

Potential scientific supervisors: Engineering & Technology

№	Surname	Name	University	Scientific interests	Link to portfolio
1.	Mohammed Alwan	Hassan	Peter the Great St Petersburg Polytechnic University	Kinematics and Dynamic Analysis, Robotic Systems, Parallel Robotics, Robotic Manipulators, Control systems, Robot Motion Planing.	https://opendoors.spbstu.ru/files/supervisors_portfolio/dr._hassan_m._alwan.pdf
2.	Babaytsev	Arseniy	Moscow Aviation Institute	Solid mechanics	https://files.mai.ru/site/upload/doc/Бабайцев_А_В_(англ).pdf
3.	Nataliya S. Belinskaya		Tomsk Polytechnic University	Thermodynamics, kinetics, mechanisms of reactions of petroleum hydroprocesses (hydrodewaxing, hydrocracking). Deactivation of catalysts of petroleum hydroprocesses (hydrodewaxing, hydrocracking). Mathematical modelling and optimization of petroleum hydroprocesses (hydrodewaxing, hydrocracking). Production and exploitation of motor fuels. Development and application of computer modelling systems of petroleum refining processes	https://tpu.ru/upload/medialibrary/a96/zxj9r3ct5ky9nmesyl0exgbhyd10mzc/Belinskaya.pdf
4.	Belov	Pavel	ITMO University	Metamaterials: 1. Radiophysics 2. Diffraction and scattering of electromagnetic waves 3. Metamaterials 4. Wireless data transmission 5. Magnetic resonance imaging 6. Nanoantennas	https://aspirantura.itmo.ru/?main=43
5.	Konstantin S. Brazovskii		Tomsk Polytechnic University	Numerical modeling of biotechnical and living systems, creation of digital twins of biotechnical	https://tpu.ru/upload/medialibrary/c68/gfuf67z448skko1skylzkni

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				systems, design of devices, systems and implants for medical applications	2idke7tem/Brazovski- AYA - 1 .pdf
6.	Busurin	Vladimir	Moscow Aviation Institute	Sensor technologies, microelectromechanical transducers of control and monitoring systems, measurement and information systems, methods for compensating for the influence of destabilizing factors.	https://files.mai.ru/site/upload/doc/Бусурин В И (англ).pdf
7.	Vatin	Nikolay	Peter the Great St Petersburg Polytechnic University	Energy-Efficient Enclosure Structures. Modular Construction, Prefabricated Structures.	https://opendoors.spbstu.ru/files/supervisors_portfolio/vatin.pdf
8.	Venediktov	Vladimir	Saint Petersburg Electrotechnical University "LETI"	Structured light beams (scalar and vector optical vortices, Bessel, Airy and similar beams), their generation, propagation and analysis; Holographic tools in adaptive optics; Advanced wavefront sensors; Advanced sensors of rotation (gyroscopes) on the base of passive ring cavities (integral optics, confocal cavities and resonators of whispering gallery modes); Metasurfaces in angle and position sensing	https://etu.ru/assets/files/oda/venediktov.pdf
9.	Gabdullin	Pavel	Peter the Great St Petersburg Polytechnic University	Surface, thin films, nanostructures, carbon nanostructures, field emission, materials for electronics, thermoelectricity, multilayer nanosystems	https://opendoors.spbstu.ru/files/supervisors_portfolio/gabdullin.pdf
10.	Glybovski	Stanislav	ITMO University	Antennas, electrodynamics of periodic structures, metamaterials, measurements in the microwave range, microwave devices, MRI coils	https://aspirantura.itmo.ru/?main=43

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11.	Gravit	Marina	Peter the Great St Petersburg Polytechnic University	Calculations of the actual fire resistance limits of building structures of oil and gas facilities, tunnel structures, wooden buildings. Influence of space-planning and structural solutions on the spread of fire hazards and on the unimpeded and timely evacuation	https://opendoors.spbstu.ru/files/supervisors_portfolio/gravit.pdf
12.	Gueraiche	Djahid	Moscow Aviation Institute	Aerodynamics, aircraft design, structures, space, aviation, multidisciplinary optimization, aeroelasticity, Mars	https://files.mai.ru/site/upload/дос/Гуереш Д (англ).pdf
13.	Irena Dolganova		Tomsk Polytechnic University	Processes of oil refining and petrochemistry, alkylation of hydrocarbons, production of synthetic detergents, multi-stage processes, non-stationary mathematical modeling, deactivation of catalysts and reaction media, thermodynamics, kinetics	https://tpu.ru/upload/medialibrary/317/fmamcrjj60p04k18k2sqc9hq8bjlphvt/Dolganova-en..pdf
14.	Elistratov	Victor	Peter the Great St Petersburg Polytechnic University	Development of theoretical and technological foundations for the conversion of renewable energy, substantiation of the parameters and operating modes of objects and energy complexes based on renewable energy sources, taking into account the spatial and temporal variability of the resource potential, economic, environmental and social efficiency in the design and management of facilities and complexes for grid and autonomous energy.	https://opendoors.spbstu.ru/files/supervisors_portfolio/elistratov.pdf
15.	Erisov	Yaroslav	Samara University	1. The constitutive equations of plasticity theory of orthotropic, including transtropic, media, which explicitly take into account such structural parameters of the material as the elastic constants of the crystal lattice and the crystallographic texture, as well as special cases for plane stress and strain states and simplified	https://ssau.ru/files/priem_doc/postgraduate/erisov_en.pdf

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				<p>linearized form are developed.</p> <p>2. Mathematical models for constructing theoretical forming limit curves of sheet metal during forming, taking into account the crystallographic orientation of the blank structure.</p> <p>3. Equations and ratios that allow, in a theoretical analysis of the processes of drawing, bending and stretch-wrap forming, to determine the optimal crystallographic orientation of the structure of the blanks. The results of the analysis of the influence of typical crystallographic orientations of aluminum alloys on the anisotropy, yield strength, as well as on the behavior and limit strains of sheet blanks during plastic forming.</p> <p>4. Mathematical and computer models for calculating the influence of the crystallographic orientation of the structure of the metal base on the operational characteristics of metal-matrix and metal-polymer composite materials. Results of the analysis of the influence of typical crystallographic orientations of an aluminum alloy matrix on the tensile strength of a fibrous composite material, fracture toughness and ultimate load bearing capacity of a metal-polymer composite material of the GLARE type.</p> <p>5. Evolution of the crystallographic orientation of the structure and its relationship with mechanical and technological properties in the manufacture of sheet semi-finished products from advanced aluminum alloys of the Al-Li</p>	

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				(1424 and V-1461) and Al-Mg-Sc (V-1579) systems.	
16.	Efanov	Dmitry	Peter the Great St Petersburg Polytechnic University	Development of testable, self-checking and fault-tolerant structures of digital systems using coding theory and information methods, as well as special classes of Boolean functions Study of technologies and methods for monitoring transport infrastructure and industry The closely integrated monitoring systems and intelligent traffic control systems synthesis methods research for motorway and railway transport purposes	https://opendoors.spbstu.ru/files/supervisors_portfolio/efanov_eng.pdf
17.	Zavjalov	Sergey	Peter the Great St Petersburg Polytechnic University	Application of spectrally efficient signals for advanced information transmission systems in conditions of limited frequency resources.	https://opendoors.spbstu.ru/files/supervisors_portfolio/zavjalov.pdf
18.	Elena Ivashkina		Tomsk Polytechnic University	petroleum chemistry, alkylation, dehydrogenation, catalytic cracking, multistage processes, modeling, catalyst deactivation, thermodynamics, kinetics	https://tpu.ru/upload/medialibrary/867/s7j14psxwomgu0yzvlna0e2vne0zq1ff/Ivashkina-A.YA..pdf
19.	Alexander S. Ivashutenko		Tomsk Polytechnic University	Nanomaterials and nanotechnologies: synthesis of dispersed materials and production of bulk products.	https://tpu.ru/upload/medialibrary/95d/fvc1j39d9dn3weke3kt7x14jpesot5b9/Ivashutenko-AYA.pdf
20.	Korovkin	Nikolay	Peter the Great St Petersburg Polytechnic University	Theoretical and applied electrical engineering, renewable energy sources, multipurpose optimization, soft computing methods, electromechanics, inverse problems of electrical engineering, electric power industry,	https://opendoors.spbstu.ru/files/supervisors_portfolio/korotkov.pdf

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				optimization of operating modes and designs of electrical devices and systems	
21.	Korotkov	Alexander	Peter the Great St Petersburg Polytechnic University	Electrical Engineering, Solid State Electronics	https://opendoors.spbstu.ru/files/supervisors_portfolio/korotkov.pdf
22.	Viktor N. Kudiiarov		Tomsk Polytechnic University	Hydrogen Purification. Hydrogen storage. Interaction of hydrogen with materials	https://tpu.ru/upload/medialibrary/701/kjsjbh25fn3s5hmk7tumkthn2nhuuj8g/Kudiyarov-AYA.pdf
23.	Kukaev	Alexander	Saint Petersburg Electrotechnical University "LETI"	Development of inertial navigation sensors based on surface acoustic waves, whispering gallery modes and other acoustic, optical, piezoelectric effects. Modeling of temperature, electrical, optical, mechanical effects in various devices using the finite element method	https://etu.ru/ru/obrazovatel'naya-deyatelnost/aspirantura-i-doktornatura/open-doors
24.	Liliia A. Leonova		Tomsk Polytechnic University	Development of a medical material based on hydroxyapatite; chemical treatment of titanium implants; investigation of coatings based on titanium oxynitrides.	https://tpu.ru/upload/medialibrary/00b/5wu4847jvwvhqgxjc1bldr6xxuwc5qs9/Leonova-AYA.pdf
25.	Loboda	Vera	Peter the Great St Petersburg Polytechnic University	MEMS sensors and energy harvesting systems design based on advanced materials and technologies for low power application like IoT, medical, monitoring systems	https://opendoors.spbstu.ru/files/supervisors_portfolio/loboda_v.v.pdf
26.	Nikita V. Martiushev		Tomsk Polytechnic University	Subtractive processing of workpieces produced by additive technologies. Manufacturing of metallic blanks using various additive technologies.	https://tpu.ru/upload/medialibrary/261/h09lfrp2xbvkvcktkffzkemw3csuo9xax/Martiushev-AYA..pdf

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27.	Maslennikova	Galina	Moscow Aviation Institute	Aircraft design and engineering	https://files.mai.ru/site/upload/doc/Масленникова Г Е (англ).pdf
28.	Matsko	Olga	Peter the Great St Petersburg Polytechnic University	Technical science	https://opendoors.spbstu.ru/files/supervisors_portfolio/matsko.pdf
29.	Medvedeva	Olga	Saint Petersburg Electrotechnical University "LETI"	Management of innovative projects. Creation of high-tech products (projects). Innovative business modeling. Commercialization of university technologies. Theoretical and methodological foundations for analyzing the problems of innovative development. Theory, methodology and methods of evaluating the effectiveness of innovative projects and programs. Management of innovations and innovation projects at the level of companies, enterprises and organizations. Innovation risks	https://etu.ru/ru/obrazovatel'naya-deyatelnost/aspirantura-i-doktornatura/open-doors
30.	Andrei V. Mostovshchikov		Tomsk Polytechnic University	Nanomaterials, Functional composite materials	https://tpu.ru/upload/medialibrary/6a5/0jt5jelarxe13zj3vreer0nx730covi8/Mostovshchikov-AYA.pdf
31.	Olga B. Nazarenko		Tomsk Polytechnic University	Electrical explosion of conductors, production of nanopowders and study of their properties, search for directions for the use of nanopowders; thermal and mechanical properties of polymer composite materials; - water purification on natural and artificial sorbents	https://tpu.ru/upload/medialibrary/dbc/yipmtn7v0q7dknjuclipflt7kwxxcdl/Nazarenko-AYA.pdf
32.	Naumov	Anton	Peter the Great St Petersburg Polytechnic University	Materials Science	https://opendoors.spbstu.ru/files/supervisors_portfolio/naumov.pdf

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33.	Neretin	Evgeny	Moscow Aviation Institute	Development of equipment for data acquisition and processing in civil aviation onboard automatic control systems, Development of onboard data measuring and control systems and devices for civil aviation, Development of integrated onboard equipment systems for civil aviation.	https://files.mai.ru/site/upload/doc/Неретин_Е_С_(англ).pdf
34.	Nikitin	Andrey	ITMO University	Power engineering: scientific research is carried out in the field of thermodynamic and thermophysical processes	https://aspirantura.itmo.ru/?main=43
35.	A. Ya. Pak		Tomsk Polytechnic University	Plasma synthesis methods, high-temperature methods, refractory materials, waste disposal, ceramic materials, material prediction.	https://tpu.ru/upload/medialibrary/fd6/3wwe2x4o37eijpc1fjtlbqjqvz0p2id8/Pak-en..pdf
36.	Popov	Eugene	Peter the Great St Petersburg Polytechnic University	Development and implementation of signal processing algorithms; Theory and practice of building information transmission systems	https://opendoors.spbstu.ru/files/supervisors_portfolio/popov.pdf
37.	Poptekhin	Vyacheslav	Peter the Great St Petersburg Polytechnic University	Power demand smart control of isolated electrical grid that uses fossil and renewable energy sources	https://opendoors.spbstu.ru/files/supervisors_portfolio/potekhin.pdf
38.	Solyaev	Yury	Moscow Aviation Institute	Solid mechanics	https://files.mai.ru/site/upload/doc/Соляев_Ю_О_(англ).pdf
39.	Starinova	Olga	Samara University	<ul style="list-style-type: none"> ● Professional, responsive and cohesive research team. ● Interaction is carried out with leading Russian and foreign scientists working in the field of interests of the scientific group. ● The results of scientific work are constantly published in highly cited scientific journals and reported at leading specialized international conferences. 	https://ssau.ru/files/priem_doc/postgraduate/starinova_en.pdf

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40.	Stotckaia	Anastasiia	Saint Petersburg Electrotechnical University "LETI"	Modern intellectual methods of control theory for mechatronic systems and complexes, mathematical modeling, research of nonlinear systems	https://etu.ru/assets/files/oda/ska-kun-a-d-portfolio_angl.pdf
41.	Strekalina	Daria Mikhailovna	Moscow Polytechnic University	Prospective technology for producing details from hard alloys for particle detectors in Mega Science projects and for medical physics	https://mospolytech.ru/upload/medialibrary/767/j2jqrceah1na3c1ze3ca5mndgw5yzkq/pnr_profil_strekalina_open_doors_en.pdf
42.	Maria A. Surmeneva		Tomsk Polytechnic University	Biomaterial Science, Coating deposition, Materials characterization, Biomaterial Engineering, Biomaterial Functionalization, additive manufacturing, PECVD	https://tpu.ru/upload/medialibrary/9a4/5ht0rr6ymu9026bhdbc62v9lo9647fij/Surmeneva-AYA.pdf
43.	Sergei I. Tverdokhlebov		Tomsk Polytechnic University	The concept of hybrid coatings and materials based on metals, calcium phosphates, organic acid polymers and fluorocarbon plastics for reconstructive surgery is being developed. Development of methods and means for molding bioactive polymer matrices and 3D materials with a high surface-to-volume ratio and controlled porosity for regenerative medicine. Development of physical and chemical methods, as well as means for modifying the surface of materials for biomedical use to impart special properties.	https://tpu.ru/upload/medialibrary/197/7wgaotvpv3pq7cnelcnorzfejv3goc/Tverdokhlebov-AYA.pdf
44.	Timashev	Svyatoslav	Ural Federal University named after the first President of Russia B.N. Yeltsin	Stochastic structural mechanics, Probability theory and mathematical statistics, FEM software, optimization (benefit-cost) software, Artificial neural networks software, Bayesian network software	https://urfu.ru/en/research/postgraduate-programs-in-english/admission-options/open-doors-olympiad/research-supervisors/sviatoslav-a-timashev/
45.	Tkachenko	Andrey	Samara University	Research and optimization of gas turbine engine workflow. Development of methods and	https://ssau.ru/files/priem_doc/postgraduate/tkachenko_en.pdf

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				computer-aided means for concept designing of aircraft engines and power plants.	
46.	Uglanov	Dmitry	Samara University	<ol style="list-style-type: none"> 1. Improving the cooling efficiency of turbine blades of GTE. 2. Improving the efficiency of the gas turbine engine through the use of a highly efficient heat exchanger-regenerator. 3. Development and creation of a methodology for determining the characteristics of low-temperature power plants using low-potential cryoproduct heat. 4. Development of effective methods of energy storage based on cryogenic energy converters. 5. Development of experimental and theoretical methods for modeling work processes in cryogenic storage complexes during refueling, storage and selection of cryogenic product. 6. Development of a pulsating bidirectional turbine for the utilization of acoustic energy. 7. Development and research of working processes of a highly efficient cryogenic engine for an unmanned aerial vehicle. 8. Development and research of working processes of onboard cryogenic pulsation coolers of the IR receiver. 9. Creation of an internal combustion engine with internal heat recovery in a cycle (ICE-R) 	https://ssau.ru/files/priem_doc/p_ostgraduate/uglanov_en.pdf
47.	Filatov	Yuri	Saint Petersburg Electrotechnical University "LETI"	Ring laser gyro physics and application; Fiber optic gyro physics and application; Laser method and means of displacement measurement; Laser metrology	https://etu.ru/assets/files/oda/struktura-portfolio-pnr-angl-filatov.pdf

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48.	Furletov	Yury Mikhailovich	Moscow Polytechnic University	Autonomous driving systems, advanced driver assistance systems (ADAS), audio signal processing systems and vehicle remote diagnostics and technical condition monitoring systems.	https://mospolytech.ru/upload/medialibrary/1eb/s8kxa913ntddna9ye519jibawvf2o1ya/pnr_profil_furletov_open_doors_en.pdf
49.	O.L. Khasanov		Tomsk Polytechnic University	Net-shaping the dry nano- and micro-scaled powders in required articles with use the powerful ultrasonic assistance and collector pressing method. Consolidation of the nano-, micro-scaled powders having ceramic or composite compositions by the spark plasma sintering	https://tpu.ru/upload/medialibrary/d6f/tw18cxz0z43kb8m42n0p3lncl44v9dgp/KHasanov-AYA.pdf
50.	Sergey V. Chakhlov		Tomsk Polytechnic University	Development of software for processing and analyzing images and equipment management for their capture in X-ray and ultrasound non-destructive testing, as well as computed tomography (including betatron tomography)	https://tpu.ru/upload/medialibrary/9f3/ozh540anxvgf2dtfgn642p96ili9f698/CHakhlov-AYA.pdf
51.	Vyacheslav A. Chuzlov		Tomsk Polytechnic University	Simulation of decontamination of the catalyst surface by coke, as well as by catalytic poisons. Development of mathematical models as a basis for digital counterparts of catalytic processes of processing of petroleum raw materials	https://tpu.ru/upload/medialibrary/0fd/j0lrun4kpgglmvpr4ik2wc16amufimv4/Chuzlov-en.-.pdf
52.	Arseniy O. Chulkov		Tomsk Polytechnic University	Active thermal non-destructive control of impact damage, delamination and cracks in composite materials such as carbon fiber, carbon-carbon, fiberglass, organoplastic, etc. – Detection of water in honeycomb composite panels used in the aerospace industry. – Detection of latent corrosion in metal shells up to 6 mm thick and assessment of the relative entrainment of the material. – Non-contact determination of thermophysical properties of materials. – Development of portable thermal imaging flaw	https://tpu.ru/upload/medialibrary/47d/6xkqvlgressfa0vk38tz0842v3u86moz/CHulkov-AYA.pdf

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				detectors-tomographs. – Development of methods for thermal control of materials.	
53.	Shadrin	Sergey Sergeevitch	Moscow Polytechnic University	Autonomous driving systems, advanced driver assistance systems (ADAS), intelligent transport systems and vehicle remote diagnostics and technical condition monitoring systems.	https://mospolytech.ru/upload/medialibrary/743/8llt6rqxb33bfppxtid1xs1lkxfc3kmv/pnr_profil_shadrin_open_doors_en.pdf
54.	Yurchenko Alexey Vasilievich		Tomsk Polytechnic University	Fiber-optic deformation control systems of various long products foundations, careers, mining, etc. Development of forecast systems for combined energy systems based on renewable energy sources. Research highlights (if applicable): Fiber-optic control systems in the mining industry have been developed and introduced	https://tpu.ru/upload/medialibrary/e4f/i7g11x8uho2kh20zkac3v9r7x96miael/YUurchenko.-_AYA_-1_.pdf