

INTERNATIONAL
SCIENCE AND TECHNOLOGY
CENTER

Luganskaya ulitsa, 9
PO Box 25, 115516 Moscow,
Russian Federation
Tel: +7 (095/501) 797-6010
Fax: +7 (095/501) 797-6047

E-mail: istcinfo@istc.ru; <http://www.istc.ru>



МЕЖДУНАРОДНЫЙ
НАУЧНО-ТЕХНИЧЕСКИЙ
ЦЕНТР

Луганская улица, 9
А/Я 25, 115516 Москва,
Российская Федерация
Тел: +7 (095/501) 797-6010
Факс: +7 (095/501) 797-6047

E-mail: istcinfo@istc.ru; <http://www.istc.ru>

Projects Approved for Funding by ISTC Governing Board at the 36th Funding Session

1. Newly Approved Projects

2755.2 Explosive and Thermochemical Welding of Pipes Having Large Diameters

Project Manager: Drennov O B; Leading Institution: VNIIEF (Sarov, N. Novgorod reg.); Collaborators: Dynamic Materials Corporation (Boulder, CO, USA), Lawrence Livermore National Laboratory / Energetic Materials Center (EMC) (Livermore, CA, USA), Lawrence Livermore National Laboratory (Livermore, CA, USA); Duration: 24 months; Funding parties: US

2893 Development and Application of Laser Photonics and Computer Simulation Methods in Prosthetic Dentistry for Denture Design Optimization

Project Manager: Shchepinov V P; Leading Institution: MIFI (Moscow); Supporting Institution: Kurchatov Research Center / Institute of Reactor Technologies and Materials (Moscow); Collaborators: Ernst Moritz Arndt Universitat Greifswald (Greifswald, Germany), European Photonics Association (Strasbourg, France), Universitat Munster / Medical Centre (Münster, Germany); Duration: 36 months; Funding parties: EU

2992 Development of Mathematical Models and Codes for Numerical Simulation of Emergency Situations Evolution and Consequences of Industrial Accidents and Terrorist Attacks on Industrial Sites with Liquefied Explosive and Toxic Gases

Project Manager: Kuleshov A A; Leading Institution: Institute of Mathematical Modelling (Moscow); Supporting Institution: Moscow State University / Department of Mechanics and Mathematics (Moscow); Collaborators: Aoyama Gakuin University (Tokyo, Japan), Lawrence Livermore National Laboratory / University of California (Livermore, CA, USA), Université Libre de Bruxelles (Brussels, Belgium), University of Central Lancashire (Preston, UK); Duration: 36 months; Funding parties: EU

3026 The Material Processing with the Two-Phase Jet Flow. (The Study of the Supersonic Two-Phase Jet Flow with the Aim to Intensify the Material Processing)

Project Manager: Killikh V E; Leading Institution: Central Research Institute of Machine Building (TsNIMash) (Korolev, Moscow reg.); Supporting Institutions: Limited Liability Enterprise "Complex Erosion Technologies RAS" (Moscow), Vavilov State Optical Institute (GOI) / Small-Scale State Enterprise "Laser Physics" (St Petersburg); Collaborators: Akros (Chambery, France), GerLoSoft (Wuppertal, Germany), Texas A&M University / College of Engineering (College Station, TX, USA), Università Degli Studi di Roma "Tor Vergata" / Department of Mechanical Engineering (Rome, Italy), von Karman Institute for Fluid Dynamics (Rhode Saint Genèse, Belgium); Duration: 36 months; Funding parties: EU

3065 Early Luminescence Diagnostic of Endoscope Accessible Forms of Cancer for Risk Groups of Population Based upon Creation and Using of Nonphototoxic Photosensitizers of Malignant Tissue and High Sensitive Stroboscopic Oncofluorometer

Project Manager: Shilov I P; Leading Institution: Russian Academy of Sciences / Institute of Radioengineering and Electronics / Fryazino Branch (Fryazino, Moscow reg.); Supporting Institutions: State Research Institute of Biological Instrument-Making (Moscow), Cancer Research Center (Moscow), Scientific and Technological Center of Unique Instrumentation (Moscow); Collaborators: University of Cologne / Clinic of Nuclear Medicine (Köln, Germany), University of Padua / Department of Biology (Padova, Italy); Duration: 36 months; Funding parties: EU US

3116 New Approaches to Bacillary Spores Desinfection with the Help of Integrated Influence with Minimal-Optimal Radiation Doses

Project Manager: Lisovenko V N; Leading Institution: VNIIEF (Sarov, N. Novgorod reg.); Supporting Institution: Nizhni Novgorod State University name after N.I. Lobachevsky (N. Novgorod, N. Novgorod reg.); Duration: 24 months; Funding parties: US

3119 Design-Theoretical and Experimental Research on Justification of Safe Use of Dispersive Fuel in a Nuclear Reactor Core
 Project Manager: Mamaev M I; Leading Institution: VNIIEF (Sarov, N. Novgorod reg.); Collaborator: General Atomics (San Diego, CA, USA); Duration: 36 months; Funding parties: US

3156 Conformational Changes of Proteins in Mental Disorders: Detection, Development of Assay Methods And Searching for Ways of Correction
 Project Manager: Tokarev V A; Leading Institution: VNIIEF (Sarov, N. Novgorod reg.); Supporting Institutions: Institute of Psychiatry (Moscow), Institute of Physical Chemical Medicine (Moscow); Collaborators: Ernst-Moritz-Arndt-Universität Greifswald / Institut für Pathologie (Greifswald, Germany), National University of Ireland (Galway, Ireland), Universität Leipzig / Institut fuer Medizinische Physik und Biophysik (Leipzig, Germany), University of Maryland / School of Medicine / Department of Biochemistry and Molecular Biology (Baltimore, MD, USA); Duration: 30 months; Funding parties: EU

3169 Development of 30 GHz/30 MW Pulsed Gyrokystron for International Electron-Positron Super-Collider Programme
 Project Manager: Petelin M I; Leading Institution: Russian Academy of Sciences / Institute of Applied Physics (N. Novgorod, N. Novgorod reg.); Collaborators: CERN (Geneva, Switzerland), Forschungszentrum Karlsruhe Technik und Umwelt / Institut für Hochleistungsimpuls und Mikrowellentechnik (Karlsruhe, Germany), Stanford Linear Accelerator Center (Stanford, CA, USA); Duration: 36 months; Funding parties: EU Other

3174 Development and Study of Integrated Receivers for Operation Frequencies 0.5-1 THz
 Project Manager: Koshelets V P; Leading Institution: Russian Academy of Sciences / Institute of Radioengineering and Electronics (Moscow); Supporting Institution: Institute of Physics of Microstructures (N. Novgorod, N. Novgorod reg.); Collaborators: Chalmers University of Technology (Göteborg, Sweden), Hypres (Elmsford, NY, USA), Kansai Advanced Research Center (Nishi-ku, Japan), National Institute of Advanced Industrial Science and Technology (AIST) (Tsukuba, Japan), Smithsonian Institution / Smithsonian Astrophysical Observatory (Cambridge, MA, USA), Space Research Organization Netherlands (Utrecht, Netherlands), Technical University of Denmark (Lyngby, Denmark), University of Erlangen-Nurnberg (Erlangen, Germany), University of Massachusetts (Amherst, MA, USA); Duration: 36 months; Funding parties: EU

3189 The Development of Composition and Technology of Amendment Production for Rehabilitation of Soils Contaminated by Radionuclides and Assessment of Their Application Efficiency
 Project Manager: Konoplev A V; Leading Institution: Scientific & Production Association "Typhoon" (Obninsk, Kaluga reg.); Supporting Institutions: Joint Institute of Energy and Nuclear Research - Sosny (Minsk, Sosny, Belarus), Kurchatov Research Center (Moscow); Collaborators: Katholieke Universiteit / Department Interfasechemie (Heverlee, Belgium), Riso National Laboratory / Radiation Research Department (Roskilde, Denmark), SCK-CEN (Mol, Belgium), US Environmental Protection Agency (Washington, DC, USA), Utrecht University / Faculty of Geosciences (Utrecht, Netherlands); Duration: 36 months; Funding parties: EU

3194 Fuel Assembly Tests under Severe Accident Conditions
 Project Manager: Nalivaev V I; Leading Institution: NPO Luch (Podolsk, Moscow reg.); Supporting Institutions: Institute of Safe Atomic Power Engineering Development (Moscow), OKB Hidropress (Podolsk, Moscow reg.); Collaborators: EDF (Paris, France), Forschungszentrum Karlsruhe GmbH (Karlsruhe, Germany); Duration: 24 months; Funding parties: EU

3195 Development, Production of the Prototype and Demonstration of the Smart Vision Sensor for Broad Application
 Project Manager: Zhukov I V; Leading Institution: VNIIEF (Sarov, N. Novgorod reg.); Collaborator: Excom Inc. (Old Bridge, NJ, USA); Duration: 36 months; Funding parties: US

A-1079 The Problem of Swine Ascariasis in Republic of Armenia and Fight and Prophylactic Measures Against it
 Project Manager: Naghashyan H; Leading Institution: Armenian Agricultural Academy (Yerevan, Armenia); Collaborator: University of Thessaloniki / Faculty of Veterinary Medicine (Thessaloniki, Greece); Duration: 36 months; Funding parties: EU

A-1214 Novel Inorganic Monolithic Sorbents for Chromatography of Biologically Active Substances
 Project Manager: Balayan H G; Leading Institution: Scientific Research Chemical Technological Institute "CHEMTECH" (Yerevan, Armenia); Collaborators: BAM (Berlin, Germany), Nexttec GmbH Biotechnologie

(Leverkusen, Germany), Université Louis Pasteur (Strasbourg, France), Xenogenetik GmbH (Vienna, Austria); Duration: 36 months; Funding parties: EU

G-1187 Research of Different Frequency Electromagnetic Fields (EMF) Effects on the Neuron
Project Manager: Partsvania B; Leading Institution: Institute of Cybernetics (Tbilisi, Georgia); Collaborators: Kuopion University (Kuopio, Finland), University of Washington / Department of Bioengineering (Seattle, WA, USA), US Environmental Protection Agency / National Health and Environmental Effects Research Laboratory (Research Triangle Park, NC, USA); Duration: 24 months; Funding parties: EU

G-1196 Development and Research of the Method and Plasma Torch for Spraying of Powder Materials by High-Enthalpy Laminar Plasma Flow
Project Manager: Khutsishvili M G; Leading Institution: Georgian Technical University (Tbilisi, Georgia); Collaborators: Institute of Plasma Physics (Prague, Czechia), National Research Council Canada / Industrial Materials Institute (Quebec City, QC, Canada), Plasma & Thermal Coatings Ltd (Newport South Wales, UK); Duration: 18 months; Funding parties: US

G-1219 Nonlinear Optical and Acoustic Waves in Isotropic and Anisotropic Media
Project Manager: Adamashvili G; Leading Institution: Georgian Technical University (Tbilisi, Georgia); Collaborators: Institut Fresnel / Faculte des Sciences Saint Jerome (Marseille, France), Max-Planck-Institut fuer Physik komplexer Systeme (Dresden, Germany), Osaka University / Graduate School of Engineering Science (Osaka, Japan), University of California / Department of Physics and Astronomy (Irvine, CA, USA), University of Central Florida (Orlando, FL, USA); Duration: 36 months; Funding parties: US

K-1117 Development of Technology of Electra- and Heatconductive Metallized Polyimide Constructs with High Reflectivity
Project Manager: Iskakov R M; Leading Institution: Institute of Chemical Sciences (Almaty, Kazakstan); Supporting Institutions: Kazakh National University (Almaty, Kazakstan), Sukhumi Institute of Physics and Technology (Tbilisi, Georgia); Collaborators: Texas State University (San Marcos, TX, USA), Université de Provence / Macromolecular Chemistry Laboratory (Marseille, France), Universite Montpellier / Laboratoire d'Etude des Materiaux Polymeres (Montpellier, France); Duration: 36 months; Funding parties: EU

K-1198 Characterization and Testing of Coated Nickel- and Iron-Based Superalloys for Application in High-Temperature Power Installations
Project Manager: Turkebaev T E; Leading Institution: National Nuclear Center of the Republic of Kazakstan / Institute of Nuclear Physics (Almaty, Kazakstan); Collaborators: Argonne National Laboratory (ANL) / West / Nuclear Technology Division (Idaho Falls, ID, USA), Pacific Northwest National Laboratory (Richland, WA, USA), University of Wisconsin-Madison / College of Engineering (Madison, WI, USA); Duration: 36 months; Funding parties: EU US RK

KR-1130 Hydraulic Structures for Small Hydropower Engineering of the Mountain and Foot-Mountain Area
Project Manager: Lavrov N P; Leading Institution: Kyrgyz-Russian Slavonic University (Bishkek, Kyrgyzstan); Collaborators: HR Wingford (Wallingford, Oxfordshire, UK), Technical University of Catalonia / Hydraulic, Marine and Environmental Department (Barcelona, Spain), Università degli Studi di L'Aquila / Dipartimento di Ingegneria delle Strutture, delle Acque e del Terreno (L'Aquila, Italy), University of Trento / Department of Civil and Environmental Engineering (Trento, Italy); Duration: 36 months; Funding parties: EU

T-1175 Development of an Effective Method of Indication and Identification of Natural and Changed Variants Bacillus Anthracis from Soil and Carrying out of Complex Preventive Actions against the Anthracis in Tajikistan
Project Manager: Satorov S; Leading Institution: Central Asian Institute of Foot-and-Mouth Diseases (Dushanbe, Tajikistan); Collaborator: Lawrence Berkeley National Laboratory / Center for Environmental Biotechnology (Berkeley, CA, USA); Duration: 36 months; Funding parties: US

2. Project Development Grants

3173 Hand-Held Express Detector of Drug Traces Based on a Method of Ion Mobility Increment Spectrometry
Project Manager: Louppou V B; Leading Institution: Siberian Branch of RAS / Design & Technological Institute of Instrument Engineering for Geophysics and Ecology (Novosibirsk, Novosibirsk reg.); Supporting Institutions: Forensic Science Center of the Ministry of Home Affairs of the Russian Federation (Moscow), Research and Production Association of Special Equipment and Telecommunications, Siberian Branch (Novosibirsk, Novosibirsk reg.); Collaborator: US Department of Energy (Washington, DC, USA); Duration: 6 months; Funding parties: US

T-1223 Complex Monitoring of Natural Foci of Arbovirus Infections on the Territory of Republic of Tajikistan
Project Manager: Tishkova F K; Leading Institution: Tajik Research Institute of Preventive Medicine (Dushanbe, Tajikistan); Supporting Institution: Ivanovsky Institute of Virology (Moscow); Collaborator: Florida Gulf Coast University (South Fort Myers, FL, USA); Duration: 24 months; Funding parties: US

3. Reallocation of Funds for Earlier Approved Projects

2927 Study of Roles of pH6 Antigen in Promoting Virulence and Immunity in Yersinia

Project Manager: Ivanov S A; Leading Institution: State Research Center for Applied Microbiology (Obolensk, Moscow reg.); Collaborators: Canadian Food Inspection Agency, Dept. of Medical Microbiology and Immunology, University of Alberta (Edmonton, AB, Canada), University of Kentucky / Department of Microbiology and Immunology (Lexington, KY, USA); Duration: 24 months; Funding parties: EU CA

2978 Digital Technology for the Detection and Control of Fissile Materials in Devices with Pulsed Neutron Sources

Project Manager: Romodanov V L; Leading Institution: MIFI (Moscow); Supporting Institutions: All-Russian Research Institute of Automatics (Moscow), NIIIT (Pulse Techniques) (Moscow); Collaborators: Fraunhofer-INT (Euskirchen, Germany), Università Degli Studi di Bari / Dipartimento Interateneo di Fisica (Bari, Italy); Duration: 30 months; Funding parties: EU CA

3098 High-Effective Methods of Investigation and Modelling of the Barrier Discharges for Optimization of Plasma Display Panels and Excimer Lamps

Project Manager: Zvereva G N; Leading Institution: Vavilov State Optical Institute (GOI) (St Petersburg); Supporting Institutions: VNIIEF (Sarov, N. Novgorod reg.), Kyrgyz-Russian Slavonic University (Bishkek, Kyrgyzstan); Collaborators: CNRS / Centre de Physique des Plasmas et de leurs Applications de Toulouse (Toulouse, France), Hokkaido University / Graduate School of Engineering (Sapporo, Japan), Nagoya Institute of Technology (Nagoya, Japan), Technische Universität München / Physik Dep. E-12 (Garching, Germany); Duration: 36 months; Funding parties: EU JP RK

KR-1176 Establishment of the Central Asia Seismic Risk Initiative

Project Manager: Abdrakhmatov K E; Leading Institution: Institute of Seismology (Bishkek, Kyrgyzstan); Supporting Institutions: Research-Methodical Seismological Expedition (Bishkek, Kyrgyzstan), National Academy of Sciences of Kyrgyzstan / Institute of Geology (Bishkek, Kyrgyzstan), Institute of Seismology (Almaty, Kazakhstan), National Nuclear Center of the Republic of Kazakhstan / Institute of Geophysical Researches (Kurchatov, Kazakhstan), Tajik Institute of Earthquake Engineering and Seismology (Dushanbe, Tajikistan); Collaborators: Ecole et Observatoire de Physique du Globe (Strasbourg, France), Lawrence Livermore National Laboratory (Livermore, CA, USA), Massachusetts Institute of Technology (MIT) (Cambridge, MA, USA), New England Research, Inc. (White River Junction, VT, USA); Duration: 36 months; Funding parties: EU US