

KFU participation in international joint projects and research collaborations in 2018¹

Table 1. KFU participation in joint international projects

№	Title	Source of funding	Duration	International partners	KFU unit
1.	High-speed calorimetry methods development for the studies of polymers, composition and biological materials	RF Mega-grant program to support research in Russian HEIs under the supervision of world best scientists (order 220)	2016-2019	University of Rostock (Germany)	Institute of Chemistry
2.	Novel therapeutics in the prevention and treatment of cerebrovascular diseases	RF Ministry of Research and Higher Education	2017-2020	U-Penn, Harvard University (USA), Technische Universität München (TUM) (Germany), Queen Mary University of London (UK)	Institute of Fundamental Medicine and Biology
3.	Biotic and abiotic events in Siberia at the Paleozoic and Mesozoic frontier: trap effusions as a trigger for global extinction	RF Ministry of Research and Higher Education	2017-2019	Boise State University (USA)	Institute of Geology and Petroleum Technologies
4.	Algebraic structures and enumeration operators	RFBR, National Science Fund of Bulgaria (BNSF)	2017-2018	Sofia University (Bulgaria)	Institute of Mathematics and Mechanics
5.	Modelling of aerosols and sprays for medical and automotive applications	RFBR, Royal Society	2016-2018	University of Brighton (UK)	Institute of Mathematics and Mechanics, Institute of Environmental Sciences
6.	Magnetism and petrophysics of	RFBR, CNRS	2018	CNRS	Institute of Geology and

¹ As of 06.02.2019

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	shock-metamofrilled and deep rocks				Petroleum Technologies
7.	Autonomous calibration of on-board cameras of a robotic system using surface coordinate marks	RFBR	2018-2019	Indian Institute of Technology Delhi (India)	Higher Institute of Information Technology and Intelligent Systems
8.	Disaster Management Information System for Floods and Landslides with Distributed Heterogeneous Group of Robots	RFBR	2019-2021	Kyoto University (Japan), Mahidol University (Thailand)	Higher Institute of Information Technology and Intelligent Systems
9.	Study of water entities of the Republic of Abkhazia	RFBR	2007-2018	Academy of Science of Abkhazia, Institute of Ecology	Institute of Management, Economics and Finance
10.	Neuroprotector screening system in the model of focal ischemia of the cerebral cortex	RSF	2017-2018	Institute of Mediterranean Neurobiology (INMED-INSERM, Marseille, France)	Institute of Fundamental Medicine and Biology
11.	Study of oxidation reactions mechanism in aliphatic and aromatic hydrocarbons and oil based on the analysis of thermodynamic and kinetic parameters, as well as free radical particles content	RSF	2017-2018	China	Institute of Chemistry
12.	Kinetic features of reactions catalyzed by cholinesterase: physiological, toxicological and pharmacological significance of hysteresis	RSF	2017-2018	France	Institute of Fundamental Medicine and Biology

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13.	Study of the anhydrobiotic chironomid genome	RSF, Agriculture, Forestry and Fisheries Research Council of Japan (AFFRC)	2017-2019	National Institute of Agrobiological Sciences (Japan)	Institute of Fundamental Medicine and Biology
14.	New teacher for new school	KFU	2016-2019	Technische universität dresden (Germany)	Institute of Psychology and Education
15.	Study of the educational environment of early childhood	KFU	2016-2018	Göteborg Univ ersity (Sweden), University of Jyväskylä (Finland)	Institute of Psychology and Education
16.	Functional programmable photonic materials for biomedical and info-communication applications	KFU, Hellenic Foundation for Research and Innovation (HFRI-ELIDEK, Greece)	2014-2019	The Hellenic Foundation for Research and Innovation (HFRI-ELIDEK, Greece) , Belarusian National Technical University (Belarus), Moldova State University (Moldova)	Institute of Physics
17.	Rehabilitation in movement disorders	KFU, University of California, Los Angeles (USA)	2016-2018	University of California, Los Angeles (USA)	Institute of Fundamental Medicine and Biology
18.	Study of energy sources by the magnetic resonance method	DFG	2017-2018	Technische Universität Ilmenau (Germany)	Institute of Physics
19.	Classroom cultural diversity climate	DFG	2019-2021	University of Potsdam (Germany)	Institute of Psychology and Education
20.	Bi- and multilingualism between conflict intensification and conflict resolution. Ethno-linguistic conflicts, language politics and contact	Volkswagen Foundation	2016-2019	JLU Giessen (Germany), National Academy of Sciences of Ukraine	Institute of Social and Philosophical Sciences and Mass Communication s, Institute of

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	situations in post-Soviet Ukraine and Russia				Philology and Intercultural Communication
21.	Conflict regions in Eastern Europe	State of Hessen LOEWE grant (Germany)	2017-2020	JLU Giessen, Giessen Center for Eastern European Studies (GiZo), Herder Institute of Research on Historic Eastern and Central Europe, Marburg (Germany)	Institute of International Relations
22.	Religion und Bildungsmedien	International Society for Historical and Systematic Research on Textbooks and Educational Media, Augsburg (Germany)	2017-2018	University of Augsburg (Germany), Ca' Foscari University of Venice (Italy), University of Tilburg (Netherlands), University of South-Eastern Norway (Norway), University of Washington in St. Louis (USA), University of Bialystok (Poland)	Institute of International Relations
23.	Regional Revolution(s) – 1917 and Its Consequences in the Province	JLU Giessen (Germany)	2017-2019	JLU Giessen (Germany), University of Konstanz, ALU Freiburg, University of Bonn (Germany)	Institute of International Relations
24.	Study of the ecology of cephalopod mollusks in the Arctic by stable	University of Coimbra, Marine and Environmental	2017-2018	University of Coimbra, Marine and Environmental	Institute of Fundamental Medicine and Biology

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	isotopes	Sciences Centre (Portugal)		Sciences Centre (Portugal)	
25.	The impact of climate change on the marine invertebrate fauna of Iceland	Icelandic Institute of Natural History (IINH) (Iceland)	2017-2018	Icelandic Institute of Natural History (IINH) (Iceland)	Institute of Fundamental Medicine and Biology
26.	The impact of climate change on the marine invertebrate fauna of Greenland	Greenland Institute of Natural Resources (Denmark)	2015-2018	Greenland Institute of Natural Resources (Denmark)	Institute of Fundamental Medicine and Biology
27.	The impact of climate change on the marine invertebrate fauna of the Barents Sea	Institute Of Marine Research (Norway)	2008-2018	Institute Of Marine Research (Norway)	Institute of Fundamental Medicine and Biology
28.	Adaptation of the neuropsychological NEPSY-II battery	KFU	2018-2020	Boston college (USA)	Institute of Psychology and Education
29.	Effect of RNA methylation on translation and alternative splicing in mammalian cells	University of Nottingham (UK)	2018	University of Nottingham (UK)	Institute of Fundamental Medicine and Biology
30.	Methodology of infrastructure limitations of industrial growth of oil refineries	British Petroleum (UK)	2017-2018	British Petroleum (UK)	Institute of Management, Economics and Finance
31.	Numerical methods for optimization problems	RFBR (grant No. 16-01-00408), Academy of Finland (grants No. 296348 and No. 296928)	2018-2019	University of Oulu (Finland)	Institute of Computational Mathematics and Information Technologies
32.	Topological and geometric properties of Banach spaces and operator algebras II	Czech Science Foundation (Czech Republic)	2017-2019	Czech Technical University in Prague, Charles University (Czech Republic)	Institute of Mathematics and Mechanics
33.	Production of an experimental batch of a catalyst for aquathermolysis and preparation of a	Zarubezhneft JSC	2018	Cuba-Petróleo (CUPET)	Institute of Geology and Petroleum Technologies

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	commercial form for field tests				
34.	Korean studies in Tatarstan and southern regions of Russia	Academy of Korean Studies (Republic of Korea)	2016 - 2020	Academy of Korean Studies (Republic of Korea)	Institute of International Relations
35.	Study and numerical modeling of economic processes in the financial market	Thousand Talents Program (China)	2016-2018	Tianjin University of Finance and Economics (China)	Institute of Computational Mathematics and Information Technologies
36.	Study of oil oxidative behaviour by combined thermogravimetry and IR spectroscopy and high pressure differential scanning calorimetry	Southwestern Petroleum University, Petrochina (China)	2017-2018	Southwestern Petroleum University (China)	Institute of Geology and Petroleum Technologies
37.	Study of oil oxidative behavior by differential scanning calorimetry of high pressure in isothermal conditions	Southwestern Petroleum University, Petrochina (China)	2017-2018	Southwestern Petroleum University (China)	Institute of Geology and Petroleum Technologies
38.	Study of oil oxidation mechanisms by EPR and NMR spectroscopy	Southwestern Petroleum University, Petrochina (China)	2017-2018	Southwestern Petroleum University (China)	Institute of Geology and Petroleum Technologies
39.	Study of oil oxidative behaviour by high pressure differential scanning calorimetry and adiabatic reaction calorimetry	Southwestern Petroleum University, Petrochina (China)	2017-2018	Southwestern Petroleum University (China)	Institute of Geology and Petroleum Technologies
40.	Study of oxidative behaviour and self-ignition of crude oil by thermal analysis method	Southwestern Petroleum University, Petrochina (China)	2017-2018	Southwestern Petroleum University (China)	Institute of Geology and Petroleum Technologies
41.	Study of the oxidative behaviour of heavy oil at the Tahe field by combined thermogravimetry and IR spectroscopy, high-pressure differential scanning	Southwestern Petroleum University, Petrochina (China)	2017-2018	Southwestern Petroleum University (China)	Institute of Geology and Petroleum Technologies

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	calorimetry, and adiabatic reaction calorimetry				
42.	Integrated reporting and sustainability reporting	DePaul University (USA)	2018	DePaul University, Northwestern University (USA)	Institute of Management, Economics and Finance
43.	Isolation of nanotube samples with metallic and semiconductor properties from raw materials in the form of single-walled carbon nanotubes	YTC America Inc. (Japan)	2018	YTC America Inc. (Japan)	Institute of Chemistry
44.	Training Program for Russia-Japan Innovative Leaders of Tomorrow	Training Program for Russia-Japan Innovative Leaders of Tomorrow	2018-2020	RIKEN Institute, Kanazawa University (Japan)	Institute of Physics, Institute of Chemistry, Institute of Fundamental Medicine and Biology
45.	Seeing Like a State? Innovative approaches to the History of Education in Russia	Indiana University (USA)	2017-2019	Indiana University (USA)	Institute of International Relations
46.	Study of selective adsorption purification of commodity isoprene from dimers	Kraton Polymers LLC (USA)	2016-2018	Kraton Polymers LLC (USA)	Institute of Chemistry
47.	Volga International Centre of Excellence in European Studies VOICES+	Erasmus+ Programme, Jean Monnet Activities	2015-2019	---	Faculty of Law
48.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2015-2017	Leipzig University (Germany)	International Office
49.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2017-2019	TU Dresden (Germany)	International Office
50.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2014-2020	D.A. Tsenov Academy of Economics (Bulgaria)	International Office
51.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2016-2020	Wroclaw University of Economics	International Office

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				(Poland)	
52.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2016-2018	University of Cadiz (Spain)	International Office
53.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2016-2018	Granada University (Spain)	International Office
54.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2016-2018	Mendel University in Brno (Czech Republic)	International Office
55.	Academic mobility support	Erasmus+ Programme, Credit Mobility	2016-2018	Masaryk University (Czech Republic)	International Office

Table 2. KFU participation in large research collaborations

№	Title	Membership since	Collaboration tasks	KFU contribution
1	Silk Road	2017	Historical reconstruction and study of events, objects, personalities, mass migrations, socio-economic and political processes associated with the dynamics of the Silk Road over a long historical period.	Organizational and methodical preparation of the nomination dossier on the Volga and Caucasus corridors of the Silk Road.
2	Learning to Teach	2014	International networked study by the World Association for Educational Research (WERA) on teachers' effective learning in different countries in the context of the evolution of educational policies	Comparative study of teacher education (models, policies, methods, research results) in different countries (Russia's case). Participation in the collective monograph preparation. IFTE annual international scientific conference.
3	FANTOM	2015	Global scientific consortium aimed at creating an atlas of gene expression in all cells and tissues of the human body (48 organizations from more than 20 countries)	In 2017, KFU initiated a new project "FANTOM-muscles" for new methods of diagnosis and treatment of various diseases
4	ThEOR	2016	International platform for creation and distribution of revolutionary "green" EEE-technologies of in-situ oil refining (300 specialists, 47 companies and	In 2016, KFU initiated an international networking group on developing and distributing EEE-technologies for hydrocarbon production. Research of in-situ oil

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			universities, 12 countries -Russia, China, USA, Canada, France, Turkey, Denmark, Indonesia and Latin America)	refining. ThEOR annual international conference
5	Cochrane Collaboration	2017	North Cochrane Center: Infectious Disease Group and Stroke Group, Epilepsy Group, Development, Training and Psychosocial Problems Group	In 2017, the long-term cooperation with the Cochrane Collaboration led to the creation of the Cochrane Russian Center KFU-Cochrane. A unique transdisciplinary and evidence-based research and educational space for various health care professionals' training. Cochrane systematic reviews of neurological and infectious diseases. Participation in international events (Cochrane Colloquium)
6	Spectrum-Roentgen-Gamma	2018	International Russian-German orbital observatory project focused on the classification and characterization of hard radiation sources based on their optical and X-ray observations (supermassive black holes, galaxy clusters)	Observation and measurement are carried out on the Russian-Turkish optical telescope RTT-150 installed by Kazan Federal University in Turkey (optical identifications of new X-ray sources, X-ray map of the Universe).
7	HealthNet	2016	Moderation, development and maintenance of E-lek forum as an international	Using the methodology for assessing the rational use of drugs in the scientific and educational processes of

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			discussion platform for drugs policy and rational use (supported by Health Action International and WHO)	the Department of Fundamental and Clinical Pharmacology (KFU)
8	European Endangered Species Programme	2015	Population management programme for animals by the European Association of Zoos and Aquaria (EAZA).	Participation in the international project on preservation and breeding of polar bears (jointly with the Eurasian Association of Zoos and Aquariums and the San Paolo Aquarium (Brazil)). Academic exchange, joint research and internships for master students.
9	DReaM	2018	“The Dictionary/ Grammar Reading Machine: Computational Tools for Accessing the World’s Linguistic Heritage” is a major international project within Horizon 2020 Program (Cultural and Digital Heritage - JPICH) with the participation of the Uppsala University (Sweden), the Leiden University (Netherlands), Tübingen University (Germany), Nankai University (China), LLACAN, CNRS (France), Max Planck Institute for Science of Human History (Germany)	Joint research in: dictionaries of ethnic minority languages in the era of smartphones; access to language descriptions without copyright; machine-readable dictionaries/ grammars.

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10	Code modernisation	2015	Joint project with Gesellschaft für Schwerionenforschung (GSI), Newcastle University, Intel Corp. and CERN (Switzerland) aimed at confirming the maximum efficiency of the widely used high energy physics codes, including neuroinformatics, biology or astrophysics. It is focused on using cloud technologies for designing a prototype able to simulate biological tissue growth, with a particular focus on human brain development.	Design and optimization of data structures. Participation of KFU experts and students.