Researcher information for Technology Consulting Program

(기술진단기획 러시아 전문가 소개서)

Code # : EC01

<table>
<tr><td>Available term for consultation</td><td colspan="2">1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME (Material&Equipment), MP (Manufacturing&Production)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path (Experience)

- (2019 ~ Current) TMK R&D/Deputy Head of the laboratory of corrosion protection and operational reliability: tests for corrosion resistance of metal by electrochemical methods, development of electrochemical methods corrosion testing of metal
- (2006 ~ 2019) Chelyabinsk Tube Rolling Plant / Head of corrosion and mechanical strength laboratory: organization of laboratory for corrosion testing of metal, conducting metal tests for resistance to sulfide stress cracking (NACE TM 0177, method A, C, D), hydrogen-induced cracking resistance (NACE TM0284)
- Conducting of general corrosion tests in different model environments.

2. Consultation fields

- metal tests for resistance to sulfide stress cracking (NACE TM0177) of pipe material
- metal tests for resistance to hydrogen-induced cracking (NACE TM0284) of pipe material
- metal tests for resistance to general corrosion.

3. Expected effect

- Training in testing procedures according to standards NACE TM0177, NACE TM0284 in different model environments
- Selection of conditions for testing
- Improvement of electrochemical corrosion tests techniques</td></tr>
<tr><td rowspan="6">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2" rowspan="3">South Ural State University, Metallurgical Department, Qualification : Engineering, physicochemical methods of research (1994-1999)</td></tr>
<tr><td>Research field</td></tr>
<tr><td>Dissertation</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC02

<table>
<tr><td>Available term for consultation</td><td colspan="2">1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">Russian Patent No. 2443786, “Low Carbon Steel Treatment Method ”</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME (Material & Equipment), MP (Manufacturing & Production)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path (Experience)

- (2018 – Current) TMK R&D, Deputy Head of Materials Science and Welding Laboratory
- (2015 - 2016) SIBUR, Project office “ZapSibNeftekhim”, Senior materials engineer
- (2003 - 2015) Baikov Institute of Metallurgy and Materials Science, Laboratory of Materials Diagnostics, Senior Scientist.

2. Consultation fields

- Fracture research of steels by fracture surface analysis (scanning electron microscopy, 3D- reconstruction of fracture surface)
- Metallic Materials selection for different applications
- Influence of structure and metallurgical quality on service live of materials
- Research Methods of metallic materials

3. Expected effect

- Improve product quality and manufacturing yield in metallurgical manufacturing
- reduce loss and cost saving thru process optimization
- Right material selection</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Metal Science and Heat Treatment</td></tr>
<tr><td>Research field</td><td colspan="2">Fracture mechanisms of low alloy steels by fracture surface analysis, rail steels, wheel steels, pipe steels.</td></tr>
<tr><td>Dissertation</td><td colspan="2">Assessment of ductility heterogeneity of low alloy steels by fracture surface analysis by means with different dimensions (2D, 3D).</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Physics of metals</td></tr>
<tr><td>Research field</td><td colspan="2">Submicrocrystalline alloys by severe plastic deformation</td></tr>
<tr><td>Dissertation</td><td colspan="2">Influence of submicrocrystalline structure obtained by equal channel angular pressing on mechanical properties low alloy steels</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">Physics of metals</td></tr>
</table>

Code # : EC03

<table>
<tr><td>Available term for consultation</td><td colspan="2">1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">Patent No. 2520275 ,
"Pipe threaded connection and method for its implementation"</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME (Material & Equipment)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career path (experience)
- (2010 - 2013) Laboratory of technological lubricants and coatings / engineer.
- Scientific research in the field of high temperature greases, preservation greases and polymer threaded coatings.

- (2013 - 2016) Junior Researcher at the TMK R&D Center.
Material Area:
▪ Participation in the development of a polymer coating for threads, eliminating the use of grease during transportation, storage and operation of OCTG pipes.
▪ Development of technology for coating deposition and polymerization.
Equipment Area:
▪ Development of equipment for controlling the time of destruction of samples during testing according to NACE TM 0177.
▪ Development of its own algorithm and control program for autoclave equipment

- (2016 - 2019) Research Associate at the TMK R&D Center:
Material Area:
▪ Development of threaded polymer coating technology
▪ Development of technology for local chrome plating of the surface of a rolling tool in an industrial environment
Equipment Area:
▪ Developed equipment for applying chrome coating to the surface of a rolling tool in an industrial environment

- (2019 - present) Head of the Laboratory of Physical and Chemical Methods of Analysis of the TMK R&D Center in Skolkovo

2. Consulting fields
- The choice of material and organization of technology for the industrial application of wear-resistant and conservation coatings
- Development of new devices for research and testing
- Electronics, microcontrollers</td></tr>
<tr><td rowspan="3">Education</td><td rowspan="3">MS</td><td>Major</td><td colspan="2">Physical engineer</td></tr>
<tr><td>Research field</td><td colspan="2">Physical chemistry</td></tr>
<tr><td>Dissertation</td><td colspan="2">Phase transformations during oxidation and reduction of fayalite</td></tr>
</table>

Code # : EC04

<table>
<tr><td>Available term for consultation</td><td colspan="2">1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">More than 10 patents in the field of materials for oil pumps and test benches</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME (Material & Equipment)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path(Experience)
- (2003-august 2019) Head of materials and technology Department in Borets company. (Oil production equipment development center)
- (August 2019- current) Head of the laboratory of corrosion protection and operational reliability of scientific and technical center “TMK”

2. Consultation fields
- Development of new promising materials for oil production equipment (motor, pump, the input module, the gas separator and others) including for complicated operating conditions;
- Bench tests of new products;
- Revision analysis of equipment;
- Acceptance tests;
- Support of new products and controlled operation;
- Preparation of expert opinions in the field of materials and tests

3. Certification
- Effective leadership training (“Mercury international”)

4. Expected effect
- Selection of materials for operation in severe conditions
- Methods of protection of materials (including coating and others)
- Methods of testing of operational properties of materials
- Reduce loss and cost saving thru process optimization</td></tr>
<tr><td rowspan="6">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Ph.D in Powder metallurgy, composite materials, coatings. Moscow steel and alloys institute</td></tr>
<tr><td>Research field</td><td colspan="2">Hard wear-resistant coating, film</td></tr>
<tr><td>Dissertation</td><td colspan="2">Development of thermos-reactive surface hardening method</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Powder metallurgy, composite materials, coatings.</td></tr>
<tr><td>Research field</td><td colspan="2">The methods of coating, hard alloys</td></tr>
<tr><td>Dissertation</td><td colspan="2">Thermosetting methods of surface hardening</td></tr>
</table>

Code # : EC05

<table>
<tr><td>Available term for consultation</td><td>1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">

Continuous rolling method and continuous multi-stand mill for its implementation (RU2614974)
SoftWare: TPAtex – FQM (RU2018665514)
Mandrel position (RU2019616594)
DigitMill (RU2019666493)
EX-pam (RU2016662673)
The software package for determining the service life of the bandage of the wheelset of an electric locomotive (RU2013614473)
Software package for determining the technological parameters of the process of rolling shells on the mill FQM (RU2013618794)
“Sobol`” program for the automated calculation of the geometric dimensions of hot-pressed pipes (RU2017616980)
The “TMK-IRS” program for the automated calculation of operational parameters of hot-pressed pipes with screw ribbing of the inner surface (RU2018612109)

</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">IT(Information Technology), ME(Material&Equipment), MP(Manufacturing&Production)</td></tr>
<tr><td>Available field for consulting</td><td colspan="3">
1. Career Path(Experience)
- (2014 ~ Current) Deputy Head of the Digital Technologies Laboratory / Deputy head of laboratory: development digital twin of the rolling mill (process);
- (2012 ~ 2019) Laboratory of modeling of technological processes of JSC "RosNITI" (“Russian Research Institute of Pipe Production”)/ engineer-Junior researcher-researcher - head of the laboratory: modeling of technological processes, technological equipment and operating conditions of products using software products and installations for physical modeling; development of new software products, their debugging, testing and adaptation to real conditions (programming language Delphi, C# and markup language HTML); analysis of technological modes of deformation during the installation of a new continuous mill FQM; development of methods of testing of pipes of category High Collapse; development of measures to increase the level of resistance to crushing of pipes; development of mathematical model and SOFTWARE for calculation of technological parameters of reduction of pipes; determination of causes of premature failure of railway locomotive bands; increase of accuracy of geometrical sizes of pipes after heat treatment

2. Consultation fields
- Modeling of materials processing pressure using finite element method with the use of specialized software, the simulation of the process operation by the finite element method (strength, thermal fatigue calculations);
- Analysis and optimization of continuous pipe rolling technology;
- Technologies of digitalization of metallurgical production.

3. Relate Networking
- Member of the editorial Board of the journal " Bulletin of SUSU. Metallurgy series»
-
</td></tr>
</table>

	4. Expected effect - To make modeling of metal forming before introduction of new technologies; search of the reasons of formation of defects, definition of technological parameters of process of metal forming by modeling by a finite element method.		
Education	Ph.D	Major	Metal forming
		Research field	Reduction mill, seamless pipes
		Dissertation	Improving the efficiency of manufacturing hot-deformed pipes based on physical and mathematical modeling of the reduction process
	MS	Major	Metallurgy
		Research field	Wire production
		Dissertation	Research of roller dies and development of a new design of roller dies for drawing titanium wire
	BS	Major	Engineering and technology

Code # : EC06

<table>
<tr><td>Available term for consultation</td><td colspan="2">1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">Patent No. 2680457 , “High-strength oil-grade pipe in cold-resistant design”</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">NT(Nano Technology), ME(Material&Equipment), MP(Manufacturing&Production)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path(Experience)
- (2004-2019) Russian Research Institute of the Tube & Pipe Industries
- (2019 - present) TMK R&D Center in Skolkovo

2. Consultation fields
- Optimization and development of new modes of heat treatment of pipes.
- Development of mechanisms and methods for improving the Physicomechanical, technological and operational properties of pipe metal.
- Examination of the causes of defects in hot and cold deformed pipes and premature failure of pipes.
- Carrying out metallographic studies in accordance with the requirements of normative and technical documentation.
- Determination of the corrosion characteristics of metal pipes for compliance with the requirements of regulatory documentation in various environments, including hydrogen sulfide (NACE MR0175/ ISO 15156).
- Investigation of factors affecting the corrosion resistance of steels, including in real conditions.
- Investigation of the resistance of pipe metal to local corrosion.
- Participation in full-scale (bypass) tests in order to adjust the composition, technology and processing of pipe steels.
- Recommendations on the selection of materials for specific operating conditions.

3. Expected effect
- Selection of pipe material to obtain the required properties and operating conditions.
- Metal science, corrosion, welding metal science.</td></tr>
<tr><td rowspan="6">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Materials Science</td></tr>
<tr><td>Research field</td><td colspan="2">Metal science and solid state physics</td></tr>
<tr><td>Dissertation</td><td colspan="2">Study of the structure and properties of high-strength ferritic-bainitic steels designed for high-pressure trunk pipelines</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Physical engineer</td></tr>
<tr><td>Research field</td><td colspan="2">Metal science and solid state physics</td></tr>
<tr><td>Dissertation</td><td colspan="2">Improvement of thread rolling tool production technology</td></tr>
</table>

Code # : EC07

<table>
<tr><td>Available term for consultation</td><td colspan="2">1-2 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME(Material&Equipment), MP(Manufacturing&Production), NT(Nano Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path(Experience)
- (2019 ~ Current) Material Science and Welding Laboratory in TMK R&D / Senior Research Engineer : Research in microalloyed low-carbon steel manufacture for critical offshore oil and gas pipelines (for reel-laying and sour service)
- (2015 ~ 2019) Metal Science and Heat Treatment Laboratory in TMK RosNITI / Senior Engineer : Research in microalloyed low-carbon steel manufacture for critical offshore pipelines.
- Research in aqueous polymer quenchants application for gas cylinders and tool joint heat treatment

2. Consultation fields
- Full-scale and small-scale mechanical and corrosion testing of materials for critical offshore oil and gas pipelines
- Effect of micro- and nanostructure on operational (including corrosive) properties of bainitic steels
- Application of alternative liquid quenchants for heat treatment

3. Expected effect
- Reduce loss thru optimal test scheduling of material
- Right material selection for strain based and/or sour service steel line pipes
- Right equipment selection for heat treatment</td></tr>
<tr><td rowspan="5">Education</td><td rowspan="3">MS</td><td>Major</td><td colspan="2">MSc, South Ural State University, Chelyabinsk</td></tr>
<tr><td>Research field</td><td colspan="2">Material Science and Heat Treatment of Metals</td></tr>
<tr><td>Dissertation</td><td colspan="2">“Research of Microstructure and Properties of Low-Carbon Steels for Reel-Laid Linepipes”</td></tr>
<tr><td rowspan="2">BS</td><td>Major</td><td colspan="2">1) Kostanay State University, Kostanay, Kazakhstan
2) University of Chemical Technology and Metallurgy, Sofia, Bulgaria (as an academic mobility program participant)</td></tr>
<tr><td>Research field</td><td colspan="2">1) Technological Machines and Equipment for Metal Working
2) Material Science</td></tr>
</table>

Code # : EC08

<table>
<tr><td>Available term for consultation</td><td colspan="2">1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">○ Eurasian patent No.031598 “Caliber of Three Roll Pipe Mill”
○ Eurasian patent No.032251 “Caliber's System of Continuous Tube Mill”
○ Patent RU No.2707052 “Method for continuous rolling of pipes and mandrel assembly for its implementation”
○ Patent application RU No.019110232/02(019685) “Continuous pipe rolling method”
○ Computer program RU No.2016662544 “Ovality2+”
○ Computer program RU No.2019616594 “Mandrel Position”</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">IT(Information Technology), ME(Material&Equipment), MP(Manufacturing&Production), ST(Space Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path(Experience)
- Experience in the application of digital technologies in production (advanced analytics and artificial intelligence can be applied to large data sets to generate new insights and enable better decision making in predictive maintenance and quality management).
- Setting up industrial equipment using non-contact measuring 3D systems;
- Optimization of production processes;
- Precision pipe manufacturing;
- Mathematical modeling;
- Computer and physical modeling;
- Quality management in the production of seamless pipes;
- New roll design for seamless pipe production.</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Metal forming technology</td></tr>
<tr><td>Research field</td><td colspan="2">High-precision pipes, production, 3-roll Pipe Mill, optimal solutions, Box-Wilson method</td></tr>
<tr><td>Dissertation</td><td colspan="2">Optimization of the process of continuous rolling of shells in order to increase the accuracy of hot-rolled seamless pipes</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Metal forming technology</td></tr>
<tr><td>Research field</td><td colspan="2">Production, optimization of the process, slip-line method</td></tr>
<tr><td>Dissertation</td><td colspan="2">Development of high-quality rolled technology for large diameter pipes</td></tr>
<tr><td></td><td>BS</td><td>Major</td><td colspan="2">Steel Technology</td></tr>
</table>

Code # : EC09

Available term for consultation	-	Available for trip to Korea	Yes
Intellectual property Information	Patent for invention No. 2404294 Composite metal-diamond coating, method for production thereof, electrolyte, diamond-containing additive, electrolyte and method for production thereof		
Category of Research (Choose 1 or more)	IT(Information Technology), NT(Nano Technology), ST(Space Technology), ME(Material&Equipment), MP(Manufacturing&Production),		
Available field for consulting	Ryzhov Evgeny Vasilievich - In 1972 entered the Military Engineering Institute of the Red Banner. A.F. Mozhaysky, who graduated in 1977 with a degree in aircraft, with the qualification of a military mechanical engineer. - After graduating from Wiki. Mozhaysky served at the Baikonur Cosmodrome. - In 1981 he entered the postgraduate studies at VIKI named after Mozhaysky. - In 1985 he was awarded the degree of candidate of technical sciences. - From 1985 to 1997, he served in one of the Central Research Institute of the Ministry of Defense as a junior research fellow, senior research fellow, laboratory head, deputy department head, department head. - In 1989, he was awarded the title of Senior Researcher. - In research institutes he was engaged in economic analysis, valuation and capitalization of intangible assets. He is the author of books: “Methods of military-economic research on the prospects for the development of space assets”, “Control of the flow around bodies using laser energy in high-speed gas flows”. - In 1997, retired from military service with the rank of Colonel, was awarded 20 medals. - He took part in the creation and establishment of the Research Institute of the CS of the branch of GKNPC them. M.V. Khrunicheva. He served as Deputy Director for Economics for 2003. - Since 2003, he has become Deputy General Director of EKA OJSC, an enterprise engaged in R&D in various fields of industry, and primarily in the field of space activities. - In 2007 becomes the General Director of RAM. The company is actively engaged in the implementation of various innovative developments in the industry, including technologies: “nanodiamond chrome”, “nanodiamond polymer, composite, carbon fiber”, as well as the creation of such projects as: “Creation of an industrial complex for applying metal-diamond coatings with a nanocrystalline structure on products operating in extreme operating conditions " - From 2010 - 2014, he served as Chairman of the Council on Entrepreneurship and Industrial Policy under the Administration of the Yubileiny Moscow Region. Evgeny Vasilievich - Author (co-author) of 47 patents of the Russian Federation and foreign countries, is a full member of the Russian Cosmonautics Academy named after Tsiolkovsky. - Since 2013, he has been the Head of the Innovation Development Section of the International Association of Space Activities Participants (MACD). - He is actively involved in the activities of expert communities: a member of the expert board of the scientific and production journal "Nanotechnology Production Ecology", an expert of the Skolkovo Foundation, a member of the Expert Council for Mechanized Oil Production, an accredited expert of the Federal Register of		

	Experts in Science and Technology. Since 2016, he has become Chairman of the Committee for Technical Regulation of NP “MON” - Rusnano.		
Education	Ph.D	Major	candidate of technical sciences.
		Research field	aerospace field
		Dissertation	Development of new materials and coatings for the space industry
	MS	Major	Member of the Russian Academy of Cosmonautics
		Research field	innovative development of the International Association of Space Participants
		Dissertation	Author (co-author) of 47 patents of the Russian Federation and foreign countries.
	BS	Major	Chairman of the Board of Directors of RAM LLC. Creation of an industrial complex for applying metal-diamond coatings with a nanocrystalline structure on products operating under extreme operating conditions ”

Code # : EC10

<table>
<tr><td>Available term for consultation</td><td colspan="2">1~1.5 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">○ APPARATUS AND METHOD FOR PROVIDING VEHICULAR POSITIONING

PCT RU 2016/000589 ,(Tatarnikov D.V., Edelman L., Pimenov A.A., Smirnov M.N., Penkrat N.A.)

○ Algorithms Library for objects recognition

2017610528, request 201619919, date 22.09.2016 (Ufnarovkii V.V., Smirnov M.N., Fedorenko S.I., Pimenov A.A.)

○ Apparatus and method of large scenes visualization

2606875, request 20151001179, 16.01.2015

Ufnarovkii V.V., Smirnov M.N., Fedorenko S.I., Pimenov A.A, Penkrat N.A., Gorilovsky A.A., Kocherizhkin V.A., Bogdanuik I.A., Bocharov E.I.

○ Vizimapping, 201466255, request 2014617165 from 22.07.2014

(Ufnarovkii V.V., Smirnov M.N.)</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">IT(Information Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- R&D projects in Computer Vision area
- R&D projects in following areas: industry safety, computer vision in digital medicine, computer vision in automotive, AR/VR applications, CNN.</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Mathematics</td></tr>
<tr><td>Research field</td><td colspan="2">Software Engineering</td></tr>
<tr><td>Dissertation</td><td colspan="2">Processor IP-core development for FPGA design</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC11

Available term for consultation	Up to 4 weeks	Available for trip to Korea	Yes
Intellectual property Information	-		
Category of Research (Choose 1 or more)	IT(Information Technology), ME(Material & Equipment), MP(Manufacturing & Production), Mobile Devices, Network & Communication Technologies, Certification, Import		
Available field for consulting	1. Career path(Experience) - (August 2013 — October 2019)Samsung Electronics, Senior Certification Specialist / Technical Product Manager - Prepared needed documents and applied for the certificates of compliance, declarations of conformity, certificates of state registration, acts of manufacturing analysis, expertise and all other relevant to product standards documentation; - Participation in certification tests (EAC, Electromagnetic Compatibility, Low Voltage Equipment, Radio Frequency, etc.); - Proceeded tenders for certification services; - Arranged and controlled all steps of the process of in-time documents preparation and keeping all required documents and databases up-to-date; - Communication with certification agencies, government institutes and appropriate ministries (FSB, Federal Customs Service, Ministry of Communication, Ministry of Industry and Trade, etc.); - Inquired relevant information and documents (product data, test reports, descriptions, etc.) from the manufactures and company business units; - Reviewed and analyzed national and EAEU legislation and regulatory documentation in appliances/network/frequency/safety/batteries/packaging areas; distributed information to all involved people; - Checked translation correctness for marking text creation; makes sure all texts, labels and stickers are in line with the national/EAEU regulation; - Assisted in import process problem solving related with product compliance; - Deals with quality & standards claims and requests from customers, end consumers (warranty claims) and authorities in Russia; initiated and followed actions on correction - Participates in investigations regarding product safety and compliance initiatives; - Makes sure that documents are in place with the Russian (EAEU) regulation and ensures information and documents are distributed properly to the customers, end consumers and authorities. - Proceeded factories (Russia, Korea, Vietnam) inspections and verifying it's comply with Quality Management Systems (ISO 9001) - Negotiation with mobile operators about launching new technologies (4G, 5G, VoLTE, VoWiFi, RCS, OMC, etc) - Testing of Android and Tizen devices (QA) 2. Consultation fields - Certification of products - Comply with EAEU and Russian legislation - Certification tests - Quality assurance - Marking and labeling		

<table>
<tr><td></td><td colspan="3">- Mobile Network and Communications
- New Technologies (5G, AR, VR, etc.)

3. Relate Networking
- Lots of contacts with different certification agencies, testing laboratories, Ministry of Communication, Federal Customs Service, Federal Security Service

4. Expected effect
- Provide trouble-free import and sell processes in accordance with EAEU and Russian law and regalements
- Improve product quality by process optimizing
- Import fee and additional expenses cost saving</td></tr>
<tr><td rowspan="6">Education</td><td rowspan="3">MS</td><td>Major</td><td>Electronical Engineering at Bauman Moscow State Technical University</td></tr>
<tr><td>Research field</td><td>Vacuum Technologies</td></tr>
<tr><td>Dissertation</td><td>System for diagnosing the operability parameters of the elements of vacuum equipment</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td>Management</td></tr>
<tr><td>Research field</td><td>Human Resources</td></tr>
<tr><td>Dissertation</td><td>Innovative technologies for the labor activity assessment in a modern organization</td></tr>
</table>

Code # : EC12

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes (up to 2 weeks)</td><td>Intellectual property Information</td><td>Berezkin Iaroslav Vyacheslavovich
International Patent
№ A61B 17/58 (2006.01)
Request № PCT/RU2018/000020
Publication № WO/2019/035734
Date: 21.02.2019</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">BT (Biology Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- PelvicFractures is a project of Doctive LLC in collaboration with the specialized research centres of Russia, Venezuela, Italy and Germany. We are focusing on the development of new surgical techniques and new devices for fixation of unstable pelvic ring fractures.
- Pu-Lock™ is a solution for Interlocking intramedullary nailing for pubic rami fractures
- We made a number of comparative biomechanical tests (torsion and cyclic bending of the pelvic fracture model of the bone synthesized plate, cannulated screw and nail).
- We simulated cyclic loads on the pelvis model similar to normal walking.
- The first patient has been operated in the end of 2016.
- About 400 Pu-Lock™ nails have already been installed.</td></tr>
<tr><td rowspan="4"></td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Orthopedic Trauma</td></tr>
<tr><td>Research field</td><td colspan="2">Pelvic Fractures</td></tr>
<tr><td>Dissertation</td><td colspan="2">«Closed intramedullary osteosynthesis with locking nails in pubic bone fractures» [in Russian]</td></tr>
<tr><td>MS</td><td>Major</td><td colspan="2">Doctor of medicine</td></tr>
</table>

Code # : EC15

<table>
<tr><td>Available term for consultation</td><td colspan="2">2 weeks</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">1. Methods of double-sided electrochemical dimensional processing of parts.
2. Methods of electrochemical processing of surfaces of small curvature with a sectional electrode-tool and a device for its implementation.
3. Methods of manufacturing a brush seal. A device for measuring the angle of inclination.
4. Devices for measuring the small displacements of an object.
5. Devices for determining the position of an aircrafts.</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME (Material&Equipment), Technology transfer, Patents management</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- I am the founder of an Accelerator for Technological Startups Guide to Innovations (way2innovations.ru) from 2018.
- Today, my platform is a multidisciplinary infrastructure consulting and IT company that supports and develops innovative technology projects and startups, organizes and conducts regional, corporate and university acceleration and educational programs and events throughout the country - in Moscow, St. Petersburg, Yekaterinburg, Tomsk, Rostov-on-Don, Ufa, Samara, Ulyanovsk, Penza, Barnaul, Tyumen, Saransk, Sterlitamak, Magadan and other Russian cities, as well as abroad - in South Korea, Israel, Germany and Turkey.
- Since 2015, more than 300 technology entrepreneurs and startups have taken part in various acceleration programs, and more than 3,000 people have participated in educational events.
- The competitive advantages of my platform are the highest professionalism of the team and a responsible approach to the provision of services, a powerful digital platform and various digital services of its own design for managing acceleration programs, an author's animation course on technological entrepreneurship and innovation, as well as a strong composition of speakers, scientific, technical and business experts, mentors and trackers from all over the country.
- Consulting fields: Patent management, technology transfer, project management, technology sourcing (materials etc.)
- (2018 - Current) Founder & CEO, Guide to Innovations
- (2016 – 2018) Project Manager, Agency for Strategic Initiatives (ASI)
- (2014 – 2016) Head of Intellectual Assets, OAO Poligon
- (2013 – 2014) Head of Technical Department, OAO Poligon</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Aviation Engineering at Ufa State Aviation Technical University</td></tr>
<tr><td>Research field</td><td colspan="2">Thermal, electric propulsion engines and power plants of aircraft</td></tr>
<tr><td>Dissertation</td><td colspan="2">Thermal, electric propulsion engines and power plants of aircraft</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Aviation Engineering at Ufa State Aviation Technical University</td></tr>
<tr><td>Research field</td><td colspan="2">Machines and technologies for highly efficient material processing processes</td></tr>
<tr><td>Dissertation</td><td colspan="2">Machines and technologies for highly efficient material processing processes</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">Aviation Engineering at Ufa State Aviation Technical University</td></tr>
</table>

Code # : EC16

<table>
<tr><td>Available term for consultation</td><td colspan="2">Up to 1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">Electronics Engineering, IT (Information Technology), MP (Manufacturing & Production)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path
- (2019 – current) CEO at ООО «Оптех» (https://opteh.ru)
- (2016 – 2019) CTO at ООО «Оптех» (https://opteh.ru)
- (2015) Software Engineer at ООО «Bezkontaknie Ustroistva(Бесконтактные устройства)» (https://wirenboard.com)
- (2013 – 2016) Engineer at Institute of Control Sciences of Russian Academy of Sciences
- (2010- 2013) Computer Operator at Moscow Institute of Physics and Technology Department of Computer Science

2. Consultation fields
- Electronic engineering
- Hardware development
- Embedded software development
- Embedded Linux
- Prototyping
- Robotics

3. Teaching and advisory experience
(2018 – current) – Advisor to the MIPT robot football team “StarKIT” (Moscow Institute of Physics and Technology)
(2016 – current) – Teacher at Moscow Institute of Physics and Technology: Basics of radio engineering
(2015 – 2016) – Advisor to the MIPT Eurobot team (Moscow Institute of Physics and Technology)</td></tr>
<tr><td rowspan="4">Education</td><td rowspan="3">MS</td><td>Major</td><td colspan="2">Applied Mathematics and Physics at Moscow Institute of Physics and Technology</td></tr>
<tr><td>Research field</td><td colspan="2">Electronics Engineering</td></tr>
<tr><td>Dissertation</td><td colspan="2"></td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">Applied Mathematics and Physics at Moscow Institute of Physics and Technology</td></tr>
</table>

Code # : EC17

<table>
<tr><td>Available term for consultation</td><td colspan="2">Up to 2 weeks</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">IT (Information Technology), MP (Manufacturing & Production), Mobile Devices, Network & Communication Technologies, Certification</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career path and responsibilities
From 2012 - Global IT company
Technical Product Manager
- QA of mobile devices including smartphones, tablets, wearables. Communication with local network operators;
- Russian IT market analysis and strategy creation for new products launch;
- VR/AR Project management for B2C and B2B;
- Global services (applications) localization for local market – existing features adaptation and new function development based on local needs;
- Documents preparation for new products certification (EAC and DoC);
- Cloud gaming solutions devlopment in Russia;
- Negotiation with mobile operators about launching new technologies (4G, 5G, VoLTE, VoWiFi, RCS, OMC, etc)
- Marketing promotions creation for new services highlight.

2. Consultation fields
- Certification of products
- VR/AR
- Cloud gaming
- Quality assurance
- Mobile devices
- Mobile Network and Communications
- New Technologies (5G, AR, VR, etc.)
4. Relate Networking
- Lots of contacts with main Russian network operators, VR/AR companies, Cloud gaming companies, certification agencies.
5. Expected effect
- Support in successful launch of new products
- Improve product quality by process optimizing
- Certification issues support</td></tr>
<tr><td rowspan="2">Education</td><td rowspan="2">MS</td><td>Major</td><td colspan="2">Electronical Engineering at Bauman Moscow State Technical University</td></tr>
<tr><td>Research field</td><td colspan="2">Radioelectronic devices</td></tr>
</table>

Code # : EC18

<table>
<tr><td>Available term for consultation</td><td>Up to 4 weeks</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">IT (Information Technology), Software Product Management, Agile Implementation, Product analytics</td></tr>
<tr><td>Available field for consulting</td><td colspan="3">1. Career path and responsibilities
(September 2019 — to present)
Docdoc (docdoc.ru) – app for booking medical appointment offline or via telemedicine service.
Product lead/Senior Product Manager
Lead the team of managers, analysts, software engineers to grow up the app’s business and product metrics via user and market research, eliciting requirements and users needs and then developing new services and features or improving current functionality.

(December 2017 — September 2019)
Yandex (yandex.ru)
Product Manager
• Performance-driven project manager able to work with multiple clients and stakeholders (20+). Excel in managing both insource and outsource cross-functional distributed teams (10+ developers in 4 different regions simultaniously);
• Recognized for the implementation of Agile practices to enhance teams’ productivity and operational excellence;
• Mentored number of Yandex employees and students at Yandex product management school;
• Exceeded company goals as a product manager by defining clients` needs and products’ requirements through executing user research and cjm, shaping product roadmap, prioritizing backlog and assessing all possible outcomes to choose the best course of action.

Achievements:
• Successfully launched Yandex Games service and several internal services from the scratch;
• Led, developed and released more than 20 projects (services for Yandex Station smart speaker, web services for Yandex Browser, Internetometr, Petfinder and internal services);
• Promoted as a manager of 2 teams of developers with united scope of projects due to ability to build productive relationships and strong judgment at critical junctures.

May 2016 — December 2017.
Evotor
Product Manager
Evotor is a smart terminal (POS terminal) with an application marketplace (market.evotor.ru) and ecosystem of services for small businesses.

Was one of the first employees to join the team and came along the path of company establishment from 10 to 200 people and 250 000 business clients.
• Elicited requirements, defined user stories via customer interviews, made market research and shaped roadmaps for several company’s products;
• Successfully launched number of new products and services, incl. management of operations and processes;
• Owned P&L models for all companies’ products.

Achievements:
• Extended current hardware product by launching new telecom inbox service (3M Rub monthly revenue);
• Made in-depth research of the big data market and as a result number of product prototypes were launched.

May 2016 — December 2017. Kassir.ru</td></tr>
</table>

	Project Manager • Elaborated and implemented business processes (incl. developing and meeting the budget requirements), developed a transparent system of efficiency analysis and reporting; • Stellar negotiator with history of successful profitable arrangements, ability to attract key clients and its further supervision; • Developed the system of sales analysis and customer actions' forecasting. Achievements: • Recognized for deep and unique knowledge of ticketing operations as a result led key consulting streams for FIFA Confederations Cup 2017, FIFA World Cup 2018. August 2013 – October 2014. Sochi 2014 Organizing Committee. Senior Project Manager • Developed and continuously assessed the implementation of the ticket sales strategy, predictive models and sales plans; • Carried out in-depth analysis and forecasting within the ticketing program to achieve full stadia and revenue goals; • Supervised the development and execution of the Fan2fan – online platform for verified ticket resale. 2. Consultation fields - Software product management; - Agile implementation; - Management of processes at the software development teams; - Product Analytics (funnels, metrics, dashboards); - User research, customer interviews, customer journey maps. 4. Relate Networking - Lots of contacts with experts from leading Russian it-companies 5. Expected effect - Improvement of software development process; - Agile practices implementation; - Consultations about product analytics, metrics, dasboards. Creating data-driven style of software development - Consultations about different methods of user research and their application - other consultations about software product management		
Education	MS	Major	Electronical Engineering at Bauman Moscow State Technical University
		Research field	Vacuum Technologies and Microelectronics
		Dissertation	The Technology of forming nanostructured coatings in vacuum by thermal evaporation technique

Code # : EC20

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes</td><td>Intellectual property Information</td><td>Patent No. 2479384
A method of producing ceramic products with nanoscale structure</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">NT(Nano Technology), ST(Space Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- Currently working as Deputy Director of Science for Institute of Structural Macrokinetics and Materials Science RAS
- ISMAN (founded in 1987) is based on the Department of Macroscopic Kinetics at the Institute of Chemical Physics, USSR Academy of Sciences. At that time, the Institute united a team of young, like-minded researchers that used the macrokinetic approach in their theoretical and experimental studies and had acquired a taste for practical app In terms of this approach, the process is controlled not only by the rates of chemical reactions and heat/mass transfer (as in classical macrokinetics) but also by the kinetics of phase and structure transformations in the system. In other words, the processes of product formation (its composition, texture, structure, and properties) are now considered to be of great importance. All this naturally stimulated development of new materials, which gave an addition to the name of the Institute (since 1998, it is the Institute of Structural Macrokinetics and Materials Science).

Combination of the macrokinetic and materials studies has become a distinctive feature of the Institute.

Nowadays, R&D at ISMAN is going on along the following lines:

theoretical models of structural macrokinetics
general theory of autowave and induction processes
experimental investigation of solid-flame combustion
theory and practice of chain reactions
new catalysts and heterogeneous catalysis
new systems for combustion chemistry
new experimental techniques
impact of external influences on SHS
SHS in multicomponent systems
SHS production of powders, materials, and items;
SHS coatings
SHS joining
materials science of SHS products
etc.
The research work carried out at the Institute facilitates further integration of macrokinetics, chemistry, and technology. lications.
-</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">SHS EXTRUSION OF MULTIFUNCTIONAL ELECTRODE MATERIALS FOR ELECTRIC SPARK ALLOYING</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC21

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes</td><td>Intellectual property Information</td><td>-</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">IT(Information Technology), NT(Nano Technology), Technology for AgroTech,</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- Our innovative centers ultimately have a combination of IT and software engineers, scientists, researchers and technicians who carry out a full DSTU Research and Development strategy as part of global University Development Programme 2020.

- In addition to our R&D centers, we invest in partnerships with educational centers all over the world in order to create the next generation of world-class experts. We have established collaborative partnerships with universities worldwide, investing more than 100 000 € in recent years to support joint programmes at DSTU and partner HEIs.

- Active involvement in the work of R&D centers provides students a great chance to start their careers straight from the university and continue work in one of the R&D based partner companies.

- MEDIAPARK “SOUTH REGION – DSTU
- INDUSTRIAL COWORKING
- RUSSIAN-CHINESE CENTER FOR INNOVATIONS AND HIGH TECHNOLOGIES TRANSFER
- INTERNATIONAL EDUCATIONAL CENTER ARENA MULTIMEDIA
- ROBOTICS DESIGN AND ENGINEERING PARK “DSTU-ROBOTICS”
- INNOVATIVE TECHNOLOGICAL CENTER OF ENGINEERING EDUCATION “MESO-BUREAU”</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">The method of vibrational refinement of cylindrical parts by rolling (transporting) on a flat oscillating surface with lateral restrictions</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC22

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes</td><td>Intellectual property Information</td><td>METHOD FOR PRODUCING CARBON NANOTUBES BY GAS-PHASE CHEMICAL DEPOSITION
A method of manufacturing a sealed product of carbon-silicon carbide material</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">NT(Nano Technology), ST(Space Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">."Ural Research Institute of Composite Materials" specializes in research, development of technologies and production of articles from composite materials based upon carbon, ceramic and polymeric matrices. At present the Institute is one of the leading designers and manufacturers of composite articles.

The Institute has mastered technology of manufacturing precise parabolic beam antennas of 5m diameter from polymeric composite materials. Within the frames of federal program on development of civil aviation equipment the research and development work was carried out along with preparation for serial production of shells and panels from composite materials for the ventilator duct of aircraft TU-204, TU-214, IL-96-300 and repair kit for the bottom part of jacket for TU 154 M. The Institute has developed the technology of manufacturing and winding load bearing shells onto sealed metallic liner to withstand operational pressure up to 150 Atm.

Developments of "Ural Research Institute of Composite Materials" are confirmed by many patents and marked by celebrated awards of international exhibitions.</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">METHOD FOR PRODUCING CARBON NANOTUBES BY GAS-PHASE CHEMICAL DEPOSITION</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC23

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes</td><td>Intellectual property Information</td><td>30 patents. Patent No. 2501108
Electrical insulation composition.</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">NT(Nano Technology), ET(Environment Technology), ST(Space Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- The Institute operates in the Kabardino-Balkarian State University since 1957, at first under the name «Faculty of Civil Engineering», from 1960 to 2015 — «Engineering Department», in 2015 — «Polytechnic Institute», and from 2016 years- «Institute of Architecture, construction and design. »
- Since 2017 has 3 institute departments and 2 colleges.

Research Fields:

Physics and chemistry of materials and processes of solid-state electronics;

Research: Nonclassical boundary value problems for differential equations and their applications to environmental protection;

Development of methods for improving the technical and economic performance of equipment and technologies of machine-building industries.

Research of dynamics and reliability of machines and equipment; x-ray Diffraction crystallography;

Physics of interphase phenomena.

Thermal physics; New, metal, polymer, structural and composite materials, structural ceramics;

Biodiversity of the Central Caucasus: composition, structure, dynamics, ecology, protection, rational use;

Scientific bases of management of interaction of the person and environment;

Mathematical and information and logical models and their computer assistance;

Methods of increasing diamond tools durability ;

Medical and biological research;

Adaptive physiology and medicine;

Physics of the atmosphere and near-earth space;

Development of new nature conservation technologies.</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">Guanidine-containing polymers and nanocomposites based on them</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes</td><td>Intellectual property Information</td><td>20. Patent No. 2407606
Damping Railway
Patent No. 2349699
An iron-based high damping alloy with a regulated level of damping and mechanical properties and an article made of it</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">NT(Nano Technology), ET(Environment Technology), ST(Space Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">Central Research Institute of Iron and Steel named after Bardin is the leading Russian research center for the creation of metallurgical technologies and new materials

Research Application / Advantages
A flexible, individual approach to each order, taking into account the wishes of consumers
Selection of materials in accordance with customer requirements
The possibility of additional scientific research and research
Development, adjustment and approval of regulatory documentation for the supply of products at the federal and industry levels
Delivery of products in small batches
Ensuring a high level of product quality
Minimum lead time</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">The structural mechanism of the formation of a highly damping state in α-Fe-based ferromagnetic alloys</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC25

<table>
<tr><td>Available term for consultation</td><td colspan="2">5 days</td><td>Available for trip to Korea</td><td>YES</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">17 patents. Emap of the repair base area with visual display of health and safety hazards of the technological environment subject to their type 2015613552</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ST (Space Technology), Civil aircraft, MT (Material Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">- Currently working for United aviation corporation (UAC) of ROSTEC
- Patents: e.g. Emap of the repair base area with visual display of health and safety hazards of the technological environment subject to their type 2015613552</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Engineering</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">Modular positioning high-response hydraulic drive for automated machinery</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC26

<table>
<tr><td>Available term for consultation</td><td colspan="2">5 days</td><td>Available for trip to Korea</td><td>YES</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">n/a</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">IT (Information Technology), NT(Nano Technology), ET(Environment Technology), ST(Space Technology), ME(Material&Equipment), MP(Manufacturing&Production)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">(Career)
- 2019-current Adviser to CEO, Association RH ISTC
- 2009-current Vice-president, Aviation and building technologies
- 2016-2017 Deputy general director, New Defense Technologies
Projects for the export of high-tech dual-use and civilian products for Russian enterprises:
* Condor 2020 (the fight against air drug trafficking);
* Modernization / equipment of airfields and helipads);
* Promising systems for providing instrumental take-off / landing;
* Promising building technologies

Continents: Latamerica, Middle East
+ Countries: CIS, India, Vietnam

(Specialty)
Specialization in regional and interstate high-tech projects related to the transfer of production and technology, including the industry:
- aerospace;
- National Air Navigation Plans;
- security systems and complexes (monitoring / protection / protection), including national and personal levels;
- landfill systems in high technology;
- complexes of airfields and control centers;
- monitoring complexes (space-air surface);
- complexes for ensuring accurate navigation / landing / special operations at the local and national levels.</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">-</td></tr>
<tr><td>Research field</td><td colspan="2">-</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Moscow Institute of Physics and Technology (National Research University)</td></tr>
<tr><td>Research field</td><td colspan="2">Flight Dynamics and Control</td></tr>
<tr><td>Dissertation</td><td colspan="2">Development and testing of aerospace engineering</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">-</td></tr>
</table>

Code # : EC27

<table>
<tr><td>Available for trip to Korea</td><td colspan="2">Yes</td><td>Intellectual property Information</td><td>1) Russian utility model patent No. 113266 « Installation for cleaning swimming pool water using ozone, ultrasound, UV radiation and chlorine» (joint authors);
2) Patent for invention of the Russian Federation No. 2635129 «Waste water treatment system» (joint authors)</td></tr>
<tr><td>Category of Research (by 6T)</td><td colspan="4">ET(Environment Technology), Shipbuilding</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1) Use of ozone, cavitation and UV radiation in swimming pool water treatment technology;
2) Design issues of a hydrodynamic cavitator;
3) Assessment of possible locations for swimming pool baths in the hull of passenger vessels;
4) Justification of the size of the ship's swimming pool bath;
5) Research on the quality of water preparation in swimming pools.</td></tr>
<tr><td rowspan="6">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Ship design and construction</td></tr>
<tr><td>Research field</td><td colspan="2">Water treatment, design of ship swimming pools</td></tr>
<tr><td>Dissertation</td><td colspan="2">Improving the design methodology for ship pools with their own water treatment system</td></tr>
<tr><td rowspan="3">Diploma degree (5 year program)</td><td>Major</td><td colspan="2">Shipbuilding</td></tr>
<tr><td>Research field</td><td colspan="2">Ship design</td></tr>
<tr><td>Dissertation</td><td colspan="2">Conversion of a 559B ship</td></tr>
</table>

Code # : EC28

Available for trip to Korea	Yes (up to 14 days)	Intellectual property Information	RU2651821C1. Method of localization of explosion of methane-air mixture and coal dust and device for its implementation
Category of Research (by 6T)	ET(Environment), ETC (Technology Transfer, Legal Services)		
Available field for consulting	1) Career Abstract - Education: 1991, attorney at law, the Red Banner Order Military Institute (Moscow) of the Ministry of Defense of the USSR - (1991-1995) Serviced in the Armed Forces of the Russian Federation in officer posts in a military court (Znamensk, Astrakhan Region) - (1995-August 2019) Advocate specialized in natural resources development & technical expertise, a member of Moscow Bar Association - (2004-August 2019) Chairman of the Presidium, Law Firm «Borodin & Partners» - (2004-2009) Chairman of the Board of Directors, CJSC Belovskaya Mine (Kemerovo Region) - 2016 – Multinational Joint R&D and JV Project in soft-magnetic materials (by technology transfer from Russian Fed.) - (2017-2019) Advisor to Director General, State Scientific Center VOSTNII for Industrial & Environmental Safety in Mining Industry of the Russian Federation (JSC «NC VOSTNII») - August 2019 - Deputy General Director, State Scientific Center VOSTNII for Industrial & Environmental Safety in Mining Industry of the Russian Federation (JSC «NC VOSTNII») / Head of Moscow Representative Office 2) Consultation Fields 1. Research Activities 2. Expertise and Conclusions in the field of Industrial Safety 3. Testing and Certification 4. Environmental Monitoring 5. Scientific and Educational Activities 6. Publishing 7. Design Bureau 8. Scientific and Technological Support 9. Development of Regulatory Documents for the Mining Industry 10. Development of Technical Regulations of the TR TS, GOSTs(EAS), Technical Specifications of TU. 11. Technology Transfer Process Management (especially between Russian & Korean partners) 3) Related Networks - Top and working-level contacts with RTN (Rostechnadzor) and its certification & testing laboratories, Ministry of Natural Resources and Environment, Federal Agency for State Property Management, Federal Security Service, Ministry of Justice etc. 4) Expected effect - Provide optimized services for products related to industrial (e.g. energy sector) & ecological safety in accordance with Russian legislations - Management of technology transfer		

Education	Ph.D	Major	-
		Research field	-
		Dissertation	-
	MS	Major	Law Faculty at the Red Banner Order Military Institute (Moscow) of the Ministry of Defense of the USSR
		Research field	Juridical Field (Aviation Law)
		Dissertation	Aviation & Space Law Regulation Measures
	BS	Major	-

Code # : EC31

<table>
<tr><td>Available term for consultation</td><td colspan="2">1week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4"></td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">IT (Information Technology), Software development</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">Please fill in detail information of your available consultation fields, knowledge and experience.

Based on this paper, the applicants will choose the consultation partner.

Eg. Your background and careers, Your “research / development / business” fields, What you can “coach / advise / contribute” from your knowledge and experience, Applicable fields, Expected effect from consultation

*Below is just example
1. Career Path (Experience)
- (2018 ~ current) Software Architect \ CTO in I-EXP, main responsibilities are business analytics of new projects, strategy and roadmap of software development, team management, development cost estimation, edutech
- (2015 ~ 2018) Head of the Department in Tecon MT, main responsibilities were organization and technical leading of a new department of software development and verification for microelectronics development, verification of new processor with RISC-V architecture, system software development, DevOps, team management
- (2013 ~ 2015) Software Developer in mail.ru, ICQ client software development for Android/Windows platforms
- (2009 ~ 2013) Lead Software Developer in Stoloto, main responsibilities were statistical analysis of new lotteries, payment terminal software development, cloud processing software development, system integration with partners software
- (2008 ~ 2009) Software Developer in Cyberplat, C++\Qt programmer in payment terminal software
- (2006 ~ 2008) Software Developer in AAM Systems, C++, application programmer in access control system software
2. Consultation fields
- Implementation of DevOps automation
- Project analysis and collection of requirements
- Software development cost estimation
- Software development team organization and management
- Strategic business planning and Project management methodologies (SWOT-analysis, 6Sigma, TRIZ, Stage Gate, Value Curve, etc)
- Edutech, innovative educational technologies
3. Certification
- MBA of Information Management
4. Relate Networking
- Association of graduates of IT-Management School
5. Expected effect
- Mentee (Applicants) can get the methodologies how to evaluate the new project's cost and development peroid
- Organize software development life cycle
- Organize software testing and verification
- Software requirements analysis
6. Appx.</td></tr>
<tr><td rowspan="2">Education</td><td rowspan="2">MBA</td><td>Major</td><td colspan="2">Informational management</td></tr>
<tr><td>Research field</td><td colspan="2">Software development organization, development management, cutting edge technologies</td></tr>
</table>

		Dissertation	Software development cost estimation
	MS	Major	Applied Mathematics and Informatics
		Research field	Real-time decision support systems
		Dissertation	Temporal databases research and realization
	BS	Major	Applied Mathematics and Informatics

Code # : EC32

<table>
<tr><td>Available term for consultation</td><td>Up to 1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">IT(Information Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="3">Area of expertise: machine learning, data mining, computer vision, IoT

Programming languages: Python, C, C++, C#, Objective-C

Libraries/Frameworks: Tensorflow/Keras, PyTorch, Caffe, NVIDIA TensorRT, Intel nGraph, various python libraries

Data science: Machine learning, deep learning, convolutional neural networks, recurrent neural networks, computer vision, regression models, hierarchical cluster analysis, video analytics, neural networks optimization, big data analysis, NLP

Other: Git, PostgreSQL, TeX, basic skills of iOS and IoT development

Languages: Russian (native), English (fluent)

Projects & experience:

3 year experience as a developer, data scientist and software engineer.

Completed various IT-projects:
• Object detection and recognition in images and videos (faces, people, cars etc.)
• Classification (emotions, age, gender, insects etc.)
• Text clusterization
• Style transfer

Have wide experience with customer code and models integration, models tuning and heuristics design for production usage, full customer interaction.

Technologies used:
CNNs, RNNs, GAN, MapReduce, CUDA, TensorRT, OpenCL, MIOpen, Intel MKL-DNN, nGraph.
Tools: Docker/NVIDIA Docker, Selenium, PyCharm, Jupyter Notebook, Sublime;
Atlassian stack: JIRA, Confluence, Bitbucket, Trello etc.

Education:
Specialist in mechanics and mathematics | Moscow State University (MSU)
September 2009 — July 2014

Consultation fields
- How to classify and deconstruct problems and build neural networks architectures based on the problems specifics (NLP, CV, ASR, etc.)
- How to cut and optimize architectures to speed up inference with minimal quality loss
- How to speed up inference using TensorRT
- How to use multiprocessing and train networks using multi GPU
- How to build efficient algorithms

Expected effect
- Applicants can implement AI solutions into their own products.
- Applicants can automate workflows and optimize inner processes.
- Applicants can speed up solutions to reach desired quality and speed metrics values.</td></tr>
</table>

Education	MS	Major	Mechanics and mathematics
		Research field	Probability theory
		Dissertation	On galactic dynamo equations with helicity flows and random coefficients

Code # : EC33

<table>
<tr><td>Available term for consultation</td><td>Up to 1 week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">IT (Information Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="3">
Area of expertise: machine learning, data mining, computer vision, IoT.

IT: Python, C++, algorithms and data structures.
Libraries: NumPy, OpenCV, TensorFlow, Keras, Darknet, Torch, Flask.
Big Data: Hadoop, Apache Spark.
Data science: Machine learning, neural networks, deep learning, reinforcement learning, computer vision, NLP, STT.
Languages: Russian (native), English (fluent).
ML researcher and developer in various fields:

Took part in a quality control project for a restaurant network (implemented product quality analysis tools for video streaming, managed application's back-end and front-end servers);
Designed neural networks for an insurance company for document classification;
Designed neural networks for eye disease detection for a pharmacy company;
Developed highly optimized pipeline, designed, trained and accelerated neural networks for license plate detection/segmentation and recognition;
Designed neural networks for specified objects detection and classification;
Conducted research, gathered and processed data for speech recognition and synthesis, trained neural networks;
Had experience with Super Resolution GAN networks for film quality improvement;
Designed and tuned high quality neural networks for age and gender classification using facial images;
Had vast experience in systems and network administration, server solutions and infrastructure scripts, including nginx, SQL, Django, CRON, etc.

Technologies used:
CNNs, RNNs, GAN, Vowpal Wabbit, MapReduce, Wav2Letter, Tacotron 2, BERT, nltk, CUDA, TensorRT.

Tools:
Docker/NVIDIA Docker, Selenium, SoX, FFmpeg, PyCharm, Jupyter Notebook, Sublime; Atlassian stack: JIRA, Confluence, Bitbucket, Bamboo, etc.

Education:
September 2009 — July 2014
Specialist in mechanics and mathematics | Moscow State University (MSU)

Additional:
September 2015 — June 2017
Big Data specialist | Yandex School of Data Analysis (YSDA)

Consultation fields

How to classify and deconstruct problems and build neural networks architectures based on the problems specifics (NLP, CV, ASR, etc.)

</td></tr>
</table>

<table>
<tr><td></td><td colspan="3">- How to cut and optimize architectures to speed up inference with minimal quality loss
- How to speed up inference using TensorRT
- How to use multiprocessing and train networks using multi GPU
- How to build efficient algorithms

Expected effect
- Applicants can implement AI solutions into their own products.
- Applicants can automate workflows and optimize inner processes.
- Applicants can speed up solutions to reach desired quality and speed metrics values.</td></tr>
<tr><td rowspan="3">Education</td><td rowspan="3">MS</td><td>Major</td><td>Mechanics and mathematics</td></tr>
<tr><td>Research field</td><td>Mathematical and Computer Methods of Analysis</td></tr>
<tr><td>Dissertation</td><td>On the arithmetic problems of the Merkle-Damgaard hash function</td></tr>
</table>

Code # : EC35

<table>
<tr><td>Available term for consultation</td><td>Free</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">From Oct 2005 till 2009 all obtained results are regarded to technological issues belong to Samsung Electronics (SEC). The results can be accessed after getting a permission from SEC. My papers (more than 50) have been published at Russian and foreign journals.</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">Optics and Photonics, Optics of lasers, Informational optical devices and laser systems</td></tr>
<tr><td>Available field for consulting</td><td colspan="3">1. Career Path (Experience)
- (2016 - Current) Vavilov State Optical Institute, St.-Petersburg, Technical expert-consultant

:- (2010 - 2016) Vavilov state optical institute, St.-Petersburg, General director assistant, Head of Department, promotion of the Institutes developments in the field of laser optical technologies

- (2005 - 2009) Samsung Electronics, Corporate Technology Operation (CTO), Mechatronics & Manufacturing Center, Suwon, Korea. Principal Engineer, UV Holographic Nanolithograthy

- (2001 - 2005) St.-Petersburg State University for Information Technology, Mechanics and Optics, St.-Petersburg, Russia, Professor Associate. Lecturing

- (2000 - 2005) LOMO PLC – Leningrad Optical Mechanical company, St.-Petersburg, Head R&D

- (1993 – 2000) Research Institute for Laser physics, St.-Petersburg, Senior Research Scientist

2. Consultation fields
- Applied photonics and optics,
- Lasers, laser optical systems and its applications,
- Traditional and modern optical materials
- Precision measurement systems,
- Optical devices for various purposes,
- Optoelectronic devices and systems
- Manufacturing of optics
- Testing

For several years I was employed as a consultant in companies:
- LIMO Microoptik GmbH, Dortmund, Germany,
- Center for Advanced Research in Space optics (CARSO), Area Science Park, Trieste, Italy,
- Industrie Anlagen Betriebs Geselschaft, IABG, Muenchen, Germany
- Schneider GmbH &Co, Fronhausen ,Germany

3. Certification
- May be possible based on Russian standards only

4. Relate Networking
- Member of Rozhgdestvenski Optical Society, Russia
- Member of International Society for Optics and Photonics (SPIE) , USA
- Member of European Optical Society (EOS) , EU

5. Expected effect
- Results of the consultations will help to prepare proposals for grant programs</td></tr>
</table>

	- Improve product quality, performance efficiency and process of optical devices manufacturing - Search for optimal solutions for advanced device development on all stages of manufacturing, testing and production - Reduce loss and cost saving thru process optimization 6. Appx. List of some references: (see Attachments): - Research Institute for Laser Physics, St.-Petersburg, Russia - Leningrad Optical-Mechanical Company -LOMO PLC, St-Petersburg, Russia - Samsung Electronics, CTO, Mechatronics & Manufacturing Technology center, Suwon, Korea		
Education	Ph.D	Major	Laser optics
		Research field	Laser optical systems and their applications
		Dissertation	Dissertation Title: High Precision Laser Interferometer for Geophysical Applications, Vavilov State Optical institute Diploma TN-102281,09.09.1987, Saint-Petersburg, Russia
	MS	Major	Physics, Applied Optics
		Research field	Optics and spectroscopy
		Dissertation	Title: “Spectral investigation of continuous high-current Ar-laser”, Physical faculty, Leningrad State University, Russia Diploma U-502909, 31.05.1972
		Degree Associated Professor	Senior Research Scientist (Associated Professor) , Research Institute for Laser Physics, Saint-Petersburg, Russia Diploma 5-US , 23.04.1998
	EU Program	Research and management, marketing	Area Science Park, Trieste, Italy Certificate, 20.12.1999
	EU Program	Scientific Management	Lovanium University, Loeven, Belgium Certificate, 15.05.1999

Personal:			Steady, reliable person, non-smoker, in good health. Hobbies: ski sport, Diploma - coach of boating tourism (rafting) photography. Life style: active sport man

Code # : EC36

Available term for consultation	5day / 1week / free / ETC	Available for trip to Korea	Yes/ No
Intellectual property Information	> 10 patents in client projects.		
Category of Research (Choose 1 or more)	IT(Information Technology), BT(Biology Technology), NT(Nano Technology), ET(Environment Technology), ST(Space Technology), ME(Material&Equipment), MP(Manufacturing&Production), CT(Convergence Technology), ETC(Please fill in)		
Available field for consulting	Certificate of TRIZ specialist №64 of the International TRIZ Association. See appendix 1. Work experience: -(March 2011 – Current) Individual entrepreneur, TRIZ-consultant. Problem solver. Projects for EVRAZ, ROSATOM, etc. -(December 2009 – March 2011)TRIZ – consultant in “Technopark of Saint-Petersburg”. Russia. Activities: The help to technopark’s residents in the problem solving of manufacture and production improvement. -(July 2005 – February 2009) TRIZ – consultant in Samsung SDI, Suwon, South Korea. Activities: The help to working groups in the problem solving of manufacture and production improvement. TRIZ training. See Appendix 2. -(October 1995 – February 2003) TRIZ – expert in Algorithm ltd. Team manager of advice project, technical problem solver, researcher. -(April 1987 – September 1995) Engineer in Shipbuilding Design Office “RUBIN”, Researcher and developer of the Computer-aided Projecting System (CAPS). Duties: Designer of technical descriptions for the CAPS. Designer drawings of hull. CV I’m problem solver in scientific and technical area, on the basis of methods of technical creativity of TRIZ and FCA. Professionally I work as the TRIZ-consultant since 1995. For this time it is executed more than hundred projects and several hundreds solutions are made. The part of decisions is patented by customers, including for my name. On Samsung SDI it is sent about 20 applications for patents. I completed dozens of practical seminars for Russian corporations, with a solution of about 200 real problems of customers. List of tasks to be solved: • Solutions to non-standard production problems; • Product improvement; • Cheaper production; • Forecast of product development; • Solving the problems of production modernization; • Elimination of marriage and losses; • Import substitution and circumvention of patents; • Advanced training for engineers, training for TRIZ. The brief list of projects, for an illustration of a range of TRIZ works. For company Procter&Gamble: 1. Improvement of hygiene products - several projects.. 2. Manufacturing process of a potato powder. For company Motorola: 3. Reduction in price of the case of a choke for fluorescent lamps. For company Ford: 4. Elimination of defect of an automatic transmission. For other companies: 5. Verification of technologies for tire recycling, manufacturing of boxes for a pizza, juices concentrating by freezing-out. 6. Not invasive measurement of a level of sugar in blood.		

	For Samsung SDI (about 100 projects/consultations): 7. A portable energy source on the basis of fuel cells. 8. Reduction prices of the chassis of the plasma TV. 9. Improvement of the display for mobile phone - some projects. 10. CRT the TV - some projects on reduction of depth of a kinescope. 11. Lithium-ion accumulators - some projects for maintenance of passage of tests on safety. 12. Elimination of various defects during manufacture PDP.		
Education	Ph.D	Major	Electronics Engineering
		Research field	Non-volatile Memory(PRAM, MRAM, FRAM), Semiconductor packaging process, equipment and materials(Adhesive, film)
		Dissertation	Flexible transparent GO-NH2-AgNP/AgNW/PET multilayer electrode for nonvolatile memory applications
	MS	Major	Advanced Materials Engineering
		Research field	Advanced materials manufacturingweb-coating, roll-to-roll, vanish mixing)
		Dissertation	Microstructure evolution mechanisms and physical, mechanical properties of kinetic and thermal sprayed multi-walled carbon nanotube reinforced metal composite coatings
	BS	Major	Electronics Engineering

Code # : EC37

<table>
<tr><td>Available term for consultation</td><td>Free</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">From 2004 till 2006 all obtained results are regarded to technological issues belong to Samsung Electro-Mechanics Co., Suwon, Republic of Korea. The results can be accessed after getting a permission from SEM. All other patents and all my papers are in my own personal Intellectual property</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">Materials Science and Technology, Optoelectronic materials and devices. Luminescence and luminescent materials. LED experience</td></tr>
<tr><td>Available field for consulting</td><td colspan="3">1. Career Path(Experience)

2011-present. Principal Researcher, Institute of Applied Physics, Academy Sciences of Moldova, Republic of Moldova

2012. Visiting Professor, School of Materials and Mineral Resources Engineering Universiti Sains Malaysia, 14300 Nibong Tebal, Penang, Malaysia

2007-2011 Research Professor, Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Republic of Korea.

2004-2006. Principal Researcher in Samsung Electro-Mechanics Co., Suwon, Republic of Korea.

2003-2004. Research Professor, Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST). Display Material Lab., Material Science department, Republic of Korea

1979-1982. Professor in Annaba State University, Algeria

1973-2003. Associate professor, Chair of Physics, Technical University of Moldova.

2. Consultation fields

Professional with extensive research and teaching experience in Materials Science and Technology.

Materials analysis, characterization and testing;

Optoelectronic materials and devices.

Luminescence and luminescent materials

Synthesis and investigation of luminescent properties of phosphors. Synthesis of nanophosphors and phosphors with submicron size.

Physical and chemical methods of phosphor treatments to improve their light-emitting performance.

LED experience.

Expert and consultant in the area of light-emitting materials and devices.</td></tr>
</table>

	Reviewer and consultant of the International journals: Solid State Chemistry, Journal of Luminescence, Optical materials, Journal of Crystal Growth, Electrochemical and Solid–State Letters, Materials Science and Engineering, Materials Research Bulletin, Journal of Alloys and Compounds, Journal of non-crystalline Solids, etc; 3. Certification Doctorate certificate, MFM No 021128, Moscow, Russia 4. Relate Networking Member of the New-York Academy of Sciences. Member of the Optical Society of Korea Member of the Luminescence Society of India Member of the Microscopy Society of Malaysia 5. Expected effect Mentee(Applicants) can get the methodologies how they can logically prepare proposal for the government grant program Improve product quality and manufacturing yield in luminescent materils reduce loss and cost saving thru process optimization Tech. driven discussion for advanced device development on all stages of manufacturing and testing 6. Appx. **Research Professor**, Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST). **Principal Researcher in** Samsung Electro-Mechanics Co., Suwon, Republic of Korea. **Visiting *Professor***, Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Republic of Korea. **Invited Professor**, School of Materials and Mineral Resources Engineering Universiti Sains Malaysia, 14300 Nibong Tebal, Penang, Malaysia **CV and List of main references: (see Attachments)**		
Education	Ph.D	Major	**E**lectron microscopy
		Research field	Semiconductors and dielectrics at low temperatures
		Dissertation	Dissertation Title: **E**lectron microscopy of semiconductors at low temperatures Doctorate certificate, MFM No 021128, Moscow, 07.12.

			1973, Russia Moscow State University, Moscow , Russia
	MS	Major	Advanced Materials Engineering
		Research field	Physics, Electronics Engineering, Advanced materials manufacturing
		Dissertation	Diploma N 634716, Moscow State University, 27.01. 1970, Moscow, Russia Moscow State University, Moscow , Russia
	BS	Major	Electronics Engineering

Code # : EC38

<table>
<tr><td>Available term for consultation</td><td colspan="2">free</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">150 scientific paper (Scopus and Web of science); 5 patents</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">IT(Information Technology), NT(Nano Technology)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">1. Career Path(Experience)
- (1996 ~ 1998) Applied Phase Transition Co. in USA (DARPA project “Nonorganic resist for photo- and E-beam lithography)
- (1999 ~ 2005) Professor of the Petrozavodsk State University
- (2005 ~2009) Senior Researcher in Devices Lab, SAIT, Samsung Electronics Co.: Research in Non-volatile Memory (Resistance Random Access memory – hear after ReRAM), in oxide electronics technical units (heterostructures – diodes and transistors) of Devices Lab.
- (2009 ~current) Professor of the Petrozavodsk State University.

2. Consultation fields
Applicant provide ideas, advise, and work related to the oxide electronics in technical devices of interesting company:
(a)Technical support for standard or novel activities:
- Contribution to non-volatile ReRAM memories (investigation on the physics and engineering for materials and construction of convenient devices).
- Contribute to oxide electronics structures and devices (oxide transistors with high mobility channel, oxide diodes with high direct currents)
- Contribute to investigations devices utilizing metal-insulator (MIT) in different oxides materials.
- Anodic oxidation (new materials, new technologies, application for constructions new devices in nano scale.
(b) Follow-up research activities

3. Certification
- Technology Transfer Manager (completed certified training under the CRDF "Transfer technology management" program in the United States).
- Government certificate (scientific and pedagogical expertise in the field of semiconductor electronics).

4. Expected effect
- Applicants can get the methodologies how we can logically prepare proposal for the government grant program
- Improve product quality and manufacturing yield in semiconductor production
- reduce loss and cost saving thru process optimization
- right material selection for constructions thin film nano-scale semiconductor devices especially for oxide electronics (especially flexible and transparent)
- Tech. driven discussion for advanced device development on early stage(device scale, form factor, configuration, production).</td></tr>
<tr><td rowspan="4">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Physics, Electronics Engineering</td></tr>
<tr><td>Research field</td><td colspan="2">Non-volatile Memory (ReRAM,), Oxide electronics.</td></tr>
<tr><td>Dissertation</td><td colspan="2">Metal-insulator transition in amorphous dioxide vanadium</td></tr>
<tr><td>MS</td><td>Major</td><td colspan="2">Physics, Advanced Materials Engineering</td></tr>
</table>

		Research field	Properties of the transition metal oxide
		Dissertation	Metal-insulator transition in anodic oxide materials
	BS	Major	Physics, semiconductor electronics

Code # : EC39

Available term for consultation	Free	Available for trip to Korea	Yes
Intellectual property Information	Please fill in the patents(filed / registered) information More then 10 Patents		
Category of Research (Choose 1 or more)	IT(Information Technology), BT(Biology Technology), NT(Nano Technology), ET(Environment Technology), ST(Space Technology), ME(Material&Equipment), MP(Manufacturing&Production), CT(Convergence Technology), ETC(Please fill in) New type of energy sosrses		
Available field for consulting	 Eng. Oleg V. Olshansky Alternative energy Engineer and Honored Inventor Born December 30, 1953. **Key specialties**: design and implementation of alternative energy plants, engineering, automation, power & heat generation, transportation and industrial energy, CAD/CAE design. Please fill in detail information of your available consultation fields, knowledge and experience. Appx. (Publications) 2012 - Book “Quantum Vacuum - two types of energy” ISBN 978-5-94424-203-7 2012 - Book “Engineering foundation for a new energy” ISBN 978-5-94424-094-1 2012 - Book “The energy and the physical vacuum” ISBN 5-93567-063-11 2012 - Book “Fuel cell technology”, № 2249886 H1M8 2012 - Book “METHOD FOR DETERMINING OF STRUCTURAL MATERIAL” - № 2320972 C2 **PROFESSIONAL EXPERIENCE** 2008-Present - Work on project engineering basis - Business Partners in CZ **SIMETI** s.r.o (consulting) - **PHE** s.r.o (chef of the R&D department)		

- Business, consulting and partnerships with a number of European companies.

199 2-201 5
- Ltd. **Infodate** , Co-founder,
- Co_Director **Solar technology** Ltd.. Technical Director http://solartechnologies.ru/
- Ltd. **PIR**. (Industrial Research and Development). Director of Economics. Consulting services in the implementation of engineering projects with firms of Germany MONTECH and solar energy practice in companies of Czech Republic.
-

FORMAL EDUCATION

2006 – 2009	Rates accounting, management, marketing, business training USA and Sweden
1984-1986	Patent Examiner, Institute of patenting.
1980 – 1982	Professional retraining diploma English-Russian Translator, German-Russian technical translator, Volgograd State Pedagogical University.
1974 – 1979	Electrical Engineer, Volgograd State Technical University (Volgograd, Russia)

Based on this paper, the applicants will choose the consultation partner.

PUBLICATIONS

2012	Book (RU)	"Quantum Vacuum - two types of energy" ISBN 978-5-94424-203-7 http://samlib.ru/g/gpebenchenko_j_i/032.shtml
2008	Book (RU)	"Engineering foundation for a new energy" ISBN 978-5-94424-094-1 http://samlib.ru/g/gpebenchenko_j_i/030.shtml
2004	Book (RU)	"The energy and the physical vacuum" ISBN 5-93567-063-1 http://samlib.ru/g/gpebenchenko_j_i/033.shtml

RU Patents

AC № **1182421** **1984** DC voltage level indicator. https://yandex.ru/patents/doc/SU1182421A1_19850930

AC № **1431073** **1987** Multichannel digital to analog converter.

https://yandex.ru/patents/doc/SU1431073A1_19881015

AC № **1682069** **1988** Photocopy system for gas cutting machine.

https://yandex.ru/patents/doc/SU1682069A1_19911007

RU **2249886** **2005** METHOD FOR CONTROLLING OUTPUT CURRENT OF

ELECTROCHEMICAL GENERATOR (OPTIONS) https://patents.s3.yandex.net/RU2249886C2_20050410.pdf

RU 2396540 **2008** METHOD FOR DETERMINING DURABILITY OF DESIGN MATERIALS IN AGGRESSIVE MEDIA AND DEVICE FOR ITS IMPLEMENTATION https://yandex.ru/patents/doc/RU2396540C2_20100810

RU 2 5 2 0 2 7 7 **2011** DEVICE FOR Catching Locusts https://yandex.ru/patents/doc/RU2520277C2_20140620

RU **2584618** **2013** METHOD OF PROCESSING METAL PARTS IN ACOUSTIC CONDITIONS RESONANCE EXPOSURE AND DEVICE FOR IMPLEMENTING THE METHOD https://patents.s3.yandex.net/RU2584618C2_20160520.pdf

RU **2651841** **2013** A method of processing metal parts under conditions of acoustic resonant exposure to a stream of a mixture of compressed air and gaseous chemicals and a device for its implementation

https://patents.s3.yandex.net/RU2651841C2_20180424.pdf

International patents

EP 0396752A1 2005 INDUSTRIEROBOTER

https://patents.google.com/patent/EP0396752A1/de

Wo 2009/157808 A2 **2008** METHOD FOR DETERMINING DURABILITY OF DESIGN MATERIALS IN AGGRESSIVE MEDIA AND DEVICE FOR ITS IMPLEMENTATION

https://patentscope.wipo.int/search/ru/detail.jsf?docId=WO2009157808

CZ Patent 029534 2016 Autonomous apparatus for trapping blood sucking ticks

https://isdv.upv.cz/doc/FullFiles/UtilityModels/FullDocuments/FDUM0029/uv029534.pdf

CZ Patent 307004 2017 The methods for producing thermal energy, the devices for its implementation, and heat generation systems

http://spisy.upv.cz/Patents/FullDocuments/307/307004.pdf

International Patent Application for CZ Patent 307004 2017:

CA3017034A1 Canadian Patent Application

CN109074872A China Patent Application

KR20190021195A Sous Korea Patent Application

US2019096535A1 US Patent Application

WO2017152889A1 International application published under the patent cooperation treaty (**PCT**)

	Eg. Your background and careers, Your “research / development / business” fields, What you can “coach / advise / contribute” from your knowledge and experience, Applicable fields, Expected effect from consultation	
Education	Major Electronics Engineering	
	1984-1986	Patent Examiner, Institute of patenting.
	1980–1982	Professional retraining diploma English-Russian Translator, German-Russian technical translator, Volgograd State Pedagogical University.
	1974–1979	Electrical Engineer, Volgograd State Technical University (Volgograd, Russia)

Code # : KC01

<table>
<tr><td>Available term for consultation</td><td colspan="2">free</td><td>Available for trip to Korea</td><td colspan="2">Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="5">Knowhow regarding manufacturing method of Tungsten Carbide Nano-particles</td></tr>
<tr><td>Category of Research</td><td colspan="5">NT(Nano Technology), ME(Material&Equipment)</td></tr>
<tr><td>Available field for consulting</td><td colspan="5">1. Research Career (Experience)
PhD in Physics and Mathematics, Senior Researcher, Laboratory of Non-Stoichiometric Compounds, Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences.
Author and co-author of 71 published works, including one review (“Advances in Chemistry”, 2006) and 38 articles in domestic (“Journal of Experimental and Theoretical Physics”, “Solid State Physics”, “Letters in JETP”, “Reports of the Academy of Sciences”, “Journal of Physical Chemistry”, “Inorganic Materials”, “Journal of Structural Chemistry”, “Materials Science”, “Metallophysics and Latest Technologies” and others) and foreign (“Physical Review”, “Journal of Solid State Chemistry ”,“ Nanotechnology ”,“ International Journal of Refractory Metals and Hard Materials ”) scientific journals, 7 articles in domestic and foreign collections.

2. Consultation fields
- Phase and Equilibria in the W-C and W-Co-C Systems
- Crystals structure of Tungsten Carbides
- Nanocrystalline Tungsten Carbide
- Production and Properties of WC Nanocrystalline Powders
- Hardmetals WC-Co Based on Nanocrystalline Powders of Tungsten Carbide

3. References
- Chairman of the Council of Young Scientists of the Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences (2006-2012).
- Member of the Council of Young Scientists and Specialists of the Sverdlovsk Region (from 2009 to the present).
- Chairman of the Council of Young Scientists of the Ural Branch of the Russian Academy of Sciences (from 2012 to present).</td></tr>
<tr><td rowspan="3">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="3">Physics and Mathematics</td></tr>
<tr><td>Research field</td><td colspan="3">Physical chemistry of solids and materials science.
Non-Stoichiometric Compounds</td></tr>
<tr><td>Dissertation</td><td colspan="3">Structure and properties of tungsten carbides of various dispersion</td></tr>
</table>

Code # : KC02

Available term for consultation	Up to 1 month	Available for trip to Korea	Yes
Intellectual property Information	**Patent on:** **-Tissue engineering:** **1.** Stepanova A.O., Karpenko A.A., Popova I.V., Laktionov P.P., Pokushalov E. A., Vlasov V.V. **Method of treatment of vascular grafts, produced by electros pinning**. Russian Patent No. 2563994, registered on August 31, 2015; Applicatio n for patent of RF No. 2014128149 priority from 09.09.2014, published: August, 2015 **2.** Stepanova A.O., Chernonosova V.S., Karpenko A.A., Popova I.V., Laktionov P.P., Pokushalov E.A., Vlasov V.V. **Method of low porosity small diameter vascular grafts manufacturing.** Russian Patent No. 2572333, registered on 10.01.2016, Application for patent of RF No. 2014143589, priority from 28.10.2014, published: 10.01.2016 **3.** V.S. Chernonosova, T.S. Godovikova, A.O. Stepanova, O.B. Naumenko, V.V. Vlasov, P.P. Laktionov. **Biograft for restoration of cartilage defects in joints and photopolymerizable hydrogel for its use.** Russian Patent No. 2593011, registered on 06.06.2016, Application for patent of RF No. 2015129217, priority from July 16, 2015, published: 06.2016. 4. Stepanova A.O., Kuznetsov K.A., Novikova O.A., Pokushalov E.A., Karpenko A.A., Laktionov P.P. **Method of producing a microfibrous drug releasing material. Russian** Patent No. 2 669 344, registered on 10.10.2018, Application for patent of RF No. 2017138348, priority from 02.11.2017, published: October 10, 2018 Bull. Number 28 **5.** Gostev A.A., Rasskazov G.A., Chernonosov V.S., Stepanova A.O., Shutov A.V., Karpenko A.A., Karaskov A.M., Pokushalov E.A., Laktionov P .P. **A method of manufacturing of small diameter vascular grafts by electrospinning and a device for its implementation.** Russian Patent No. 2 704 314, registered on 28.10.2019, Application for patent of RF No. 2018116273, priority from 28.04.2018, published: 28.10.2019 Bull. Number № 31. 6. Laktionov P.P., Chernonosova V.S., Rasskazov G.A., Cherepanova A.V., Karpenko A.A. et all, **Detergent-free procedure for decellularization of (xenogenic) biological tissues intended for human surgery.** Korean patent application 2019 **-DNA vaccines (apyrogenic DNA isolation)** Laktionov P.P., Skvortsova T.E., Morozkin E.S., Malshakova V.S., Cherepanova A.V., Bondar A.A., Vlasov V.V. Ilyichev A.A., Karpenko L.I., Bazhan S.I., Oreshkova S.F., Nechaeva E.A., Drozdov I.G. **Method of pyrogen-free plasmid DNA isolation from bacterial cells.** Russian Patent No. 2408729, registered on January 10, 2011, priority date 06.04.2009. **-Circulating cell isolation (microfluidics)** Laktionov P.P., Vainer O.B., Zaporozhchenko I.A., Pyshnaya I.A., Pyshniy D.V., Dmitrienko E.V., Skvortsova T.E., Morozkin E.S., Loseva E .M., Vandysheva N.V., Romanov S.I. **Mmethod for the selective isolation of a population of viable cells from biological fluids.** Russian Patent No. 2423698, registered on July 10, 2011, priority date 9.11. 2009. **-Cell-free Nucleic acids** 1. Skvortsova T.E., Morozkin E.S., Laktionov P.P., Rykova E. Yu., Pokushalov E.A., Vlasov V.V. **Method for the diagnosis of lung cancer.** Russian Patent No. 2 633 693, registered on 10.16.2017, priority date 12.12.2016. 2. Lekhnov E.A., Laktionov P.P., Morozkin E.S., Zaporozhchenko I.A., Vlasov V.V. Method for isolating microRNA from biological liquids. Russian Patent No. 2585232, registered on 27.05.2016, priority date 06.05.2015.		

	3. Lekhnov EA, Konoshenko M.Yu., Bryzgunova O.E., Zaporozhchenko IA, Laktionov PP, **Method for the isolation of extracellular vesicles from biological fluids.** Russian Patent No. 2678988, registered on 05.02.2019, priority date 05.03.2018.
Category of Research (Choose 1 or more)	BT(Biology Technology), ME(Material&Equipment), MP(Manufacturing&Production), Molecular Biological Technologies (Tissue culture, cell-free DNA, RNA, NGS, etc)
Available field for consulting	1. Career Path Graduate from Novosibirsk state university at 1983, as Biochemist and Molecular Biologist, young scientist in the Institute of Organic chemistry SB RAS (NIOCH SD RAS), Institute of Biochemistry SB RAS (NIBOCH SD RAS), Institute of Immunology SB RAMS (IIM SB RAMN), starting from 1994 in the current institute of Chemical Biology and Fundamental Medicine SB RAS (ICBFM SB RAS). Starting from 2000 leader of the Group of Cellular Biology, starting from 2013 leader of the laboratory of Molecular Medicine of ICBFM SB RAS. Starting from 2014 leader of the Laboratory of Biomedical Technologies of National Medical Research Center named academician Meshalkin, Ministry of Health of the Russian Federation. Shareholder of Biosilica Ltd (production of DNA and RNA isolation KITs, since 2006) and TE&GRAFTS Ltd. (second shareholder is ICBFM SB RAS, tissue engineering of cardiovascular devices, since 2019) More than 130 publications in PubMed, h-index 23 (Scopus), supervisor of many grants from RFBR, RSF, Ministry of Health of Russian Federation, etc. 2. Experience. 1983-1988, Scientist in NIOCh SB RAS, NIBOCH SB RAS. Production of monoclonal antibodies against no less than 10 antigens, development of a rapid method for localization of antigenic determinants on proteins, study of proteins antigenic structure and functional topography. Preparation of Au, Fe, Ag colloids. Preparation of the complexes of the colloids with proteins, protein localization in cells, TEM-immunogold protein localization. 1989-1994. Director of Bios Ltd. Development of technologies for production of immunochemicals (immunoglobulins, monoclonal antibodies, affinity purified polyclonal antibodies, proteins). Development of antibodies in mice, rats, rabbits, goats, sheeps. Production of poly- and monoclonal antibodies against peptides, haptens, conjugates preparation, design of immunoassays. Large scale production of fetal calf serum, immunoglobulins, affinity purified antibodies and their fragments, conjugates. Production of poly- and monoclonal antibodies by order, purification of peptides and proteins by order. Designing and production of laboratory equipment. 1994-2020 Basic Biochemistry and Molecular biology including isolation of biopolymers (proteins, DNA, RNA, microRNA) and microvesicles for general study as well as for diagnostic and DNA vaccines. Study of biopolymer interactions, including affinity modification. Development of cell-free DNA and RNA based cancer diagnostics. Cell culture, primary and transformed cells, immune histochemical and mRNA based cell characterization, tests for toxicity (ISO) and biocompatibility, investigation of cell interaction with different materials including deep study of cellular phenotype by NGS sequencing. Tissue engineering of hyaline cartilage, vascular grafts, covered metal stents and cardiac valves. Basic study of the mechanical and chemical properties of the materials (XPS, IR, SAXS, SEM, strain-stress diagram, etc). Production of drug-releasing materials, study of drug release from 3D matrices. Study of biomaterials, as well as bioprostheses in vivo. Histology, immunohistological studies, blood biochemistry, etc. - Material selection and novel materials development (production of biomaterials from blends of natural and synthetic polymers by electrospinning) - Process customization for new device development, biochemical processes (non-pyrogenic biopolymer production), preparation of the technical regulations - Strategic business planning and Project management preparation of applications for national and international scientific and production support programs. - Technology Transfer activity, preparation of Patents, Know How etc. - Expert of Russian Foundation of Basic Research, Russian Science Foundation, etc.

	- Supervisor of more than 10 PhD thesises (3 in tissue engineering) 3. Expected effect - Mentee(Applicants) can get the methodologies how they can logically prepare proposal for the government grant program - Improve product quality and manufacturing yield in field of tissue engineering and biochemistry/molecular and cell biology - reduce loss and cost saving thru process optimization - Tech. driven discussion for advanced device development (necessary for production of small diameter vascular grafts) 4. Appx. List of publications for last 2 years.		
Education	Ph.D	Major	Biochemistry
		Research field	Nucleic acids and protein biochemistry, oligonucleotide derivatives, oligonucleotide - protein complexes, development of new DNA related techniques, DNA to protein interactions
		Dissertation	Investigation of interactions of the oligonucleotides and DNA with cells and proteins of body fluids (1997)
	MS	Major	Biochemistry, Monoclonal antibodies technology
		Research field	Cell culture and hybridoma technology, immunology and immunochemistry
		Dissertation	Development of the methods of screening and hybridization of lymphoid cells for production of monoclonal antibodies against human myoglobin - myocardial infarction marker (1983)
	BS	Major	Molecular Biology and Biochemistry

Code # : KC03

Available term for consultation	free	Available for trip to Korea	Yes
Intellectual property Information	9 international patents, 3 domestic patents registered in Russia ● Gas laser WO US CN DE RU US8345723B2 Vladimir Vasilyevich Atezhev Optosystems Ltd. PIC GPI RAS Priority 2009-06-19 • Filed 2010-05-27 • Granted 2013-01-01 • Published 2013-01-01 ● Офтальмохирургическая лазерная система WO RU WO2015178803A1 Игорь ГУРЕВИЧ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "ОПТОСИСТЕМЫ" (ООО "Оптосистемы") Priority 2014-05-22 • Filed 2015-05-05 • Published 2015-11-26 ● Способ формирования оболочки волноводной структуры в прозрачном объемном … WO RU WO2016105245A1 Михаил Андреевич БУХАРИН ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "ОПТОСИСТЕМЫ" (ООО "Оптосистемы") Priority 2014-12-24 • Filed 2015-12-08 • Published 2016-06-30 ● Способ и устройство формирования прецизионных отверстий в оптически прозрачной … WO CN RU WO2015069143A1 Сергей Каренович ВАРТАПЕТОВ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "ОПТОСИСТЕМЫ" (ООО "Оптосистемы") Priority 2013-11-07 • Filed 2014-10-07 • Published 2015-05-14 ● Ophthalmic surgical femtosecond laser system WO CN DE RU CN202682148U 谢尔盖·卡列诺维奇·瓦尔塔佩托夫 光学系统有限责任公司 Priority 2010-03-10 • Filed 2011-03-02 • Granted 2013-01-23 • Published 2013-01-23 ● Laser scanning device (laser scanning system) with a resonance scanner WO DE RU DE212012000262U1 Optosystems Ltd. PIC GPI RAS Priority 2012-03-26 • Filed 2012-12-14 • Published 2014-12-02 ● Gas-discharge laser WO US CN DE RU US8005126B2 Vladimir Vasilyevich Atezhev Optosystems Ltd. Priority 2007-03-13 • Filed 2008-02-11 • Granted 2011-08-23 • Published 2011-08-23 ● Module of a polymer composite saturation absorber with single-walled carbon … WO DE RU DE212012000233U1 Optosystems Ltd. Priority 2011-12-29 • Filed 2012-12-14 • Published 2014-08-18 ● All-fiber laser with an ultrashort pulse width		

	WO DE RU DE212012000238U1 Optosystems Ltd. Priority 2011-12-29 • Filed 2012-12-14 • Published 2014-08-18 ● CVD Reactor RU 158 690 U1 Priority 21.09.2015 ● CVD Reactor RU2 299 929 C2 Priority 11.08.2005 ● CVD Reactor RU 2 393 270 C1 Priority 03.12.2008
Category of Research (Choose 1 or more)	● NT (Nano Technology) ● ME (Material & Equipment), ● MP (Manufacturing & Production)
Available field for consulting	RESEARCH SKILLS and CURRENT RESEARCH INTERESTS: ● Gas discharge Excimer laser ● Laser systems for micromachining ● Lidar systems for ozone and pollutants measurements ● Pulse solid state lasers ● Diode pump solid state lasers ● Medical lasers (refractive surgery, cardiology, dermatology) ● Microwave plasma CVD systems and technologies 1. Career Path (Experience) ● 1977~1980: the chief of research group ● 1980~1990: the chief of laser subdivision of Physics Instrumentation Center Physics Instrumentation, Center of Prokhorov General Physics Institute (PIC GRI RAS) ● 1990~2000: deputy director of Physics Instrumentation Center (PIC GRI RAS) ● 2001~2016: director of Physics Instrumentation Center Physics Instrumentation Center of Prokhorov, General Physics Institute ● 2000~present: Founder of Optosystems Ltd. (www.optosystems.ru). Optosystems Ltd. is the leading manufacturer of lasers for medicine, science and technology in Russia. The product line includes excimer lasers, CO_2 and N_2 lasers, DPSS lasers, medical laser systems, lidars, high voltage power supplies and magnetometers. 2. Consultation fields ● Consulting on development of laser source and industrial laser equipment using it ● Joint development of laser processing equipment made of metal, polymer and ceramic 3. Certification ● Russian Academy of Science member 4. PROFESSIONAL MEMBERSHIPS: ● Expert of Laser Association of Russia

<table>
<tr><td></td><td colspan="3">

- Expert of «Russian Corporation of Nanotechnologies»
- Member of Research Committee of General Physics Institute

5. Expected effect

- Mentees (applicants) can get a methodology to logically propose a government grant program.
- Support development of ultra-precision laser processing equipment for semiconductor and display production
- Process optimization to reduce losses and costs
- Leading discussion on early stages of advanced device development (device scale, form factor, configuration, BOM / process / production)

</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D.</td><td>Major</td><td>Physics (General Physics Institute)</td></tr>
<tr><td>Research field</td><td>Gas discharge lasers (excimer, CO_2), solid state lasers.</td></tr>
<tr><td>Dissertation</td><td>Gas discharge laser with magnetic switch generator
(*Advisor – Academician A. Prokhorov)</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td>Physics (Moscow Physical Technical Physical Institute)</td></tr>
<tr><td>Research field</td><td>Gas discharge lasers (excimer, CO_2), solid state lasers</td></tr>
<tr><td>Dissertation</td><td>High-power solid-state laser with picosecond generator and the problem of interaction of a powerful picosecond laser pulses with solid and gas targets. High power gas discharge CO_2 and excimer lasers</td></tr>
<tr><td>BS</td><td>Major</td><td>Physics</td></tr>
</table>

Code # : KC04

<table>
<tr><td>Available term for consultation</td><td colspan="2">free</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME(Material&Equipment), ETC(Material Science)</td></tr>
<tr><td>Available field for consulting</td><td colspan="4">Career Path
1975-1978 – Head of Laboratory of Separation of Substances Mixtures at the Nizhny Novgorod State University
1978-Current – Head of Laboratory of Chemistry of High-Purity Non-Oxide Glasses at the Institute of Chemistry of High-Purity Substances of Russian Academy of Sciences (ICHPS RAS)
1988-1998 – Deputy Director of ICHPS RAS
1998-2017 – Director of ICHPS RAS
2018-Current – Scientific Supervisor of ICHPS RAS

2. Consultation fields
- Chemistry and technology of high-purity substances and materials;
-Volatile inorganic hydrides (SiH_4, H_2S, H_2Se)
-High Purity Elements (S, Se, Te, As, Ge, Si)
-High transparent chalcogenide glasses for the middle IR-range optics
-Chalcogenide glass fiber with low optical losses in 2-12 micron wavelength range
- Strategic business planning and Project management methodologies(Planning of Government Project proposal)
3. Certification
-
4. Relate Networking
- Academician Council Chairman of RAS “Chemistry of High-Purity Substances”
- Member of Advisory Board of International Symposium of Non-Oxide and New Glasses
5. Expected effect
- Mentee(Applicants) can get the methodologies how they can logically prepare proposal for the government grant program
- Improve product quality and manufacturing yield in IR optical materials production
- reduce loss and cost saving through process optimization
- right material selection for IR-optical systems
- Tech. driven discussion for advanced device development on early stage
6. Appx.
2008-Current – Full Member of Russian Academy of Sciences
1998 - Laureate of the state prize of the Russian Federation</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Doctor Degree</td><td>Major</td><td colspan="2">Chemistry of High-Purity Substances</td></tr>
<tr><td>Research field</td><td colspan="2">Deep Purification methods and technologies</td></tr>
<tr><td>Dissertation</td><td colspan="2">Preparation of High-Purity Chalcogens</td></tr>
<tr><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Chemistry of High-Purity Substances</td></tr>
<tr><td>Research field</td><td colspan="2">Deep Purification methods and technologies</td></tr>
<tr><td>Dissertation</td><td colspan="2">Sulfur Ultra-Purification from Melt by Counter Current Crystallization</td></tr>
<tr><td>MS</td><td>Major</td><td colspan="2">Chemistry of High-Purity Substances</td></tr>
</table>

		Research field	High purity elements (S,Se). Deep Purification methods and technologies
		Dissertation	Mass-Spectrometry of cyclic molecules of sulfur and selenium compounds
	BS	Major	Inorganic Chemistry

Code # : UC01

Available term for consultation	free	Available for trip to Korea	Yes /
Intellectual property Information	Controlled Transparency Screen, RU2645450C1, 2016-12-12 Memristor switching device, Application 2019140967 from 10.12.2019 Method for controlling memristor operation and device for its implementation, Application 2019140968 from 10.12.2019 Latest publication https://iopscience.iop.org/article/10.1088/1742-5468/ab684a		
Category of Research (Choose 1 or more)	IT(Information Technology), ME(Material&Equipment), MP(Manufacturing&Production), CT(Convergence Technology)		
Available field for cooperation	1. Career Path (Experience) **6.2018- till now, Engineering Center of Lobachevsky University** Vice Director R&D Project Management, Planning of Engineering Center activity, Search, selection and arranging project development teams Manage by outsourcing engineers **11.2009 — 12.2019 , LG Electronics, Technology Center in Moscow (LG TCM)** **Representative in Volga Region** **08.2000 — 09.2009 , LG Innotek, R/F Lab, Representative office of LG Innotek in Russia** **Office Head** Executive Director of R&D Lab, R&D Project Management, Finance Management, Planning of Representative Office activity, Search, selection and arranging project development teams Manage by outsourcing engineers Over 50 R&D projects in area of wireless and wired communications, electronics, HW and SW design, RF Front End design, Mobile Communication, Measurement equipment, new polymer development, LED, OLED, LCD, etc. Development of equipment related to WLAN, WPAN, WWAN, Wireless USB, WiFi, Multi Band OFDM, GSM, WCDMA, GPS, PCS, WiMax, WiMedia, MIMO, optic communication, image processing etc **04.1998 - 07.2000 , LG Electronics, Technology Center in Moscow (LG TCM)** **Representative in Nyzhny Novgorod** R&D project management, Search, selection and arranging project development teams Manage by outsourcing engineers R&D projects in area of wireless communications, electronics, HW design, Mobile Communication, measurement equipment, acoustic electronics etc. Development of equipment related to WWAN, GSM, CDMA, GPS, MW systems etc **11.1996 - 08.2012 , Nyzhny Novgorod State University** **Senior Lecturer, Associated Profesor** Scientific and Applied Research, Teaching		

Basics of communication systems and RF waves propagation, noises and fluctuations.

Over 40 scientific papers in international scientific journals.
Citation h-index 11
Participation in projects of INTAS (International Association for the promotion of co-operation with scientists from the New Independent States of the former Soviet Union established in 1993 by the European Community)
Participation in the projects of Russian Foundation for Basic Research
Participation in Russian-Italian project for International PhD Scholarship in framework of Bologna process

09.1995 - 11.1996 , University of Palermo (Italy)
Researcher

Applied research for ST Microelectronics
Optimization of MOSFET transistors

08.1991 - 06.1993 , Nizhny Novgorod State University
Researcher

Scientific research

3. Certification
- Foreign economy management, Lobachevsky Univ.
- International technology transfer, Lobachevsky Univ.
- Global Manager Course, LG Electronics Learning Center

4. Relate Networking
- Manager of international PhD school (Russia-Italy-Spain

Education	Ph.D	Major	Radio-physics and Quantum Electronics
		Research field	Fluctuations in nonlinear systems, Markovian random processes
		Dissertation	Time and spectral characteristics of noise induced transient processes in nonlinear systems

Code # : UC03

Available term for consultation	free	Available for trip to Korea	Yes
Intellectual property Information	1. System and method for adaptive phase compensation of OFDM signals ((US patent 7,457,366) 2. System and method for intelligent transmitted power control scheme (US patent 7,460,876) 3. An adaptive multicarrier wireless communication system, apparatus and associated methods (US patent 7,286,609) 4. System and method for selecting data rates to provide uniform bit loading of subcarriers of a multicarrier communication channel (US patent 7,333,556) 5. Multicarrier communication system and methods for link adaptation using uniform bit loading and subcarrier puncturing (US patent 7,570,953) 6. Adaptive channel equalizer for wireless system (US patent application 20050141657) 7. Downlink preamble processing techniques for initial acquisition (US patent 8,019,026) 8. Method for channel estimation using recursive filtering and multicarrier receiver with interference-aware demodulation (US patent 8,428,158) 9. Interfering base stations recognition method and scheme for 802.16e systems (US patent 8,351,522) 10. Channel quality assessment method in ODFM(A) communications systems (US patent 8,345,781) 11. Method, device, and apparatus for multi-stream multi-band transmission (US patent 7,899,125) 12. Method and apparatus for suppressing co-channel interference (US patent 8,804,884) 13. mmWave communication system using MIMO and beamforming (USPTO provisional application No 61157558) 14. Pre-coding method for spatial multiplexing in multiple input and output system (US patent 8,842,640)		
Category of Research (Choose 1 or more)	IT(Information Technology)		
Available field for cooperation	SUMMARY • 19+ years experience in R&D and ICT (Intel, Rostelecom, UNN, Lantan) • 12+ years experience in initiation and management of R&D projects • Experience in modern wireless technologies (Car radars, Wi-Fi, LTE/WiMAX, mmWave, etc.) • Ph.D. degree in Physics and Mathematics (Radio Physics), Master degree in Economics • Proven analytical capabilities (number of publications – 30+, patent applications – 14) **2014 — currently: Lobachevsky State University of Nizhni Novgorod (UNN)** **SENIOR RESEARCH SCIENTIST** Achievements: • Several large R&D projects were performed, including: - Optical power meter for high voltage power lines (budget: RUR 142M) - Mobile meteoradar (budget: RUR 94M) - Microwave sensing system for active control of building vibrations (budget: RUR 68M) • UNN Engineering Center was started (budget: RUR 92M) • Megagrant StoLab was started (budget: RUR 96M) **2007-2017: LANTAN Ltd (Nizhny Novgorod, Russia)** **R&D PROJECT MANAGER** Responsibilities: - R&D project management. - Work with R&D project agreements and contracts. Achievements: • 20+ R&D projects in the area of wireless technology were performed, including: - Small multiband antenna characteristics measurements (for Samsung) - Development of super wideband antenna concept for mobile phone (for Samsung) - Super wideband antenna prototype for folder-type phone (for Samsung) - Development of UL MIMO scheme for 802.16m system (for LG Electronics) - Transmitting/receiving OFDMA (mWiMAX) and SC-FDMA (LTE) signals simultaneously on Uplink (for LG Electronics) - Development of high-throughput PHY concept for mmWave communications (for LG Electronics) - Development of mWiMAX signal analyzing module for DMA (for LIGNex1)		

	- Development of photopolymer material specified properties (for LG Electronics) - Direction-of-Arrival (DoA) estimation for 77GHz automotive radar (for LG Electronics) - Modification of Direction-of-Arrival (DoA) estimation scheme on the base of real road measurements data (for LG Electronics) • 2 US and Korean patent applications were submitted. **2001-2007: Intel Corporation** **SENIOR RESEARCHER** Responsibilities: - Support of Intel activity in mmWave WPAN standardization process (IEEE 802.15.3c): - Preparing materials with research results for internal (Intel mmWave Forum) and external (IBM, Philips, SiBEAM, WirelessHD, IEEE802.15.3c) meetings. - Feasibility study of UWB system concept for mmWave WPAN. - Research support of Intel Mobile WiMAX product ("Ofer") developing by BWD-Israel: - Investigation of fast link adaptation schemes efficiency in WiMAX systems (IEEE 802.16e). - Development of software platform for system level simulations of Mobile WiMAX systems. - Development of DL preamble processing scheme for initial acquisition in IEEE 802.16e systems. - Development high throughput wireless LAN concept (IEEE802.11n). - Development of link layer simulator of OFDM system (IEEE802.11a PHY). Achievements: - 12 US patent applications were submitted at US PTO. - Gratitude from Intel Mobile WiMAX product team (BWD-Israel). - 2 standard contributions to TG IEEE802.15.3c were sent. - First Intel proposal for IEEE 802.11n. - Paper at Intel Technology Journal. - Intel Russia/CIS Recognition Award "In recognition of valuable contribution to Intel Mobile WiMAX platform strategy" - Intel Russia/CIS Special Recognition Award "In recognition of contribution to the first Intel WiMAX simulator development"

Education	Ph.D	Major	Radio Physics
		Research field	Stochastic signal processing
		Dissertation	Analysis of fast link adaptation techniques for OFDM wireless communication systems
	MS	Major	Radio Physics
		Research field	Stochastic signal processing
		Dissertation	Analysis of statistical characteristics of frequency-selective channel capacity
	BS	Major	Radio Engineering

Code # : UC06

Available term for consultation	1-3 week in august 2020	Available for trip to Korea	Yes
Intellectual property Information	1.Korean Patent: BONE CONDUCTION SPEAKER KR101121170 (B1) — 2012-03-22 2.Korean Patent: LED LAMP WITH HEAT RADIATION MECHANISM USING CONVECTION CIRCULATION KR20110062822 (A) — 2011-06-10 3.USSA Patent (Author's certificate): ROTATOR № 1510543/1989.22. May 4.USSA Patent (Author's certificate): SLIDING DOORS OF HANGAR № 1497937/1989.01. Apr. 5.USSA Patent (Author's certificate): PROTECTIVE DOME № 1480388/1989.15. Jan. 6.USSA Patent (Author's certificate): WAY OF PUTTING A PROTECTIVE COATING ON AN ELASTIC HARNESS № 1417744/1988.15. Apr. 7.USSA Patent (Author's certificate): DOORS OF HANGAR № 1307734/1987.03. Jan.		
Category of Research (Choose 1 or more)	**ME/MP**		
Available field for consulting	**Project management experience: participated in several projects as a developer of new technical systems, business-adviser and business-trainer on modernization of productions and managerial processes in the companies:** • **Metallurgical companies: "Severstal", "Nornikel", "NLMK", "VMZ", "VSMPO-AVISMA" (Russia)** • **Several production SMEs (South Korea, 2009, 2011, 2013) ***** • **Furniture fittings: "MDM-Complect" (Russia)** • **Car manufacturing company: "KAMAZ" (Russia).** • **Natural Beverage Company: "OCHAKOVO" (Russia)** • **Research institutes: "Flight Research Institute" (Russia)** • **High noise level headset bone. (South Korea)/** • **Marriage Probe Card. (South Korea)** • **Overheating of LED lights. (South Korea)** • **Bend the shaft. (South Korea)** • **Blockage of channels. (South Korea)** • **Burn the tray. (Russia)** • **Cooling of the stamp. (Russia)** • **Damage to the machine. (Russia)** • **Stale material. (Russia)** • **Overspending of electricity. (Russia)** • **Twisting of the profile. (Russia)** • **Ph.D. on cognitive-creative activity** • **Development of methodical materials for educational system**		

	• **Development of methodical materials on TRIZ** • **Development of methodical materials for business consulting**		
Education	Ph.D	Major	Chelyabinsk state university (Chelyabinsk, Russia)
		Research field	Manufactring Process
		Dissertation	TRIZ-Master
	MS	Major	Public university of technical progress (Chelyabinsk, Russia)
		Research field	Manufactring Process
		Dissertation	TRIZ-Expert (Diploma №39)
	BS	Major	Kazan aviation institute (Kazan, Russia) Engineer, Major in mechanic of aircraft construction (Diploma BI №404325)

Code # : UC08

<table>
<tr><td>Available term for consultation</td><td>free</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="3">Internal Know-How</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="3">ME (Material&Equipment), MP(Manufacturing&Production)</td></tr>
<tr><td>Available field for cooperation</td><td colspan="3">1. Career Path (Experience)
- (2015 ~ Current) TC Printing technologies LLC / Head of laboratory : Research and commercialization in printed electronics area (materials, technology, devices)

2. Consultation fields
- Silver pastes with nano- and microparticles;
- Printed devices;
- Wearable electronics;
- Force and bend

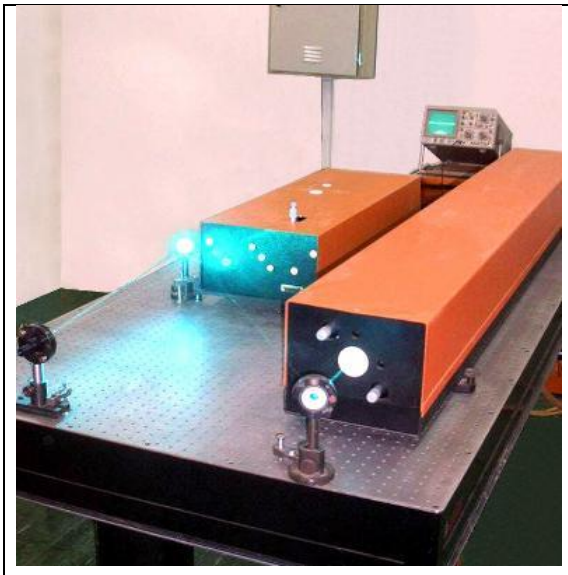
3. Providing consultation with meaningful information regarding sophisticated approaches to formulations of pastes for printed electronics.

1) stencil printable pressure-assisted paste that can be used as a thermo- a electroconductive interface between semiconductor chip and heatsink
Physical properties:
Low specific resistance 3*10-7 Ohm*m
Recommended sintering parameters: <10 Mpa; <250 ℃

2) stencil printable non-pressure paste that can be used as a thermo- a electroconductive interface between semiconductor chip and heatsink
Physical properties:
Low specific resistance 5*10-8 Ohm*m
Recommended sintering parameters: <240 ℃
Applications
•Joining of large area Si chips with heatsinks
Pressure-assisted paste provides excellent electrical conductivity together with high thermal conductivity.</td></tr>
<tr><td>Education</td><td>Bachelor</td><td colspan="2">Electronics engineering</td></tr>
</table>

Code # : UC09

Available term for consultation	One Week	Available for trip to Korea	Yes
Intellectual property Information	-		
Category of Research (Choose 1 or more)	ME(Material&Equipment), MP(Manufacturing&Production)		
Available field for cosulting	# Main Research Development and research of diode-pumped solid-state lasers with mode locking and cavity Q-switching in various regions of the generation spectrum. Obtaining ultrashort pulses and high peak radiation powers of such lasers. Creation of high-power solid-state lasers with nonlinear frequency conversion (tuning range 0.25–10 μm) pumped by diode-pumped high-power solid-state lasers and their harmonics. In addition, work was carried out with the titanium-sapphire laser, which has the widest tuning range, and from which the highest continuous radiation power of ~ 40 W was obtained to date [Donin V.I. et al. Optics Commun., 1995, Vol. 122, P.40]. Physical processes in a high-current gas-discharge plasma with the aim of creating powerful (~ 100–1000 W) continuous radiation sources in the visible and UV spectral regions. # Related Projects - Studies of ion-sound instability of a high-current discharge of low pressure have been completed, the development of which can limit the lasing power and shorten the life of ion lasers. In particular, using the methods of optical plasma diagnostics, the local dispersion characteristics of the lower instability modes were studied. - A powerful effective source of continuous long-range VUV radiation for processing samples with a large total area has been created . A powerful single-mode Nd: YAG laser was developed with pumping by diode lasers and an 80% conversion coefficient of radiation into the second harmonic. - Studies have been conducted on the creation of radiation sources that are widely tuned in frequency based on a titanium-sapphire laser with the possibility of intracavity doubling and tripling of its generation frequency to 280 nm, dye lasers, and also a parametric light generator with the adjustment region of 3-10 microns. A software package has been developed for calculating the characteristics of nonlinear media in the generation of optical harmonics up to the fifth. - An original method has been proposed for implementing the Q-switching modes and simultaneously mode locking in a solid-state laser using a single traveling wave AOM, as well as with the formation of a Kerr lens in a doubling nonlinear crystal [26]. In the case of a diode-pumped Nd: YAG laser, this method allows you to widely control the pulse duration (3 ÷ 100 ps, 50 ÷ 500 ns), their repetition frequency (1 ÷ 50 kHz) and increase significantly (107 ÷ 108 times) pulsed laser power. - Issues of effective selection of the TEM00 mode and thermo-optical distortions in a solid-state laser with longitudinal diode pumping were studied. A powerful air-cooled single-mode diode-pumped Nd: YVO4 laser has been developed, which in addition to high power has a high optical efficiency (≈60%). - A new physical effect was discovered — self-organization of Q-switch solid-state laser generation and mode locking, in which Q-switch pulse trains “spontaneously” form at a relaxation oscillation frequency, and each train contains equally spaced picosecond monopulses . - We studied the parametric generation of the middle IR, visible, and UV spectral ranges from a non-linear PPLN crystal with synchronous pumping by a Q-switched Nd: YAG laser with Q-switching and mode locking at a pump intensity of ≤ 10 GW / cm2. Tunable radiation with wavelengths near 392, 463 and 822 nm was first observed.		

			
Education	Ph.D	Major	Physics
		Research field	high-power ion lasers

Code # : UC13

<table>
<tr><td>Available term for consultation</td><td colspan="2">Free</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">DEVICE FOR MANIPULATING MICRO- AND NANO-OBJECTS, METHOD OF ITS MANUFACTURING AND CONTROL SYSTEM, № RU 2698570 C1, 2019.08.28</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">NT(Nano Technology), ME(Material&Equipment), MP(Manufacturing&Production)</td></tr>
<tr><td>Available field for cooperation</td><td colspan="4">Project Manager of “Nanoactuator” LLC, Researcher of Kotelnikov Institute of Radioengineering and Electronics (IRE) of Russian Academy of Sciences (RAS).
Organization and management of the team of engineers and researchers. Writing scientific articles and patents for inventions. Work at the equipment: scanning electron microscope, electron lithography and focused ion beam microscope. Project promotion at the Russian and international conferences. Conducting industry analysis of the market and analysis of competitors. Attracting investment in the project. Preparation of presentations / analytical materials for investors and government representatives.
- Management of the team of the developers in the development of design documentation and the creation of prototypes.
- Attracting financing in the amount of 1 million dollars from the funds of the Russian Science Foundation and the Russian Fund of Fundamental Investigations
- Participation in international research projects and work abroad. $ 0.5 million raised.
- For more than 3 years I have been successfully leading a team consisting of 5 developers in the project from the field of nano-robotics;
- I regularly participate at the international conferences as a speaker (more than 4 times a year) in Russia and abroad, and also carry out part of the project work abroad;
- I have about 40 scientific publications in peer-reviewed scientific journals, including Q1, and the Hirsch index = 7 in the Scopus system and Web of Science and 2 Patents;
- I have successful experience in attracting investments from international funds (BRICS, e-Asia, India, China, etc.) and domestic funds;
- received a technical education at the University, one of the top 5 in Russia and 300 in the world according to the QS World University Rankings 2020 rating.
- I am the laureate of the Award of the Government of Moscow 2017 in the nomination Developments, “New Materials and Nanotechnologies”.</td></tr>
<tr><td rowspan="7">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Nanotechnology</td></tr>
<tr><td>Research field</td><td colspan="2">Phase transitions, shape memory effect, three dimensional nanomanipulation, nanoinstruments development</td></tr>
<tr><td>Dissertation</td><td colspan="2">Phase transitions and shape memory effect at the nanoscale</td></tr>
<tr><td rowspan="3">MS</td><td>Major</td><td colspan="2">Nanotechnology</td></tr>
<tr><td>Research field</td><td colspan="2">Phase transitions, shape memory effect, three dimensional nanomanipulation, nanoinstruments development</td></tr>
<tr><td>Dissertation</td><td colspan="2">Giant deformations in the intermetallics with shape memory effect at the micro- and nanoscales.</td></tr>
<tr><td>BS</td><td>Major</td><td colspan="2">Nanotechnology</td></tr>
</table>

Code # : UC15

Available term for consultation	No deadlines anytime	Available for trip to Korea	No
Intellectual property Information	Received several patents: for a calcium preparation (OSTEOL-FORTE), a patent for coatings destroying bacteria and viruses without chemicals, a patent for a design for converting solar energy into current and heat with high efficiency		
Category of Research (Choose 1 or more)	BT(Biology Technology), NT(Nano Technology), ET(Environment Technology), ME(Material&Equipment), MP(Manufacturing&Production)		
Available field for cooperation	1. Career Path (Experience) and Consultation fields (industry consultations are described in text) : 1974-1976. Magnitogorsk Iron and Steel Works. Position - engineer of coke production. 1976-1978. NII PRIVATE FIRM NIIPROINS (НИИ ЧФ НИИПРОИНС) Security Institute - engineer. I developed a new method for analyzing unstable solutions of titanyl sulfates using frequency-impedance measurements, and confirmed the thermodynamic memory of electrolyte solutions. The theory of supercapacities and methods for their manufacture (> 100F / cc) is proposed. He spoke at a conference of physicists at the opening of the Chelyabinsk University. 1979. Magnitogorsk High School. Chemistry teacher. 1980. Magnitogorsk Mining and Metallurgical Institute. Engineer of the research sector. Within two months, he decided to increase the resistance to high-strength cord corrosion resistance during stress-freezing for prestressed structures (resistance was 20 minutes, it became more than 600 hours, which was above all requirements), he proposed a model of this phenomenon. The method proposed by me was based only on a change in some technological parameters and the resistance became above all the criteria. The tests took place at the Beloretsk Metallurgical Plant (BMZ). Then, I took up the decision to increase the resistance of multi-roll calibers. He wrote the theory of lubricants for particularly severe lubrication conditions with metal deformation. Developed a new classification of such lubricants. The lubricant that I proposed was tested at the Beloretsk Metallurgical Plant, unexpectedly, the resistance of rolls increased by a factor of thousands (and they even began to make them from hard alloys) - the lubricant allowed us to switch back to ordinary roll steels - ШХ15, Х12М. 1982. All-Union Research Institute of the Hardware Industry. Engineer. Continued work on lubricants for the hardware industry. Developed a new lubrication principle for a new process. 1983. Institute of Metallurgy in the Academy of Sciences of the USSR. Junior Researcher. 1984. Institute of Mechanical Engineering. He continued to develop the theory of lubrication and friction, developed the foundations of the model of lifeless friction. He participated in the creation of NTTM. 1987. Cooperative EPK Dawn. Vice-chairman. Developed and produced new additives for lifeless friction. 1990. Cooperative Engineering and Commercial Center (ICC). Director In this cooperative, only their own projects were developed: sensors for extra-large loads, distributed control systems for managing particularly critical facilities (nuclear power plants, power engineering, etc.) are systems without a master processor. These were ring networks with an extended exchange protocol, which allowed the destruction of individual nodes in this network, other processing points took the burden of processing and management. Have a reliability of over 99%. They started production of their controllers based on the Intel 1852.1851 single-chip processor (which were produced in the USSR) on the personal computer bus. 1994. Left Russia and began working in Bulgaria at the Bulgarian Academy of Sciences. He made reports at the Bulgarian Academy of Sciences on the evolution of the genome - on his work, at the invitation of Academician Tsankov. Academician Parmon read my work. He published his works in the Novosibirsk Edition of the Science of Siberia.		

	From 2000 to 2008 he was engaged in chemistry and pharmaceuticals. In 2005, he began the development of drugs with a general effect on the processing of the genome in pathologies and other pharmaceutical projects (currently there are more than 15 drugs in the portfolio). 2011. Establishment of the ASCO PHARM company - the company focused on finalizing the OSTEOL-FORTE calcium preparation project and some other projects. Sales took place in the EU. I am the Deputy Director for Technical Issues. 2018. The company "ASCO PHARM" wins the acceleration program of business projects of the Ural Federal University. 2019. The company "ASCO PHARM" combined resources and efforts together with the largest Russian university - the Ural Federal University. Created a joint venture. 2019. The company "ASCO PHARM" begins the commercialization of the medicine "OSTEOL-FORTE" and expands its development portfolio. 2. Relate Networking: Member of the Academic Council of the Institute. (All-Union Research Institute of the Hardware Industry) - a member of the scientific council. At the moment: Scientific expert of the Innovation Development Fund of the Ural Federal University.		
Education	Ph.D	Major	Sverdlovsk Institute of Electrochemistry of the Academy of Sciences
		Research field	Thermodynamics and electrochemistry
		Dissertation	Not finished graduate school
	MS	Major	Свердловский Институт Электрохимии Академии Наук УНЦ (Sverdlovsk Institute of Electrochemistry of the Academy of Sciences)
		Research field	Thermodynamics and electrochemistry
		Dissertation	Not finished graduate school
	BS	Major	Magnitogorsk State Technical University G.I. Nosova. (then Mining and Metallurgical Institute named after Nosov (MGMI). Specialty Solid Fuel Chemical Technology

Code # : UC16

<table>
<tr><td>Available term for consultation</td><td colspan="2">1week</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME(Material&Equipment), IT(Information Technology),
MP(Manufacturing&Production),</td></tr>
<tr><td>Available field for cosulting</td><td colspan="4">1. Computer engineering modeling of processes in energy machines. Design optimization and increase of efficiency;
2. Carrying out strength calculations by methods of computer modeling of buildings of energy machines and mechanisms, rotors, etc. ; Determination of critical frequencies, fatigue and resource calculations;
3. Calculation of building structures;
4. Computer modeling of physical processes: heat transfer, combustion, mass transfer, flow around gaseous and liquid media, etc.
5. Modeling of fracture processes.

Basic research, experimentation and development

The laboratory "Engineering computer modeling and strength calculations" has its own methods of high-precision computer modeling of physical systems, mechanisms and energy machines; their optimization in order to increase the resource, characteristics and performance indicators.
In its work, the laboratory uses the capacities of the Polytechnic supercomputer center, the third largest supercomputer center in Russia, as well as the laboratory’s own supercomputer.
In its research and development, the laboratory uses both commercial software packages like ANSYS, Numeca, Comsol, IOSO, etc., as well as software products of its own design.</td></tr>
<tr><td rowspan="6">Education</td><td rowspan="3">Ph.D</td><td>Major</td><td colspan="2">Computer ScienceTechnical Sciences Peter the Great St. Petersburg Polytechnic University</td></tr>
<tr><td>Research field</td><td colspan="2">Computer engineering modeling</td></tr>
<tr><td>Dissertation</td><td colspan="2">-</td></tr>
<tr><td rowspan="3">MS</td><td>-</td><td colspan="2">-</td></tr>
<tr><td>-</td><td colspan="2">-</td></tr>
<tr><td>-</td><td colspan="2">-</td></tr>
</table>

Code # : UC17

<table>
<tr><td>Available term for consultation</td><td colspan="2">5day</td><td>Available for trip to Korea</td><td>Yes</td></tr>
<tr><td>Intellectual property Information</td><td colspan="4">-</td></tr>
<tr><td>Category of Research
(Choose 1 or more)</td><td colspan="4">ME/MP</td></tr>
<tr><td>Available field for cooperation</td><td colspan="4">The company "MONOROTOR" produces high-precision screw dispensers - devices that allow high-precision dosing of viscous substances.
A feature of these devices is their versatility, in terms of the dosed substance. It can be liquids with any viscosity, from ordinary water to polymer sealants; various loose, powdery materials can be dosed, but in the form of a paste.
The device is also convenient from the point of view of automation of dosing processes, application of various viscous materials on complex three-dimensional surfaces or use in robotic systems.

Technical specification of the 3D-printing machine for polymer reinforced material.
The target technical specification of 3D printer
Requirements can be divided into:
- production speed; building 50ml per minute.
- material requirements;
- form requirements;
- technological requirements;
- reliability requirements;

The materials used in the manufacture of the socket must meet the following requirements:
Resistant to water, weathering, UV rays;
Have high wear resistance;
High specific strength, rigidity and toughness;
The material should be applicable for 3D printing (high thixotropy, life time less than 30 seconds, high adhesion).
Table 1 - Planned characteristics of the material
<table>
<tr><td>Parameter</td><td>Value</td><td>Units</td></tr>
<tr><td>Tensile strength, not less</td><td>120</td><td>MPa</td></tr>
<tr><td>Bending strength, not less</td><td>100</td><td>MPa</td></tr>
<tr><td>Hardness</td><td>40~60</td><td>Shor D</td></tr>
<tr><td>Density</td><td>500~1100</td><td>kg/m^3</td></tr>
</table>
Workpiece Form Requirements:
The shape of the workpiece should correspond to the geometry of the 3D model obtained after processing the stump shape from 3D scanning;
Maximum workpiece dimensions: 200x200x300 mm.
Reliability Requirements:
The properties of the product should not deteriorate over the entire service life (up to 5 years)
The product must be operated in daily use.</td></tr>
<tr><td rowspan="2">Education</td><td rowspan="2">Ph.D</td><td>Major</td><td colspan="2">Red Diplomas of Engineering Technologies, Bauman</td></tr>
<tr><td>Research field</td><td colspan="2">ART IN METAL: The greatest technological difficulties in the production of a dispenser are caused by the processing of a screw gerotor pair. The technologies of the MONOROTOR company allow to create rotors with mass cross-section diameter of about 4 mm in conditions of mass production. 2018
MULTI DISPENSER - 2: From sketch to industrial design. MONOROTOR company has developed a dual dispenser, which will allow to dose multicomponent substances: "base + hardener" or "base + dye." 2018
NEW MATERIAL: Dispensers "Monorotor" have a positive reputation in the testing of dosing chocolate. Dosing startegia</td></tr>
</table>

			allows applying material in the form of tracks, a given thickness, points, complex spatial curves of variable thickness and various three-dimensional objects. 2018 TESTS OF DOSERS: In partnership with the Vindek laboratory, tests were carried out of the Monorotor screw dosers. Dispensers showed good repeatability, the identity of the results of dosing of the epoxy compound and withstood the specified volume ratio. 2018
		Dissertation	TECHNOLOGICAL ASSURANCE OF QUALITY FORMING O F CYCLOIDAL SCREW SURFACES DURING PROCESSING BY UNPROFILED TOOL ON MULTIPURPOSE MACHINES
	MS	Major	-
		Research field	-
		Dissertation	-
	BS	Major	Engineering Technologies

Code # : UC21

Available term for consultation	1week	Available for trip to Korea	Yes
Intellectual property Information	-		
Category of Research (Choose 1 or more)	ME(Material&Equipment), NT(Nano Technology), MP(Manufacturing&Production),		
Available field for cosulting	1. Development of the design and general principles for controlling an integrated electrolysis unit for the simultaneous production of anolyte for disinfection of water and ferrate for disinfection of effluents 2. Creation and testing of energy-efficient mobile drives of sucker rod pumps (SHG) with an adaptive group control system for oil wells Basic research, experimentation and development 1. Development of a new method and technical solution for a prototype integrated electrolysis unit (KEA) for the simultaneous production of anolyte for disinfection of water and ferrates for disinfection of effluents, which allows to increase the environmental safety, productivity and quality of disinfection of water and effluents while reducing the cost of the process compared to existing technologies . Tasks to be solved: - development of the concept of producing anolyte and ferrates by electrolysis in a single KEA; - development of the structure and technological scheme of KEA, the control system and the functioning algorithm of KEA; - development and research of prototype modules for the production of anolyte and ferrate and KEA control system; - Development and testing of a CEA performance management program; - development and research of the laboratory apparatus KEA, programs and methods of its experimental research; - development and testing of a prototype installation of KEA, a program and methods for its testing in an industrial partner; - development of a draft technical task for the ROC “Creation of an integrated electrolysis unit with a given capacity for the production of disinfecting agents for water and effluents”. Scientific and technical result: The KEA laboratory unit allows producing up to 65 g / h of chlorine (up to 1.56 kg / day) at an energy consumption of up to 3.5 kWh / kg of chlorine and up to 25 g / h of ferrate (up to 600 g / day) at an energy consumption of up to 6 kWh / kg of ferrate, which allows disinfecting up to 20,000 l / h of drinking water (based on up to 3.5 mg / l) and up to 10,000 l / hour of wastewater (based on up to 2.5 mg / l). The prototype installation of industrial KEA allows producing up to 1040 g / h of chlorine (up to 25 kg / day) with energy consumption of up to 3.5 kWh / kg of chlorine and up to 420 g / h of ferrate (up to 10 kg / day) with energy consumption of up to 6 kWh / kg of ferrate, which allows disinfecting up to 320 cubic meters per hour of drinking water (up to 3.5 mg / l) and up to 160 cubic meters per hour of wastewater (up to 2.5 mg / l). 2. Development of principles for managing a group of drives and experimental samples of groups of 2 and 6 energy-efficient domestic mobile drives of sucker-rod pumps with a single adaptive control system, which will simultaneously manage several drives of sucker-rod pumps (SHG) at the same time and minimize capital, operational system costs and energy compared to single drives with individual control systems. The main tasks are the creation of an improved design of the SHGN drive and group adaptive control systems for the group of drives of “wells” of nearby wells in order to increase energy efficiency and reduce the cost of group water in comparison with single drives with individual self-propelled guns. In terms of their technical characteristics and functional capabilities, the group drives under development will not		

	be inferior to the best domestic and foreign analogues, but should surpass them in energy efficiency and economy in terms of capital and operating costs. Scientific and technical result: Software for a single adaptive self-propelled guns, managing a group of 2 and 6 drives operating in asynchronous mode. An experimental sample of a group of 2 SHGN drives with a single adaptive self-propelled guns (1 pc.) For research tests at idle, with load simulation and full-scale tests by an industrial partner at the well, consisting of: - experimental samples of single mobile drives SHGN in the amount of 2 pieces; - an experimental model of a single adaptive self-propelled guns, managing a group of 2 drives operating in asynchronous mode; - software for a single adaptive self-propelled guns. An experimental sample of a group of 6 SHGN drives with a single adaptive self-propelled guns (2 pcs.) For research tests at idle, with simulated load (1 pc.) And full-scale tests by an industrial partner at the well (1 pc.), Consisting of: - experimental samples of single mobile drives SHGN in the amount of 6 pieces; - An experimental model of a single adaptive self-propelled guns, managing a group of 6 drives operating in asynchronous mode; - software for a single adaptive self-propelled guns.		
Education	Ph.D	Major	Mechatronic Engineering SpbSTU
		Research field	Mechanics, Equipment, Material
		Dissertation	-

Code # : UC31

Available term for consultation	Free by appointment	Available for trip to Korea	Yes
Intellectual property Information	1. Desublimation device No. 2011128135/05(041734) filing date 07/07/2011 2. Method of susceptibility adding to dyes for metallized polymeric products No. 2011124996/02(036910) filing date 17.06.2011 3. Desublimation device No. 2011128135/20(034415) filing date 6/8/2011 Category of Research		
Category of Research (Choose 1 or more)	NT(Nano Technology)		
Available field for cosulting	Career (Experience) 1. 10/2019 – until now Chief Executive Officer of the Center of Nanotechnology and Nanomaterials of the Republic of Mordovia LLC (CNNRM) Description: CNNRM is a member of a network of nanotechnology centers (nanocenters) established with a direct participation of the Rosnano Fund for Infrastructure and Educational Programs in the Russian Federation. The network includes 13 nanocenters that provide establishment and development of material base startups. Regarding CNNRM I could provide to applicants consultation service in wide range of technological fields. It is possible to use the network of nanotechnology centers in terms of how some technology can be implemented to different types of production cycles. 2. 02/2015 – until now "Technological Company "Liquid-phase Nanocomposites and Fluoropolymers" LLC General Director (Project of Nanotechnology and Nanomaterials of the Republic of Mordovia LLC) Description: As a CEO of the company I have an opportunity to provide appropriate expertise in the fields of industrial coatings, functional additives technology (nanotubes, nano-sized fluorine polymers) for paints, thermosets, and different types of plastics. 3. 06/2016 – 10/2019 Deputy Director, Director of the Project Office of the Center of Nanotechnology and Nanomaterials of the Republic of Mordovia LLC 03/2015– 06/2016 "Center of Nanotechnology and Nanomaterials of the Republic of Mordovia" LLC — Project Manager 06/2014 – 02/2015 Investment Manager (Tomsk Center of nanotechnology Rosnano Group of Companies "SYGMA.Tomsk" LLC) 03/2013 – 06/2014 Project office senior analyst (Tomsk center of nanotechnology Rosnano of the Group of Companies "SYGMA.Tomsk" LLC) Description: 8-years of experience in the field of technological startups building and launching process helping applicants to get expertise and consultations. Consultation fields Project management issues: - Consulting service of Strategic business planning, technology market place. - Financial analysis of projects - Technology condition and readiness to transfer - Adjustment of project documentation to make it suitable for investor's compehension. - Ability to arrange meetings with potential technology consumers, experts, investors ect. Technology issues: - Industrial coatings, paints mainly with anti-ice, hydrophobic, high corrosion resistant, antistatic properties. - Functional additives (carbon nanotubes, fluorine containing materials) for different fields of materials - Printed electronic field. Conductive pastes, adhesives, protective coatings. 4. Relate Networking		

	- Member of nanotechnology centers (nanocenters) established with direct participation of the Rosnano Fund for Infrastructure and Educational Programs in the Russian Federation. 5. Expected effect - Applicants can get the methodologies how they can logically prepare proposal for the government grant program. - Improve product quality and manufacturing by functional additives - Reduce loss and cost saving thru process optimization - Common work		
Education	MS	Major	Nanomaterials
		Research field	Direct fluorination, fluorine containing products, industrial hydrophobic coatings
		Dissertation	Modification of Ultra-High Molecular Weight Polyethylene