</i></p> <p><b>THE CLASSIFICATION OF THE GENE EXPRESSION PROFILES IN BRAIN TUMOUR</b></p>
13:35 – 13:45	<p><b>Kolomiychuk, Oleg</b>  <i>Institute of Mathematics, National Academy of Sciences of Ukraine, Ukraine</i></p> <p><b>TASKS OF OBSERVATIONS IN ALMOST CONSERVATIVE DYNAMIC SYSTEMS</b></p>
14:10 – 15:00	<p><b>DINNER AND POSTER SECTION:  "MEDICINE AND MATHEMATICAL MODELS IN MEDICINE"</b></p>
15:00 – 17:00	<p><b>SECTION: "Mathematical Modeling for Medicine"</b></p>

<b>Hall A.</b>	Moderation: Valentin Yatsenko
15.00 – 15.20	<b>Novytskyy, Viktor</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine, Ukraine</i> <b>MATHEMATICAL MODELING PROCESS IN APPLIED HYDRO- AND HEMODYNAMICS</b>
15.20 – 15.40	<b>Rybalko, Svetlana, Palchykovska, Larisa</b> <i>Institute of Epidemiology and Infection Diseases, Ukraine</i> <b>USE OF THE MODEL DNA-CONTAINING ENZYME SYSTEMS TO SEARCH FOR INHIBITORS OF NUCLEIC ACID SYNTHESIS IN VIRUSES AND BACTERIA</b>
15.40 – 16.00	<b>Melnik, Roderick</b> <i>Wilfrid Laurier University, Canada</i> <b>RNA NANOSTRUCTURES AND THEIR PROPERTIES: A MODELLING PERSPECTIVE</b>
16.00 – 16.20	<b>Prysyazhnyuk, Anatoly</b> <i>SI “Research Center for Radiation Medicine of Academy of Medical Sciences of Ukraine”, Ukraine</i> <b>CANCER RISK IN AFFECTED BY CHORNOBYL ACCIDENT GROUPS OF UKRAINIAN POPULATION</b>
16.20 – 16.40	<b>Salminen, Lotta</b> <i>University of Tampere, Finland</i> <b>DIABETIC RETINOPATHY - A CHALLENGE TO PRIMARY HEALTH CARE</b>
<b>15:00 – 17:00</b> <b>Hall B.</b>	<b>SECTION: “Mathematical Modeling for biological and environmental problems”</b> Moderation: Oleksandr Popovych
15.00 – 15.20	<b>Maiboroda, Rostyslav</b> <i>T. Shevchenko National University of Kyiv, Ukraine</i> <b>STATISTICAL ANALYSIS OF MIXTURES WITH APPLICATIONS TO DNA MICROARRAY DATA</b>
15.20 – 15.40	<b>Nastenکو, Ievgen</b> <i>National M. Amosov Institute of Cardio-Vascular Surgery, National Technical University of Ukraine 'Kyiv Polytechnic Institute'(Intercollegiate College of Medical Engineering) , Ukraine</i> <b>MATHEMATICAL STATISTIC IN LIFE</b>

	<b>SCIENCES. WHAT IS DESIRABLE?</b>
15.40 – 16.00	<b>Olkhovsky, Vladislav</b> <i>Institute for Nuclear Research, National Academy of Sciences of Ukraine, Ukraine</i> <b>THE PROBLEMS OF THE ORIGIN OF BIOLOGIC LIFE AND OF THE REDUCTIONISM OF BIOLOGY TO PHYSICS (QUANTUM MECHANICS)</b>
16.00 – 16.20	<b>Koshmanenko, Volodymyr</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine, Ukraine</i> <b>THE CONFLICT TRIAD MODEL WITH APPLICATIONS TO INFECTION DISTRIBUTION</b>
16.20 – 16.40	<b>Quak, Ewald</b> <i>TUT Institute of Cybernetics, Estonia</i> <b>BALTIC WAY: THE POTENTIAL OF CURRENTS FOR ENVIRONMENTAL MANAGEMENT OF THE BALTIC SEA</b>
16.40 – 17.00	<b>Hryniv, Rostyslav</b> <i>Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, National Academy of Sciences of Ukraine, Ukraine</i> <b>INVERSE SCATTERING FOR SCHRÖDINGER OPERATORS WITH SINGULAR MIURA POTENTIALS</b>
<b>15:00 – 17:00</b> <b>Hall C.</b>	<b>SECTION: “Biology and Chemistry for Life Sciences”</b> Moderation: Timothy Clark
15.00 – 15.20	<b>Komarov, Igor</b> <i>T. Shevchenko National University of Kyiv, Ukraine</i> <b>EXPLORING CHEMICAL SPACE FOR THE NEED OF MEDICINAL CHEMISTRY -- THEORY AND PRACTICE</b>
15.20 – 15.40	<b>Rozhenko, Alexander</b> <i>Institute of Organic Chemistry, National Academy of Sciences of Ukraine, Ukraine</i> <b>CALIXARENES AS PROTOTYPES OF BIOCHEMICAL RECEPTORS: A QUANTUM CHEMICAL INVESTIGATION</b>

15.40 – 16.00	<p><b>Kryachko, Eugene</b>  <i>Bogolyubov Institute for Theoretical Physics, National Academy of Sciences of Ukraine, Ukraine</i></p> <p><b>GOLD CLUSTERS AND NON-CLASSICAL X-H...AU HYDROGEN BONDS: COMPUTATIONAL AND NANO-BIOPHYSICS APPLICATIONS</b></p>
16.00 – 16.20	<p><b>Skok, Maryna</b>  <i>Palladin Institute of Biochemistry, National Academy of Sciences of Ukraine, Ukraine</i></p> <p><b>NICOTINIC ACETYLCHOLINE RECEPTORS: UNIVERSAL ROLE AND MEDICAL SIGNIFICANCE</b></p>
16.20 – 16.40	<p><b>Borisjuk, Nikolai</b>  <i>Biotechnology Foundation Laboratories, Thomas Jefferson University, USA</i></p> <p><b>METHABOLIC ENGINEERING OF PLANT BIOMASS FOR BIOFUEL PRODUCTION</b></p>
16.40 – 17.00	<p><b>Volkov, Roman</b>  <i>Yu. Fedkovich National University of Chernivtsi</i></p> <p><b>BIOTECHNOLOGICAL IMPROVEMENT OF CULTIVATED PLANTS RESISTANCE TO ENVIRONMENTAL STRESS</b></p>
17:00 – 19:00 Hall A.	<p><b>ROUND TABLE DISCUSSION «YOUNG TALENTS MANAGEMENT»</b></p> <p><b>Lushchyk, Ulyana</b>  <i>Clinical hospital "Feofaniya", Ukraine</i></p> <p><b>AN ALGORITHM OF TALENT MANAGEMENT IN SCIENTIFIC MANAGEMENT</b></p> <p><b>Abashnik, Volodymyr</b>  <i>Kharkiv University of Economy and Law (HEPU) Ukraine</i></p> <p><b>THE YOUNG TALENT IN THE HUMANITIES</b></p>
19:00 – 19:30	<b>COLLECTING OF THE PARTICIPANTS IN BUSES</b>
20:00 – 22:00	<b>BANQUET IN RESTAURANT «MYSLYVSKIY KHUTIR»</b>

**August 07, 2010, Saturday**  
**Taras Shevchenko National University of Kyiv**  
**Volodymyrska St., 60**

<b>09:00 – 09:15</b> <b>Assembly Hall</b>	<b>WELCOMING ADDRESSES OF PRO-RECTOR IN SCIENTIFIC WORK OF THE TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV</b> <b>Prof. Dr. Valerii Grygoruk</b>
<b>09:15 – 11:50</b> <b>Assembly Hall</b>	<b>PLENARY LECTURES</b>
<b>09:15 – 09:45</b>	<b>Kolokoltsov, Vassili</b> <i>University of Warwick, UK</i> <b>CONSTRUCTION OF LINEAR AND NONLINEAR MARKOV PROCESSES VIA SDES DRIVEN BY NONLINEAR LÉVY NOISE</b>
<b>09:45 – 10:15</b>	<b>Xue-Mei Li</b> <i>University of Warwick, UK</i> <b>STOCHASTIC ANALYSIS OF PATH SPACES</b>
<b>10:15 – 10:45</b>	<b>Imkeller, Peter</b> <i>Humboldt-Universitaet zu Berlin, Germany</i> <b>STOCHASTIC DYNAMICS OF PALEO-CLIMATIC TIME SERIES</b>
<b>10:50 – 11:20</b>	<b>Tarkhanov, Nikolai</b> <i>Institute of Mathematics, University of Potsdam, Germany</i> <b>NUMERICAL EXPERIMENTS FOR THE RIEMANN HYPOTHESIS</b>
<b>11:20 – 11:50</b>	<b>Kochubei, Anatoly</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine, Ukraine</i> <b>DISTRIBUTED ORDER CALCULUS AND ULTRASLOW PHYSICAL PROCESSES</b>
<b>11:50 – 12:20</b>	<b>COFFEE, POSTER SECTION „Mathematics“</b>
<b>12:20 – 13:40</b> <b>Assembly Hall</b>	<b>SECTION “Mathematics – I”</b> Moderation: Nikolai Tarkhanov
<b>12.20 – 12.40</b>	<b>Fursikov, Andrei</b>

	<i>M. V. Lomonosov Moscow State University, Russia</i> <b>OPTIMAL NEUMANN CONTROL FOR THE STEADY-STATE 2D NAVIER-STOKES EQUATIONS</b>
12.40 – 13.00	<b>Goritsky, Andrey</b> <i>M. V. Lomonosov Moscow State University, Russia</i> <b>INERTIAL MANIFOLDS AND GAP PROPERTY FOR DISSIPATIVE HYPERBOLIC EQUATIONS</b>
13.00 – 13.20	<b>Kmit, Irina</b> <i>Institute for Applied Problems of Mechanics and Mathematics, National Academy of Sciences of Ukraine</i> <b>FREDHOLM ALTERNATIVE FOR HYPERBOLIC MODELS IN LASER DYNAMICS</b>
<b>12:20 – 13:40</b> <b>Aud. 266</b>	<b>SECTION “Mathematics – II”</b> Moderation: Anatoly Kochubei
12.20 – 12.40	<b>Mikhailets, Vladimir</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>ABOUT THE HILL-SCHRÖDINGER OPERATORS.</b>
12.40 – 13.00	<b>Murach, Aleksandr</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>HÖRMANDER SPACES ON MANIFOLDS AND THEIR APPLICATIONS</b>
13.00 – 13.20	<b>Pankrashkin, Konstantin</b> <i>University Paris Sud</i> <b>ON THE AHARONOV-BOHM OPERATORS</b>
<b>12:20 – 13:40</b> <b>Aud. 204</b>	<b>SECTION “Mathematics – III”</b> Moderation: Vassili Kolokoltsov
12.20 – 12.40	<b>Urusov, Mikhail</b> <i>University of Ulm, Institute of Mathematical Finance, Germany</i> <b>ON THE MARTINGALE PROPERTY OF CERTAIN LOCAL MARTINGALES</b>
12.40 – 13.00	<b>Samoilenko, Igor</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>LONG-TIME BEHAVIOR OF RANDOM PROCESSES WITH RARE BIG JUMPS</b>
13.00 – 13.20	<b>Omelchenko, Oleh</b>

	<p><i>Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany and Institute of Mathematics, Kyiv, Ukraine</i></p> <p><b>COUPLING AND MOTION OF CHIMERA STATES</b></p>
<b>13:20 – 15:00</b>	<p><b>LUNCH IN “Domashnja Kuchnja”, Bogdana Khmel'nyts'kogo St., 16-22 (by badge)</b></p>
<b>15:00 – 17:00</b> <b>Assembly Hall</b>	<p><b>YOUNG SCIENTISTS SECTION “Mathematics – I” (COMPETITION)</b> Moderation: Xue-Mei Li</p>
15:00 – 15:10	<p><b>Dilna, Nataliya</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i></p> <p><b>UNIQUE SOLVABILITY OF THE INITIAL VALUE PROBLEM FOR NONLINEAR FUNCTIONAL DIFFERENTIAL EQUATIONS</b></p>
15:10 – 15:20	<p><b>Drozd-Korolova, Olena, Korolyov, Alexey</b> <i>T. Shevchenko National University of Kyiv</i></p> <p><b>RADIONUCLEID DYNAMICS STUDY</b></p>
15.25 – 15.35	<p><b>Grushka, Yaroslav</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i></p> <p><b>THE CONSTANCY PROBLEM OF PROJECTION TRACE</b></p>
15.35 – 15.45	<p><b>Protsakh, Nataliya</b> <i>Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NAS of Ukraine, Lviv, Ukraine</i></p> <p><b>ON BEHAVIOUR OF SOLUTIONS OF MIXED PROBLEM FOR ULTRAPARABOLIC EQUATION</b></p>
15.50 – 16.00	<p><b>Ryabukha, Tatiana</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i></p> <p><b>THERMODYNAMIC LIMIT OF OBSERVABLE EVOLUTION</b></p>
16.00 – 16.10	<p><b>Zhariy, Mariya</b> <i>Johannes Kepler University, Austria</i></p> <p><b>SPARSE AND ADAPTIVE METHODS FOR SOLVING LINEAR ILL-POSED INVERSE PROBLEMS</b></p>
<b>15:00 – 17:00</b>	<p><b>YOUNG SCIENTISTS SECTION “Mathematics – II”</b></p>

<b>Aud. 266</b>	<b>(COMPETITION)</b> Moderation: Vladimir Mikhailets
15:00 – 15:10	<b>Chabanenko, Dmitry</b> <i>Bogdan Khmelnytsky Cherkassy National University</i> <b>NONLINEAR MULTIAGENT SYSTEMS WITH RELATIONS OF CONCURRENCY, COOPERATION AND DOMINANCE</b>
15:10 – 15:20	<b>Goriunov, Andrii</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>ON ONE-DIMENSIONAL DIFFERENTIAL OPERATORS WITH DISTRIBUTION COEFFICIENTS</b>
15.25 – 15.35	<b>Goloshchapova, Nataly</b> <i>Donetsk Institute of Applied Mathematics and Mechanics</i> <b>ON THE SPECTRAL PROPERTIES OF MULTI-DIMENSIONAL SCHRÖDINGER OPERATOR WITH POINT INTERACTIONS</b>
15.35 – 15.45	<b>Popov, Andrey</b> <i>T. Shevchenko National University of Kyiv</i> <b>ASYMPTOTIC EXPANSIONS OF THE EIGENELEMENTS OF SPECTRAL PROBLEMS WITH QUICKLY OSCILLATING COEFFICIENTS IN THIN PERFORATED DOMAINS</b>
15.50 – 16.00	<b>Sivak, Olena</b> <i>T. Shevchenko National University of Kyiv</i> <b>ASYMPTOTIC ANALYSIS OF A QUASILINEAR ELLIPTIC PROBLEM WITH DIFFERENT BOUNDARY MULTI-PHASE INTERACTIONS IN A PERFORATED DOMAIN</b>
16.00 – 16.10	<b>Zrazhevsky, Aleksey</b> <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute'</i> <b>THE UNIFORM CONVERGENCE IN THE CASE OF THE WRAPPING OF REGRESSION CLASS BY THE POLYNOMIAL TYPE FUNCTIONS</b>
16.15 – 16.25	<b>Davydok, Anastasia</b> <i>Vasyl Stefanyk Precarpathian National University</i> <b>COMPRESSION AND TORSION OF SHAFT WITH VARIABLE FLEXURAL STIFFNESS</b>

16.25 – 16.35	<b>Zubchenko, Volodymyr</b> <i>T. Shevchenko National University of Kyiv</i> <b>THE RATE OF CONVERGENCE OF EULER SCHEME FOR STOCHASTIC DIFFERENTIAL EQUATIONS WITH NON-LIPSCHITZ DIFFUSION AND POISSON MEASURE</b>
<b>15:00 – 17:00</b> <b>Aud. 204</b>	<b>YOUNG SCIENTISTS SECTION “Mathematics – III” (COMPETITION)</b> Moderation: Andrei Fursikov
15:00 – 15:10	<b>Khripchenko, Nikolay</b> <i>Kharkiv V. N. Karazin National University</i> <b>AUTOMORPHISMS OF FINITARY INCIDENCE RINGS</b>
15:10 – 15:20	<b>Kriukova, Galyna</b> <i>T. Shevchenko National University of Kyiv</i> <b>ON NETWORK SYNCHRONIZATION</b>
15.25 – 15.35	<b>Moklyachuk, Oleksandr</b> <i>T. Shevchenko National University of Kyiv</i> <b>MODELS OF STOCHASTIC PROCESSES IN <math>D(V,W)</math> SPACES</b>
15.35 – 15.45	<b>Shvai, Nadya</b> <i>T. Shevchenko National University of Kyiv</i> <b>ESTIMATION OF A TWO COMPONENT SYMMETRIC MIXTURE MODEL</b>
15.50 – 16.00	<b>Shvai, Olexander</b> <i>T. Shevchenko National University of Kyiv</i> <b>ESTIMATION OF THE RATE OF CONVERGENCE FOR THE EULER APPROXIMATION OF STOCHASTIC DIFFERENTIAL EQUATION WITH ADDITIONAL PROCESS-PARAMETER</b>
16.00 – 16.10	<b>Tsvir, Zhanna</b> <i>T. Shevchenko National University of Kyiv</i> <b>GENERALIZED QUANTUM KINETIC EQUATION</b>
16.15 – 16.25	<b>Usoltseva, Elena</b> <i>T. Shevchenko National University of Kyiv</i> <b>PARAMETRIC AND NONPARAMETRIC ESTIMATORS IN AFTM UNDER MEASUREMENT ERROR</b>
16:40 – 17:50	<b>COFFEE, YOUNG SCIENTISTS POSTER SECTION “MATHEMATICS” (COMPETITION)</b>

<b>18:00 – 18:30</b>	<b>PLENARY LECTURE</b> <b>Antoniouk, Alexandra</b> <i>Kyiv Institute of Mathematics NAS Ukraine, Ukraine</i> <b>MATHEMATICS IS THE SCIENCE OF LIFE</b> <b>(IN MEMORY OF ALEXANDER ANTONIOUK)</b> <b>Reminiscences.</b>
<b>18:30 – 19:00</b>	<b>Collecting of the participants to the buses.</b> <b>Transport to the Riverside Station.</b>
<b>19:00 – 22:00</b>	<b>DINNER ON BOARD.</b>

**August 08, 2010, Sunday**  
**National Technical University of Ukraine “Kyiv Polytechnic Institute”**  
**Prospect Peremogy 37**

<b>09:00 – 09:20</b> <b>Academic Council Hall</b>	<b>WELCOMING ADDRESSES TO THE PARTICIPANTS OF THE CONFERENCE</b> <b>Novogrudskaya, Rina</b> <b>KYIV POLYTECHNIC INSTITUTE IS THE ALMA MATER OF TECHNICAL SCIENCE IN UKRAINE</b>
<b>09:00 – 11:35</b> <b>Academic Council Hall</b>	<b>PLENARY LECTURES</b> Moderation: Peter Imkeller
<b>09:00 – 09:30</b>	<b>Kurzynski, Michal</b> <i>Adam Mickiewicz University, Poland</i> <b>FRACTAL NETWORKS MODEL THE CONFORMATIONAL TRANSITION DYNAMICS IN NATIVE PROTEINS</b>
<b>09:30 – 10:00</b>	<b>László, János F.</b> <i>Institute for Research Organisation, Hungarian Academy of Sciences</i> <b>PHYSIOLOGICAL EFFECTS OF STATIC MAGNETIC FIELD EXPOSURE</b>

10:00 – 10:30	<b>Nesenenko, Sergiy</b> <i>Technische Universitaet Darmstadt</i> <b>HOMOGENIZATION OF VISCOPLASTIC MODELS OF MONOTONE TYPE</b>
10:35 – 11:05	<b>Boi, Luciano</b> <i>Ecole des Hautes Etudes en Sciences Sociales, France</i> <b>WHEN TOPOLOGY AND BIOLOGY "MEETS" FOR LIFE</b>
11:05 – 11:35	<b>Makarenko, Oleksandr</b> <i>Institute for Applied System Analysis at National Technical University of Ukraine 'Kyiv Polytechnic Institute', Ukraine</i> <b>BIOLOGICALLY INSPIRED MODELS AND NEW PROBLEMS FOR LIFE SCIENCE</b>
11:35 – 12:00	<b>COFFEE</b>
12:00 – 13:00 <b>Academic Council Hall</b>	<b>SECTION “Mathematics – I”</b> Moderation: Michal Kurzynski
12:00 – 12:20	<b>Gerasimenko, Viktor</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>THE VON NEUMANN HIERARCHY FOR BOSE AND FERMI PARTICLES</b>
12.20 – 12.40	<b>Blavatska, Viktoria</b> <i>Institute for Condensed Matter Physics, National Academy of Sciences of Ukraine</i> <b>POLYMERS IN CROWDED ENVIRONMENT: GLOBULE-COIL TRANSITIONS AND SHAPE ANISOTROPY</b>
12.40 – 13.00	<b>Shchepanyuk, Gennadiy</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>ON EXPONENTIAL DECAY OF CORRELATIONS IN QUANTUM LATTICE SYSTEMS OF COMPACT SPINS WITH FINITE-RANGE CONTINUOUS INTERACTION AT THE SUFFICIENTLY SMALL MASS OF THE CONSTITUENT PARTICLES</b>

<b>12:00 – 13:00</b> <b>Administrative Council Hall</b>	<b>SECTION “Mathematics – II”</b> Moderation: János F. László
12:00 – 12:20	<b>Zelinskyi, Iurii</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>CONTINUOUS MAPPINGS OF DOMAINS IN SPHERE</b>
12.20 – 12.40	<b>Sakhno, Lyudmyla</b> <i>T. Shevchenko National University of Kyiv</i> <b>STATISTICAL INFERENCE FOR STATIONARY PROCESSES AND FIELDS USING HIGHER ORDER INFORMATION</b>
12.40 – 13.00	<b>Shevchuk, Igor</b> <i>MBtech Powertrain GmbH</i> <b>SELF-SIMILAR SOLUTION OF TRANSPORT EQUATIONS IN ROTATING CONE-AND-PLATE DEVICES</b>
<b>12:00 – 13:00</b> <b>The Big Physical Lecture Hall</b>	<b>SECTION “Mathematics – III”</b> Moderation: Sergiy Nesenenko
12:00 – 12:20	<b>Kolganova, Elena</b> <i>Joint Institute for Nuclear Research, Dubna, Russia</i> <b>EFIMOV PROPERTIES OF THREE-ATOMIC SYSTEMS</b>
12.20 – 12.40	<b>Korol, Ihor</b> <i>Uzhhorod National University, Ukraine</i> <b>PERIODICAL SOLUTIONS OF THE SINGULAR IMPULSIVE DIFFERENTIAL SYSTEMS</b>
12.40 – 13.00	<b>Sapaty, Peter</b> <i>Institute of Mathematical Machines and Systems Problems, National Academy of Sciences</i> <b>HIGH-LEVEL TECHNOLOGY TO MANAGE DISTRIBUTED DYNAMIC SYSTEMS</b>

<b>13:00- 14:00</b> <b>Academic</b> <b>Council Hall</b>	<b>Shramko, Yaroslav</b> <i>Kryvyi Rih State Pedagogical University, Ukraine</i> <b>TRUTH AS A MATHEMATICAL OBJECT</b>  <b>AWARDING OF THE WINNERS OF YOUNG</b> <b>SCIENTISTS SECTIONS</b> <b>CLOSING CEREMONY</b> <b>CLOSING DINNER</b>
<b>14:00 – 16:00</b>	<b>BUS CITY TOUR</b>

**POSTER SECTIONS:**

<b>August 06</b>	
<b>11:25 – 12:05</b>	<b>YOUNG SCIENTISTS POSTER SECTION “LIFE SCIENCE” (COMPETITION)</b>
	<b>Muehlbacher, Markus</b> <i>University Clinic Erlangen</i> <b>INSIGHTS INTO BLOOD-BRAIN BARRIER PERMEABILITY</b>
	<b>Pashenko, Aleksander</b> <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute'</i> <b>OXYGEN-DOPED NANODIAMONDS</b>
	<b>Tynkevich, Yurii</b> <i>Yu. Fedkovich National University of Chernivtsi</i> <b>5S RDNA OF ROSACEAE: POTENTIAL FOR PHYLOGENY RECONSTRUCTION</b>
	<b>Zhuk, Tatiana</b> <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute'</i> <b>"GREEN" SYNTHESIS OF THE NEUROPROTECTIVE DRUG "MEMANTINE"</b>
<b>14:15 – 15:00</b>	<b>POSTER SECTION:</b>

	<p><b>“MEDICINE AND MATHEMATICAL MODELS IN MEDICINE”</b></p>
	<p><b>Guryanov, Vitaliy</b>  <i>Donetsk National Medical University</i>  <b>IDENTIFICATION OF RISK GROUPS FOR DEVELOPMENT OF SEVERE CONSEQUENCES AMONG PATIENTS WITH DIABETES MELLITUS USING "KOHONEN'S NEURONAL NETWORKS MODEL"</b></p>
	<p><b>Khalangot, Mykola</b>  <i>V.P. Komisarenko Institute of Endocrinology and Metabolism AMS Ukraine</i>  <b>IDENTIFICATION OF RISK GROUPS FOR DEVELOPMENT OF SEVERE CONSEQUENCES AMONG PATIENTS WITH DIABETES MELLITUS USING "KOHONEN'S NEURONAL NETWORKS MODEL"</b></p>
	<p><b>Maksimenko, Vitaliy</b>  <i>National M. Amosov Institute of Cardio-Vascular Surgery, National Technical University of Ukraine 'Kyiv Polytechnic Institute'</i>  <b>ACTUAL QUESTIONS ABOUT BIOMEDICAL-ENGINEERING SPECIALISTS IN UKRAINE</b></p>
	<p><b>Muhomor, Olexandr</b>  <i>Clinical hospital “Feofanya” of Ukrainian State Administration</i></p>
	<p><b>Myasnyy, Ivan</b>  <i>Clinical hospital “Feofanya” of Ukrainian State Administration</i></p>
	<p><b>Zelinska, Liubov</b>  <i>Borispol hospital</i>  <b>NEUROLOGICAL ASPECT OF CHERNOBYL</b></p>
	<p><b>Alexeyeva, Tetiana</b>  <i>Clinical hospital “Feofanya” of Ukrainian State</i></p>

	<p><i>Administration</i></p> <p><b>MATHEMATICAL MODELING IN THE NEUROREHABILITATION OF ACUTE PATIENTS BY WAY OF AN EXAMPLE OF EFFICIENT TREATMENT OF PATIENTS WITH APALLIC SYNDROME</b></p>
	<p><b>Derevyanko, Lyudmyla</b>  <i>Clinical hospital "Feofanya" of Ukrainian State Administration</i></p>
	<p><b>Golovach, Iryna</b>  <i>Clinical hospital "Feofanya" of Ukrainian State Administration</i></p>
	<p><b>Goncharenko, Vadim</b>  <i>Clinical hospital "Feofanya" of Ukrainian State Administration</i></p>
	<p><b>Ivankov, Olexandr</b>  <i>Clinical hospital "Feofanya" of Ukrainian State Administration</i></p>
	<p><b>Zazirnyy, Igor</b>  <i>Clinical hospital "Feofanya" of Ukrainian State Administration</i></p>
<b>August 07</b>	
<b>16:40 – 17:50</b>	<b>YOUNG SCIENTISTS POSTER SECTION "MATHEMATICS" (COMPETITION)</b>
	<p><b>Budnitska, Tetiana</b>  <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i></p> <p><b>TOPOLOGICAL CLASSIFICATION OF AFFINE OPERATORS</b></p>
	<p><b>Gapyak, Igor</b>  <i>T. Shevchenko National University of Kyiv</i></p> <p><b>SOLUTION OF BBGKY HIERARCHY OF TAGGED</b></p>

	<b>PARTICLE IN INFINITE-PARTICLE SYSTEM</b>
	<b>Gerasimova, Tatiana</b> <i>T. Shevchenko National University of Kyiv</i> <b>UNITARY SIMILARITY OF UNICELLULAR COMPACT OPERATORS</b>
	<b>Molyboga, Volodymyr</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>COMPLETENESS OF THE ROOTVECTOR SYSTEM</b>
	<b>Nakvasiuk, Iuliia</b> <i>T. Shevchenko National University of Kyiv</i> <b>HOMOGENIZATION OF THE PARABOLIC SIGNORINI BOUNDARY-PROBLEM IN A THICK PLANE JUNCTION</b>
	<b>Osipchuk, Tatiana</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>QUESTIONS OF LINEAR CONVEXITY IN <math>H^n</math></b>
	<b>Reva, Nadya</b> <i>National Technical University of Ukraine 'Kyiv Polytechnic Institute'</i> <b>CONTINUOUS PARAMETER DEPENDENCE FOR SOLUTIONS AND GREEN'S MATRICES OF ONE- DIMENSIONAL LINEAR BOUNDARY-VALUE PROBLEMS</b>
	<b>Tesko, Volodymyr</b> <i>Institute of Mathematics, National Academy of Sciences of Ukraine</i> <b>STOCHASTIC INTEGRAL OF HITSUDA- SKOROHOD TYPE CONNECTED WITH PROCESSES OF MEIXNER TYPE</b>
	<b>Sadovyj, Dmytro</b> <i>T. Shevchenko National University of Kyiv</i> <b>HOMOGENIZATION OF QUASILINEAR</b>

	<b>PARABOLIC PROBLEMS IN A THICK TWO-LEVEL JUNCTION</b>
	<b>Stiepanova, Kateryna</b> <i>Institute of Applied Mathematics and Mechanics, National Academy of Sciences of Ukraine</i> <b>LONG-TIME EXTINCTION OF SOLUTIONS FOR SOME QUASILINEAR PARABOLIC EQUATIONS</b>