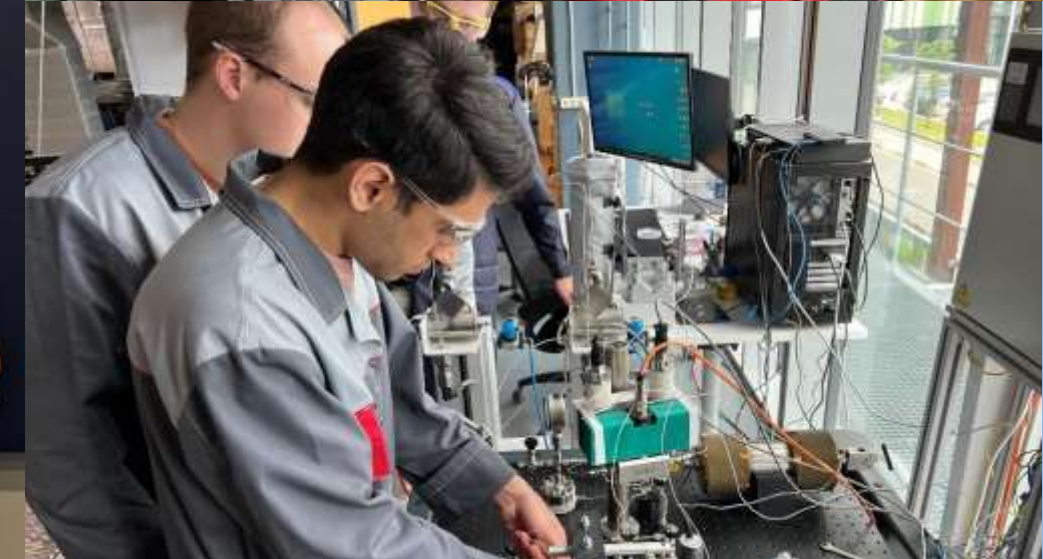


2022

Industrial Immersion Project Book

Essentials



Industrial immersion partner company - industrial enterprise or organization of the industrial sector, a small innovative company, a subject of the Skolkovo ecosystem, an industry institute or an organization that realizes a project on governmental support of business development, accepting students for Industrial Immersion.

Industrial Immersion project focuses on a short-term development of assigned tasks of research, manufacturing or operational problems specified by the host company. Students solve the project task under supervision of a Skoltech professor or employee appointed to monitor the project.

Terms:
8 weeks during summer term

Assessment is carried out based on the report and poster



Host company: how to participate in the program

- 01 Propose technically attractive project
- 02 Provide equipped working places in the company's office. Project implementation in the company's environment is important for students exposure to a corporate culture
- 03 Assign an employee of the company to supervise the project/students
- 04 Develop a detailed technical task of the proposed project
- 05 Draw up a work plan with the students
- 06 Monitor the project progress
- 07 Assess report and approve project poster for Industry Day Conference.

190 projects
in 2022

107
offline

3
online

80
hybrid

42% partner companies — Skolkovo
residents

16% partner companies – Skoltech
startups



Skoltech

Program partner companies in 2022

- 1.ABBYY
- 2.AbsoluteTech
- 3.Alfa-Bank
- 4.Alfasatcom
- 5.Applied Computational Technologies
6. **Company name is protected by NDA*
- 7.Artificial Intelligent Research Institute (AIRI)
- 8.Avatarify AI
- 9.Belka Technology
- 10.Bioimaging
- 11.Biomimetix
- 12.Biomolecule
- 13.Biotech Campus
- 14.Bloomtech
- 15.BostonGene
- 16.Cloning Facility
- 17.CompMechLab
- 18.Composite Vision
- 19.Core Technologies
- 20.Cryptochemistry
- 21.Crystera
- 22.Cyberphysics
- 23.Diagnostic and Telemedicine Center
- 24.Digital Petroleum
- 25.FlexLab
- 26.Gazpromneft STC
- 27.Gazpromneft Technological Partnerships
- 28.Genetico
- 29.Genomed
30. **Company name is protected by NDA*
- 31.International Gymnasium of the Skolkovo Innovation Center
- 32.International Laboratory of Stochastic Algorithms and High Dimensional Inference
- 33.Institute of Laser and Welding Technologies (ILIST)
- 34.InPiezo
- 35.Insilico
- 36.Intelligent Ideas
- 37.Integrant
- 38.IPG / IRE-Polus
- 39.IQsoft
- 40.IRA Labs
- 41.Kintech Lab
- 42.Knowledge Genesis
- 43.Kosima
- 44.KosmoLab
- 45.LabAdvance
- 46.Market Council
- 47.Matrix Wave
- 48.M-Granat
- 49.MolTech
- 50.Motorica
- 51.MRM Proteomics R
- 52.M&S decisions
- 53.MTS
- 54.Nanosemantics Lab
- 55.NPP Impulse
- 56.Navigine
- 57.Neurotrend
- 58.Nissan
- 59.Novaprint 3D
- 60.Novosibirsk R&T Centre (NNTC)
- 61.OZON
- 62.OilGene
- 63.Onder
- 64.Open Longevity
- 65.Philips
- 66.PhisTech
- 67.Piklema Predictive
- 68.Pipe Metallurgical Company (TMK)
- 69.Plan-S Satellite and Space Technologies
- 70.Platform 3 opinion
- 71.Perm Research and Production Instrument-Making Company (PNPPK)
- 72.Qrate
- 73.Quicktoken
- 74.Research Complex, Center for Technological Provision in Novosibirsk Academgorodok Technopark (IK CTO)
- 75.Research Institute of Railway Transport (VNIIZhT)
- 76.Rosebud AI
- 77.RSHB-Intech
- 78.Russian Quantum Centre (RQC)
- 79.Rustor
- 80.Samsung
- 81.Sakhalin Energy
- 82.Sberbank
- 83.SberMedAI
- 84.Siberian Generating Company
- 85.Sintez
- 86.Smart Staffing
- 87.SoKo
- 88.South Geotherm SPE
- 89.Space Technology and Services Centre
- 90.Tekvel
- 91.Tesart
- 92.Tesis
- 93.TetraQuant
- 94.Tevian
- 95.Tirphotonics
- 96.Troitsk Engineering Center
- 97.TrackTrack
- 98.Tsuru Robotics
99. Unim
100. Vein CV
101. Vibrant
102. Visillect
103. VisionLabs
104. Yandex
105. Yevdokimov MSUMD, Orthodontics Lab

Statistics

Program	Students	Companies	Projects	Group & interdisciplinary projects incl.	Project format		
					offline	online	hybrid
Advanced Computational Science	8	6	6	3	3	0	3
Advanced Manufacturing Technologies	18	16	17	1	17	0	0
Data Science	73	30	59	12	22	1	36
Energy Systems	9	3	3	2	0	1	2
Internet of Things & Wireless Technologies	18	11	16	4	15	0	1
Life Sciences	35	19	28	6	8	1	19
Materials Science	14	12	13	1	3	0	10
Petroleum Engineering	18	8	15	0	14	0	1
Photonics and Quantum Materials	22	13	21	1	16	0	5
Space and Engineering Systems	20	14	15	4	10	0	6
Total	234	105	190	31	107	3	80

Projects areas

Advanced Computational Science	mathematical modelling, modelling and automation of search, parallel computing, experiment automation
Advanced Manufacturing Technologies	functional materials, additive technologies, composite materials, mathematical modeling
Data Science	big data, data analytics, Artificial Intelligence
Energy Systems	energy markets, Artificial Intelligence in energy industry
Internet of Things & Wireless Technologies	next generation wireless, data analysis, biomedical imaging, UAV, VR, information security, BCI, navigation systems
Life Sciences	genetic engineering, bioinformatics, infectious diseases, neurotechnologies, agricultural technologies, medical genetics
Materials Science	materials modeling, optimization of methods for synthesis of materials, measurement of material properties, research of electrochemical sensors
Petroleum Engineering	EOR, geomechanics, mathematical modelling, unconventional and hard to recover hydrocarbons, basin modelling
Photonics and Quantum Materials	laser technologies, optical and antenna elements, quantum algorithms, nanomaterials, biophotonics
Space and Engineering Systems	systems Engineering (+MBSE), the Earth remote sensing image processing, small space devices, robotics

Projects catalogue 2017-2021

2021



2020



2019



2018



2017



More about the Industrial Immersion program
you can find on the website

Advanced Computational Science (ACS)

Students	8
Companies	6
Projects total	6
Group projects	3*
Online projects	0
Offline projects	3
Hybrid projects	3

1. Gazpromneft STC

2. Samsung

3. Sberbank
4. Sintez

5. Vein CV

6. Yandex






Industrial Immersion Coordinator

Victoria Brighton



* Including 1 interdisciplinary project with DS

Advanced Computational Science

<div> GAZPROM</div> <div><div>SCIENCE & TECHNOLOGY CENTER</div></div> <div>1 </div>	<div></div> <div>2 </div>	<div></div> <div>1 </div>
<div>Refinement of the prototype of the automatic search for the optimal field development system</div>	<div>Develop automation tools for handling experiment results and visual reporting</div> <div>Develop and configure tools to control integrity and synchronize data</div>	<div>AutoTS framework in time series analysis</div>
<div>Skoltech supervisor</div> <div>Vladimir Palyulin</div> <div>offline</div>	<div>Skoltech supervisor</div> <div>Ivan Oseledets</div> <div> hybrid</div>	<div>Skoltech supervisor</div> <div>Sergey Rykovanov</div> <div>offline</div>
<div> Sintez combining the best</div> <div>2 </div>	<div></div> <div>1/3* </div>	<div></div> <div>1 </div>
<div>Dataset for monitoring of natural resources</div>	<div>Deep Learning Model development for Medical Image Analysis in Oncology</div> <div>* <i>Interdisciplinary with DS</i></div>	<div>Optimization of map-reduce operations with large mmaped-files due to multithreaded calculations</div>
<div>Skoltech supervisor</div> <div>Evgeny Burnaev</div> <div> hybrid</div>	<div>Skoltech supervisor</div> <div>Alexey Vishnyakov</div> <div> offline</div>	<div>Skoltech supervisor</div> <div>Sergey Rykovanov</div> <div>hybrid</div>

Advanced Manufacturing Technologies (AMT)

Students	18
Companies	16
Projects total	17
Group projects	1
Online projects	0
Offline projects	17
Hybrid projects	0

- | | | |
|--|---|---|
| 1. Applied Computational Technologies | 8. Industrial Project, Skoltech* | 12. Nissan |
| 2. *Company name is protected by a NDA | 9. InPiezo | 13. Pipe Metallurgical Company (TMK) |
| 3. Bioimaging | 10. Institute of Laser and Welding Technologies (ILIST) | 14. Research Institute of Railway Transport (VNIIZhT) |
| 4. CompMechLab | 11. Research Complex, Center for Technological Provision in Novosibirsk Technopark (IK CTO) | 15. Sberbank |
| 5. Composite Vision | | 16. Tesis |
| 6. Cyberphysics | | |
| 7. Diagnostic and Telemedicine Center | | |



Industrial
Immersion
Coordinator

Dmitry Krasovsky



* Company name is protected by NDA




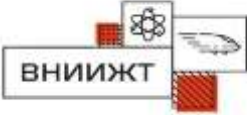


Advanced Manufacturing Technologies

<div>Applied Computational Technologies</div> <div>Gasdynamics of detonation thermal spray system</div> <div>Skoltech supervisor Dmitry Krasovsky</div> <div>offline</div> <div>1 person</div>	<div>Company name is protected by a NDA</div> <div>Time-series forecasting with neural networks</div> <div>Skoltech supervisor Timur Aslyamov</div> <div>offline</div> <div>1 person</div>	<div>Company name is protected by a NDA</div> <div>Visualization for oil & gas industry using streamlit</div> <div>Skoltech supervisor Petr Zhilyaev</div> <div>offline</div> <div>1 person</div>
<div>BIOIMAGING</div> <div>Studies of the optical properties of two dimensional MoS2</div> <div>Skoltech supervisor Stanislav Evlashin</div> <div>offline</div> <div>1 person</div>	<div>CML CompMechLab</div> <div>Validation of micromechanics properties of polymer composite materials</div> <div>Skoltech supervisor Ivan Sergeichev</div> <div>offline</div> <div>1 person</div>	<div>COMPOSITE VISION</div> <div>Sk resident Skoltech startup</div> <div>Development of a Method for Forming Synthetic Data of Inhomogeneities of Composite Materials Using CAD Tools</div> <div>Skoltech supervisor Alexander Safonov</div> <div>offline</div> <div>1 person</div>

Advanced Manufacturing Technologies

<div><div></div><div><div>Sk resident</div><div>Skoltech startup</div></div><div>1 person icon</div></div> <div><p>Using a hybrid approach in predictive analytics of electric power plants</p></div> <div><div>Skoltech supervisor</div><div>Ighor Uzhinsky</div><div>offline</div></div>	<div><div></div><div>Diagnostic and Telemedicine Center</div><div>1 person icon</div></div> <div><p>Estimation of parameters of the object's vibrations, leading to registration of a Doppler twinkling artifact on a screen of an ultrasound scanner, by a laser vibrometer</p></div> <div><div>Skoltech supervisor</div><div>Loic Salles</div><div>offline</div></div>	<div><div></div><div>Numerical modeling of delivery and pool melting for power of two dissimilar alloys during DED</div><div><div>Skoltech R&D project. Company name is protected by NDA</div></div><div><div>Skoltech supervisor</div><div>Igor Shishkovsky</div><div>offline</div></div></div>
<div><div></div><div>3 people icon</div></div> <div><p>Development of a rigid piezo actuator for a piezoelectric motor</p></div> <div><div>Skoltech supervisor</div><div>Igor Shishkovsky</div><div>offline</div></div>	<div><div></div><div>1 person icon</div></div> <div><p>Direct Metal Deposition of gradient alloys</p></div> <div><div>Skoltech supervisor</div><div>Stanislav Evlashin</div><div>offline</div></div>	<div><div></div><div>Research Complex, Center for Technological Provision in Novosibirsk Academgorodok Technopark</div><div>1 person icon</div></div> <div><p>Research and analysis of physical and mechanical properties of polymer composite materials</p></div> <div><div>Skoltech supervisor</div><div>Ivan Sergeichev</div><div>offline</div></div>

Advanced Manufacturing Technologies

<div></div> <div>3D modelling efficient architecture for lithium-ion batteries components using innovative approach of parametric modelling based on functional representation, with the calculation of the capacity and power performance</div> <div><div>Skoltech supervisor Evgenii Maltsev</div><div> offline</div></div>	<div></div> <div>Pipe Metallurgical Company (TMK)</div> <div>Materials characterization and corrosion evaluation of functional materials and coatings used in oil gas industry</div> <div><div>Skoltech supervisor Dmitriy Dzhurinskiy</div><div>offline</div></div>	<div></div> <div>Research Institute of Railway Transport (VNIIZhT)</div> <div>Development and use of functional models as a predictive analytics tool for complex systems</div> <div><div>Skoltech supervisor Loic Salles</div><div>offline</div></div>
<div></div> <div>Design of stable legged robot locomotion algorithms for walking up- and downstairs</div> <div><div>Skoltech supervisor Pavel Osinenko</div><div>offline</div></div>	<div></div> <div>Solving hydrodynamic tasks using the FlowVision software package</div> <div><div>Skoltech supervisor Aslan Kasimov</div><div>offline</div></div>	

Data Science (DS)

Students	73
Companies	30
Projects total	59
Group projects	12*
Online projects	1
Offline projects	22
Hybrid projects	36

1. ABBYY

2. AbsoluteTech

3. Alfa-Bank

4. **Company name is protected by NDA*

5. Artificial Intelligent Research Institute (AIRI)

6. Avatarify AI

7. Belka Technology

8. Huawei

9. International Laboratory of Stochastic Algorithms and High Dimensional Inference

10. IQsoft

11. IRA Labs

12. MRM Proteomics R

13. MTS

14. Nanosemantics Lab

15. Onder

16. Piklema Predictive

17. Philips

18. Platform 3 opinion

19. Quicktoken

20. Rosebud AI

21. RSHB-Intech

22. Samsung

23. Sberbank

24. Tevian

25. TrackTrack

26. Vein CV

27. Visillect

28. VisionLabs

29. Yandex

30. Yevdokimov MSUMD, Orthodontics Lab



Industrial Immersion Coordinator

Victoria Brighton



Students Number








Group Project




Interdisciplinary Group Project

** Including 2 interdisciplinary projects with ACS and IoTWT*

Data Science

<div></div> <div>Text simplification in Russian</div> <div><div>Skoltech supervisor</div><div>Elena Gryazina</div></div> <div>1 person icon</div> <div>hybrid</div>	<div><div>AbsolutTech</div><div></div></div> <div>Development of an algorithm for dynamic pricing of insurance objects (cars) for a more transparent determination of the sum insured relative to the market</div> <div><div>Skoltech supervisor</div><div>Alexey Zaytsev, Maxim Panov</div></div> <div>3 people icon</div> <div>Sk resident</div> <div>hybrid</div>	<div></div> <div>Develop a group of treatment sensitivity estimation models for financial products pricing procedures</div> <div><div>Skoltech supervisor</div><div>Maxim Panov</div></div> <div>1 person icon</div> <div>offline</div>
<div><div>Company name is protected by NDA</div></div> <div>Self-supervised learning in identifying unplanned drilling events</div> <div><div>Skoltech supervisor</div><div>Alexey Zaytsev</div></div> <div>1 person icon</div> <div>hybrid</div>	<div></div> <div>Constructing an effective ensemble of models from a single self-supervised pre-trained neural network</div> <div><div>Skoltech supervisor</div><div>Dmitry Dylov</div></div> <div>1 person icon</div> <div>hybrid</div>	<div></div> <div>Improving source code readability using neural network algorithms</div> <div><div>Skoltech supervisor</div><div>Sergey Rykovanov</div></div> <div>1 person icon</div> <div>hybrid</div>


Data Science

<div><div><div><div>AVATARIFY</div><div>AI Face Animator</div></div></div><div>Camera pose confidence estimation for visual localization task</div><div><div>Skoltech supervisor</div><div>Evgeny Burnaev</div></div><div>offline</div></div>	<div><div><div><div>BELKA TECHNOLOGY</div><div>High load system development for data processing</div><div><div>Skoltech supervisor</div><div>Sergey Rykovanov</div></div><div>offline</div></div></div></div>	<div><div><div><div>Company name is protected by NDA</div><div>Mathematical models and optimization in cloud computing problems</div><div><div>Skoltech supervisor</div><div>Maxim Panov</div></div><div>hybrid</div></div></div></div>
<div><div><div><div>Company name is protected by NDA</div><div>Research of methods of compression and acceleration of neural networks</div><div><div>Skoltech supervisor</div><div>Alexey Zaytsev</div></div><div>offline</div></div></div></div>	<div><div><div><div>Company name is protected by NDA</div><div>Development of Language models for Question Answering and Code</div><div><div>Skoltech supervisor</div><div>Maxim Panov</div></div><div>offline</div></div></div></div>	<div><div><div><div>Company name is protected by NDA</div><div>Learnable variance stabilizing transformation of denoising task</div><div><div>Skoltech supervisor</div><div>Maxim Panov</div></div><div>offline</div></div></div></div>

Data Science

<div>Company name is protected by NDA</div> <div>2</div> <div>Development of deep neural networks with long short-term memory (LSTM) in lossless compression</div> <div>Training adaptive hash functions in lossless compression</div> <div>Skoltech supervisor</div> <div>Maxim Panov, Yury Yanovich</div> <div>online</div>	<div>Company name is protected by NDA</div> <div>1</div> <div>RGB-D Reconstruction of 3D objects</div> <div>Skoltech supervisor</div> <div>Alexey Artemov</div> <div>offline</div>	<div>Company name is protected by NDA</div> <div>1</div> <div>Energy shaping for digital subcarrier modulation for fiber non-linearity mitigation</div> <div>Skoltech supervisor</div> <div>Alexey Frolov</div> <div>offline</div>
<div>Company name is protected by NDA</div> <div>1</div> <div>Multilingual ASR solution for mining Speech-to-Speech translation data</div> <div>Skoltech supervisor</div> <div>Evgeny Burnaev</div> <div>offline</div>	<div>Company name is protected by NDA</div> <div>2</div> <div>Cache utilization optimization by using run-time traces</div> <div>Skoltech supervisor</div> <div>Ivan Oseledets, Evgeny Burnaev</div> <div>offline</div>	<div>Company name is protected by NDA</div> <div>2</div> <div>Topological Data Analysis for Synthetic Speech Detection</div> <div>Skoltech supervisor</div> <div>Evgeny Burnaev</div> <div>offline</div>

Data Science

 HDI Lab


1 person icon

Development and verification of anomaly detection algorithms with application to the task of detecting suspicious transactions

Skoltech supervisor

Maxim Panov

offline

 Yandex

1 person icon

Development of reinforcement learning algorithms with applications to the trajectory generation problem for traffic agents

Skoltech supervisor

Maxim Panov

offline

 iQ Soft

1 person icon

Development of computer vision algorithm

Skoltech supervisor

Alexander Panchenko

hybrid

 IRA LABS

Sk resident

Skoltech startup


1 person icon

Self-learning in medical image segmentation problems for meta-learning problems

Skoltech supervisor

Mikhail Belyaev

hybrid

 IRA LABS

Sk resident

Skoltech startup


1 person icon

Estimation of uncertainty of models for localization of key points on medical images

Skoltech supervisor

Mikhail Belyaev

hybrid

 IRA LABS

Sk resident

Skoltech startup

1 person icon


Segmentation of 3-D medical images based on object geometry to search for rare pathologies


Skoltech supervisor

Mikhail Belyaev

hybrid

Data Science

 resident

 startup

1

MRM Proteomics R

Knowledge graph for the analysis of biomedical data on bacterial molecular targets, antibiotics and antimicrobial resistance

Skoltech supervisor
Alexander Panchenko

hybrid



1

Ticketland Recommender System

Skoltech supervisor
Evgeny Frolov

offline

 resident

 startup


2


 Nanosemantics

Creation of DeepFake Video using neural networks


Skoltech supervisor
Alexey Artemov, Maxim Panov


hybrid

 resident


 startup


2

 Nanosemantics

Development of a prototype service for noise reduction in audio with speech

Skoltech supervisor
Ivan Oseledets, Maxim Panov


hybrid




1


Development of a distributed ledger microservice for a system of settlements and payments between users and resource providers based on blockchain technology

Skoltech supervisor
Andrzej Cichocki

hybrid

 resident

1



Research of the decision support system for haul truck drivers

Skoltech supervisor
Elena Gryazina

hybrid

Data Science



1 person icon

Multiple-phase segmentation of the pancreas

Skoltech supervisor
Dmitry Dylov

offline



1 person icon

Develop neural networks for segmentation of lines and tubes in x-ray medical images

Skoltech supervisor
Dmitry Dylov

offline



1 person icon

Compression of raw CT data

Skoltech supervisor
Dmitry Dylov

offline



Sk resident

1 person icon

Development of a decision-making system for AI video analytics

Skoltech supervisor
Ivan Oseledets

hybrid



Sk resident

1 person icon

Development of a service for the search and classification of leukocytes on bone marrow blood smears

Skoltech supervisor
Ivan Oseledets

hybrid



2 person icon

Tokenization of loan portfolios in numbers


Skoltech supervisor
Yury Yanovich

hybrid icon


Data Science


<div>> ROSEBUD.AI</div> <div>Research of methods to guide generative content creation</div> <div>Skoltech supervisor Andrzej Cichocki</div> <div>1 person icon</div> <div>hybrid</div>	<div><div><div>RSHB-INTECH</div><div>PCXB-INTEX</div></div><div>Development of a predictive model for identifying customers who are not inclined to return to the http://svoe-rodnoe.ru/ website</div><div>Skoltech supervisor Maxim Panov</div><div>1 person icon</div><div>offline</div></div>	<div>SAMSUNG</div> <div>Development of a method for 3D segmentation and 3D object detection based on a fully convolutional neural network model</div> <div>Skoltech supervisor Anh-Huy Phan</div> <div>1 person icon</div> <div>hybrid</div>
<div>SAMSUNG</div> <div>Segmentation of object materials for 3D reconstruction</div> <div>Skoltech supervisor Victor Lempitsky</div> <div>1 person icon</div> <div>hybrid</div>	<div>SAMSUNG</div> <div>Analyze and compare methods for StyleGANv3 inversion and image editing</div> <div>Skoltech supervisor Maxim Panov</div> <div>1 person icon</div> <div>hybrid</div>	<div>SAMSUNG</div> <div><div>Develop a faster inference algorithm in diffusion models</div><div>Develop an algorithm for distillation of a given diffusion model</div></div> <div>Skoltech supervisor Evgeny Burnaev, Maxim Panov</div> <div>2 people icon</div> <div>hybrid</div>

Data Science

<div><div>SAMSUNG</div><div>3人</div><div>Developing method for learnable real-time predictive rendering of head-avatars</div><div>Skoltech supervisor Maxim Panov, Serguei Barannikov</div><div>hybrid</div></div>	<div><div>SAMSUNG</div><div>2人</div><div>Study and Implementation of Neural Matchers and semantics for visual localization Study and implementation Visual Place Recognition for camera global localization</div><div>Skoltech supervisor Gonzalo Ferrer</div><div>hybrid</div></div>	<div><div>SAMSUNG</div><div>1人</div><div>Study and Implementation of map creation algorithm for Indoor positioning system</div><div>Skoltech supervisor Alexander Panchenko</div><div>hybrid</div></div>
<div><div>SAMSUNG</div><div>1人</div><div>Investigating user input patterns for interactive image segmentation</div><div>Skoltech supervisor Alexey Zaytsev</div><div>hybrid</div></div>	<div><div>SAMSUNG</div><div>1人</div><div>Developing megapixel one-shot mesh-based avatars</div><div>Skoltech supervisor Victor Lempitsky</div><div>hybrid</div></div>	<div><div>SBERBANK</div><div>1人</div><div>Exploring alternative data for banking CRM applications</div><div>Skoltech supervisor Alexander Zhrebker</div><div>offline</div></div>

Data Science



1 

Develop algorithms for visual signature verification in documents

Skoltech supervisor
Andrey Somov

hybrid




1 

Development of a universal authority to increase the accuracy of identifying connections between legal act and it's draft


Skoltech supervisor
Maxim Panov

hybrid



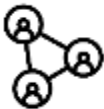
Sk resident


Skoltech startup

2/3* 

Development of a model for segmentation and analysis of medical images of vasculature
** Interdisciplinary with IOTWT*


Skoltech supervisor
Pavel Osinenko, Evgeny Nikolaev


hybrid



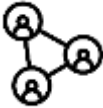
Sk resident


Skoltech startup

2/3* 

Deep Learning Model development for Medical Image Analysis in Oncology
** Interdisciplinary with ACS*


Skoltech supervisor
Maxim Panov, Alexey Zaytsev


hybrid



Sk resident


Skoltech startup

1 

Face-Skull Transfer Learning


Skoltech supervisor
Ivan Oseledets

hybrid



Sk resident

Skoltech startup

1 

Stack-based denoising analysis

Skoltech supervisor
Dmitry Dylov

hybrid

Data Science



1 person icon

Color constancy domain adaptation

Skoltech supervisor

Maxim Panov

offline




1 person icon

Face recognition algorithms development

Skoltech supervisor

Alexander Zhrebker

hybrid




1 person icon

Applications of transformers in the recommended systems

Skoltech supervisor

Maxim Panov

offline




1 person icon

Modelling of uncertainty in graph machine learning

Skoltech supervisor

Alexander Panchenko

offline



1 person icon

Development of methods and algorithms for managing the processes of diagnosis and disclosure of the pathogenesis of dentofacial anomalies based on the integration and intellectual analysis of large data sets of anthropometric, radiation, functional research methods

Skoltech supervisor

Alexander Bernstein

hybrid

Energy Systems (ES)

Students	9
Companies	3
Projects total	3
Group projects	2
Online projects	1
Offline projects	0
Hybrid projects	2

- 1. Market Council
- 2. Siberian Generating Company
- 3. Tekvel



Industrial
Immersion
Coordinator

Ekaterina Guseva



Students
Number





Group
Project



Interdisciplinary
Group Project

Energy Systems



1 

Development of a methodology for calculating the coefficients of energy emissions of greenhouse gases

Skoltech supervisor

Henni Ouerdane

online




4 


Identification of heat consumption anomalies of consumers by machine learning methods

Skoltech supervisor

Federico Martin Ibanez


hybrid




Sk resident 4 

Development of digital twin functions in the electric power industry

Development of an adaptive algorithm for blocking the trigger of the emergency event logger at a high noise level in the input signal

Skoltech supervisor

Vladimir Terzija


hybrid

Internet of Things & Wireless Technologies (IoTWT)

Students	18
Companies	11
Projects total	16
Group projects	4*
Online projects	0
Offline projects	15
Hybrid projects	1

1. Alfasatcom

2. **Company name is protected by NDA*

3. Bloomtech

4. **Company name is protected by NDA*

5. Intelligent Ideas
6. Navigine

7. Neurotrend

8. Philips

9. Smart Staffing

10. Tesart

11. Vein CV



Industrial
Immersion
Coordinator

Maria Kolotiy



Students
Number



Group
Project



Interdisciplinary
Group Project

** Including 2 interdisciplinary projects with DS and SES*

Internet Of Things & Wireless Technologies



Sk resident

2

Development of a frontend application in JavaScript with Vue.js framework

Development of REST API services for backend in Python

Skoltech supervisor

Sergey Rykovanov, Andrey Somov



offline

Company name is protected by NDA

1/3*

Development of a UAV with a landing platform and testing in a physical simulator

** Interdisciplinary with SES*

Skoltech supervisor

Andrey Somov



offline

B L O O M T E C H

1

Secure multi-party computation for object detection

Skoltech supervisor

Alexey Frolov

offline

Company name is protected by NDA

1

Dynamic MIMO Channel forecasting and robust precoding in the wireless systems 5G

Skoltech supervisor

Alexey Frolov

offline

Company name is protected by NDA

1

Multi-task Joint Coding: Explore Coding for 6G New Scenarios

Skoltech supervisor

Alexey Frolov

offline

Company name is protected by NDA

1



Complexity optimization for MIMO beam-domain SIC detection scheme for 5G uplink receiver

Skoltech supervisor


Andrey Ivanov

offline

Internet Of Things & Wireless Technologies

<div></div> <div>Development of the binocular display control board</div> <div><div>Skoltech supervisor</div><div>Andrey Somov</div></div> <div><div>2 people icon</div><div>offline</div></div>	<div><div>Sk resident</div><div></div><div>Navigine</div></div> <div>Navigation system development</div> <div><div>Skoltech supervisor</div><div>Gonzalo Ferrer</div></div> <div><div>1 person icon</div><div>offline</div></div>	<div><div>Sk resident</div><div></div></div> <div>Development of the hardware-software complex «NeuroChat»</div> <div><div>Skoltech supervisor</div><div>Andrzej Cichocki</div></div> <div><div>1 person icon</div><div>offline</div></div>
<div></div> <div>Analysis of the domain adaptation problem from a frequency domain aspect</div> <div><div>Skoltech supervisor</div><div>Dmitry Dylov</div></div> <div><div>1 person icon</div><div>hybrid</div></div>	<div><div>Sk resident</div><div></div><div>SmartStaffing</div></div> <div>Formation of a reference model of competencies using machine learning algorithms</div> <div><div>Skoltech supervisor</div><div>Grigoriy Kovalev</div></div> <div><div>1 person icon</div><div>offline</div></div>	<div><div></div><div>TESART</div></div> <div>Efficiency research of error-correcting polar codes</div> <div><div>Skoltech supervisor</div><div>Andrey Somov</div></div> <div><div>1 person icon</div><div>offline</div></div>

Internet Of Things & Wireless Technologies


TESART

1 person

Signal processing for full duplex data transmission systems without time and frequency division

Skoltech supervisor
Andrey Somov

offline

VEIN CV


Sk resident
Skoltech startup

1 person

Deep learning of C++ transition code

Skoltech supervisor
Andrey Somov

offline

VEIN CV

Sk resident
Skoltech startup


1/3* people

Development of a model for segmentation and analysis of medical images of vasculature

* *Interdisciplinary with DS*

Skoltech supervisor
Alexey Frolov

offline

VEIN CV

Sk resident
Skoltech startup

1 person

Automatic annotation of EEG epileptic pattern for ALICE toolbox

Skoltech supervisor
Maxim Sharaev

offline

Life Sciences (LS)

Students	35
Companies	19
Projects total	28
Group projects	6
Online projects	1
Offline projects	8
Hybrid projects	19

1. Biomolecule

2. Biotech Campus

3. BostonGene

4. Cloning Facility

5. Crystera

6. Genetico

7. Genomed
8. Insilico

9. International
Gymnasium of the
Skolkovo Innovation
Center

10. M&S decisions

11. MolTech

12. Motorica
13. MRM Proteomics R

14. OilGene

15. Open Longevity

16. SberMedAI

17. SoKo

18. Unim

19. Vibrant



Industrial
Immersion
Coordinator

Vera Rybko



Students
Number







Group
Project



Interdisciplinary
Group Project


Life Sciences

<div></div> <div>Biomolecule</div> <div>1 person icon</div> <div>Technical analysis of publications of the biomolecule resource and optimization of font styles, pictures and links</div> <div>Skoltech supervisor</div> <div>Vera Rybko</div> <div>hybrid</div>	<div></div> <div>Biomolecule</div> <div>1 person icon</div> <div>Thematic analysis of publications of the biomolecule resource and optimization of the sequence of presentation of the material</div> <div>Skoltech supervisor</div> <div>Vera Rybko</div> <div>hybrid</div>	<div></div> <div>Biomolecule</div> <div>1 person icon</div> <div>Review and analysis of biomedical research articles for building a company brand on Yandex.Q</div> <div>Skoltech supervisor</div> <div>Vera Rybko</div> <div>hybrid</div>
<div></div> <div>Purification of ultra long genomic DNA from blood samples</div> <div>1 person icon</div> <div>Skoltech supervisor</div> <div>Vera Rybko</div> <div>offline</div>	<div></div> <div>Dashboard development for the internal analytical system of the immunity analysis group</div> <div>1 person icon</div> <div>Skoltech supervisor</div> <div>Vera Rybko</div> <div>offline</div>	<div></div> <div>Implementation of scRNA-seq in precision oncology</div> <div>1 person icon</div> <div>Skoltech supervisor</div> <div>Vera Rybko</div> <div>offline</div>

Life Sciences

<div><div></div><div><p>Designing web-application for registration of commercial kits measuring protein concentrations</p></div><div><div>Skoltech supervisor</div><div>Vera Rybko</div></div><div><div>1 person icon</div><div>offline</div></div></div>	<div><div></div><div><p>Investigation of methods for improving the classification of imaginary movements by EEG patterns</p></div><div><div>Skoltech supervisor</div><div>Natalya Podsosonnaya</div></div><div><div>1 person icon</div><div>offline</div></div></div>	<div><div></div><div><p>Implementation of bioinformatic approaches in defining functions of orphan proteins of human CYP4 family</p></div><div><div>Skoltech supervisor</div><div>Vera Rybko</div></div><div><div>2 people icon</div><div>hybrid</div></div></div>
<div><div></div><div><p>Tools for repeat expansion detection and for variant effect prediction in intronic and regulatory regions of genes in WES and WGS data</p></div><div><div>Skoltech supervisor</div><div>Vera Rybko</div></div><div><div>2 people icon</div><div>hybrid</div></div></div>	<div><div></div><div><p>Development of NGS-based test-system for Liquid Biopsy analysis</p></div><div><div>Skoltech supervisor</div><div>Vera Rybko</div></div><div><div>3 people icon</div><div>offline</div></div></div>	<div><div></div><div><p>Implementation of multi-omics approach for the search and validation of molecular drug targets in pulmonary hypertension</p></div><div><div>Skoltech supervisor</div><div>Vera Rybko</div></div><div><div>1 person icon</div><div>hybrid</div></div></div>

Life Sciences


**Insilico
Medicine**

Sk resident1

Comparison of the harmonization algorithms for single-cell RNA sequencing transcriptomes using big data

Skoltech supervisor
Vera Rybko

hybrid

**Insilico
Medicine**

Sk resident1

Development of a classifier of genes according to the probability of a toxic effect during therapeutic exposure

Skoltech supervisor
Vera Rybko

hybrid


**Sk**
Международная
гимназия

Sk resident1

Development of "Science and Art" program

Skoltech supervisor
Vera Rybko

hybrid


**M&S** Modeling & Simulation
Decisions

Sk resident1

Clinical pharmacology: investigation of different parametric time-to-event models for PFS and OS assessment in cancer

Skoltech supervisor
Vera Rybko

hybrid


**M&S** Modeling & Simulation
Decisions

Sk resident1

Applying generalized additive models (GAM) to analyze non-linear longitudinal data on cancer biomarkers to support decision making in oncology

Skoltech supervisor
Vera Rybko

hybrid

**MolTech**
Molecular Technologies


Sk resident2

Application of neural networks for optimization of drug candidates

Skoltech supervisor
Vera Rybko

hybrid

Life Sciences



Sk resident


1 person

Development of optical haptic interface for arm prosthetics

Skoltech supervisor

Natalya Podsosonnaya

offline



Sk resident

Skoltech startup


1 person

Synthesis of proteotypic peptide standards and kit development for quantitative next-generation MS-based proteomics assays

Skoltech supervisor

Vera Rybko

offline



Sk resident

Skoltech startup

1 person

Construction, adaptation and visualization of the gene-disease association

Skoltech supervisor

Vera Rybko

hybrid



Sk resident

Skoltech startup

1 person

Search for resistance genes to sunflower broomrape

Skoltech supervisor

Vera Rybko

hybrid



Sk resident

Skoltech startup

1 person

The development of mobile systems (ring isothermal PCR) for diagnosing the resistance of sunflower plants to broomrape

Skoltech supervisor

Vera Rybko

hybrid



1 person


Molecular orbital analysis of anti-glycation agents for QSAR applications

Skoltech supervisor

Vera Rybko

hybrid

Life Sciences



Sk resident


1 person icon

Development of the AI-algorithm for recognition of pathologies in mammary glands

Skoltech supervisor

Vera Rybko

hybrid




2 person icon

Analysis of phenotypic data of soybean varieties and search for single-nucleotide polymorphisms by economically valuable traits

Skoltech supervisor

Vera Rybko


hybrid



Sk resident

2 person icon

World biopsy market research: growth, trends, existing problems in biopsy

Skoltech supervisor

Vera Rybko


hybrid



Sk resident

1 person icon

Skoltech startup

Investigation of methods for improving the classification of imaginary movements by EEG patterns

Skoltech supervisor

Natalya Podsosonnaya

hybrid

Materials Science (MS)

Students	14
Companies	12
Projects total	13
Group projects	1
Online projects	0
Offline projects	3
Hybrid projects	10

1. Biomimetix

2. Core Technologies

3. Cryptochemistry

4. FlexLab

5. IPG

6. Kintech Lab
7. M-Granat (RQC Spin-off)

8. Nissan

9. Novaprint 3D

10. NPP Impulse

11. OZON

12. Rustor



Industrial
Immersion
Coordinator

Ekaterina Guseva



Students
Number



Group
Project









Interdisciplinary
Group Project

Materials Science

<div><p>Materials. Naturally</p></div> <div>Research of mechanical properties of biomaterials</div> <div><div>Sk resident</div><div>Skoltech startup</div></div> <div>1 person</div> <div>Skoltech supervisor Alexey Salimon</div> <div>hybrid</div>	<div></div> <div>Investigation of crystal hypomorphism by structure prediction</div> <div><div>Sk resident</div><div>Skoltech startup</div></div> <div>1 person</div> <div>Skoltech supervisor Artem Oganov</div> <div>hybrid</div>	<div></div> <div>Computer simulation of the structure of clusters formed on a substrate</div> <div><div>Sk resident</div><div>Skoltech startup</div></div> <div>1 person</div> <div>Skoltech supervisor Artem Oganov</div> <div>hybrid</div>
<div><div>Sk resident</div><div>Skoltech startup</div></div> <div>Cryptochemistry</div> <div>Production of mixed oxides with a given crystallinity</div> <div>Skoltech supervisor Dmitry Krasnikov</div> <div>offline</div> <div>1 person</div>	<div></div> <div>Optimization of hybrid perovskite photodetectors for pulse oximetry devices</div> <div>Skoltech supervisor Dmitry Krasnikov</div> <div>offline</div> <div>1 person</div>	<div></div> <div>Theoretical and practical determination of the properties of the $\text{LiNa}_5\text{Mo}_9\text{O}_{30}$ structure</div> <div>Skoltech supervisor Artem Oganov</div> <div>offline</div> <div>1 person</div>

Materials Science

<div></div> <div>1 person</div> <div>First-principle modeling of materials for LEDs</div> <div>Skoltech supervisor Sergey Levchenko</div> <div>hybrid</div>	<div><div>Sk resident</div><div>M-Granat RQC Spin-off</div></div> <div>1 person</div> <div>Investigation of magnetic properties of colloidal structures</div> <div>Skoltech supervisor Gleb Sukhorukov</div> <div>hybrid</div>	<div></div> <div>1 person</div> <div>Development of Cost- and Energy-Efficient Methods for Recovering Lithium and Electrolyte from Waste Batteries</div> <div>Skoltech supervisor Roman Kapaev</div> <div>hybrid</div>
<div><div>Sk resident</div><div>Skoltech startup</div></div> <div>1 person</div> <div>Determining the response of CNT-based sensors to a thermosetting resin</div> <div>Skoltech supervisor Dmitry Krasnikov</div> <div>hybrid</div>	<div></div> <div>1 person</div> <div>Research of various metal powders for 3D printing of components in manufacturing</div> <div>Skoltech supervisor Marina Tepliakova</div> <div>hybrid</div>	<div></div> <div>1 person</div> <div>Investigation of the prospects for the use of machine learning in the development of methods and techniques for the production of medicines</div> <div>Skoltech supervisor Dmitry Aksenov</div> <div>hybrid</div>

Materials Science

28

RUSTOR

Development of a hydrothermal synthesis method using microwave radiation to obtain cathode materials based on Ni-enriched NMC with a "core-shell" structure for lithium-ion batteries

Skoltech supervisor

Aleksandra Savina



hybrid

Petroleum Engineering (PE)

Students	18
Companies	8
Projects total	15
Group projects	1
Online projects	0
Offline projects	14
Hybrid projects	1

1. **Company name is protected by NDA*

2. Digital Petroleum

3. Gazpromneft STC

4. Gazpromneft Technological Partnerships
5. LabAdvance

6. Novosibirsk R&T Centre (NNTC)

7. Sakhalin Energy

8. South Geotherm SPE



Industrial
Immersion
Coordinator

Alexey Cheremisin



Students
Number



Group
Project



Interdisciplinary
Group Project

Petroleum Engineering

Company name is protected by NDA

1

Research of membranes for gas separation

Skoltech supervisor

Evgeny Chuvilin

hybrid

Company name is protected by NDA

1

Graph-based temporal process planning and scheduling for well drilling operations

Skoltech supervisor

Dmitri Koroteev

offline

Digital Petroleum

Sk resident

Skoltech startup

1

Petroleum Data Processing and Lithofacies Prediction

Skoltech supervisor

Alexei Tchistiakov

offline

Digital Petroleum

Sk resident

Skoltech startup

1

Efficiency analysis of reservoir flow modeling acceleration

Skoltech supervisor

Dmitri Koroteev

offline

Digital Petroleum

Sk resident

Skoltech startup

1

Investigation of the possibilities of non-invasive acceleration of petroleum simulators

Skoltech supervisor

Dmitri Koroteev

offline

GAZPROM SCIENCE & TECHNOLOGY CENTER

1

Screening of Surfactant Compositions Using Microfluidic Technology

Skoltech supervisor


Alexey Cheremisin

hybrid

43

Skoltech

Petroleum Engineering



SCIENCE & TECHNOLOGY
CENTER

1 person icon

Review and evaluation of the effectiveness of combined EOR with CO2

Skoltech supervisor

Alexey Cheremisin

offline



Technological
Partnerships

1 person icon

Optimization of the technology of thermochemical treatment based on data on the kinetics of transformation of organic matter in rocks of the Bazhenov formation during the injection of supercritical water

Skoltech supervisor

Mikhail Spasennykh

offline



Technological
Partnerships

1 person icon

Interpretation of CPP 3D data for the purpose of studying the structure of hydrocarbon deposits in unconventional reservoirs

Skoltech supervisor

Alexei Tchistiakov

offline



LABADVANCE
Petroleum Service Provider

Skoltech resident

Skoltech startup


1 person icon

The studies of microfluidic technology for the rapid screening of enhanced oil recovery methods

Skoltech supervisor

Alexey Cheremisin

offline



LABADVANCE
Petroleum Service Provider

Skoltech resident

Skoltech startup


1 person icon

Selection of hydraulic fracturing fluid using microfluidic technology

Skoltech supervisor

Alexey Cheremisin

offline



LABADVANCE
Petroleum Service Provider

Skoltech resident

Skoltech startup

1 person icon


Microfluidic studies of salinity water injection for enhanced oil recovery


Skoltech supervisor

Alexei Tchistiakov

offline

Petroleum Engineering



1 

Development of numerical methods for predicting hydrocarbon production based on historical data and proxy models of reservoir fluid movement

Skoltech supervisor

Alexander Cheremisin

offline




1 

Well data aggregation and preparation of the well history for offshore oil platform "Molikpaq" PA-A


Skoltech supervisor

Dmitriy Potapenko

offline



South Geotherm
SPE


4 

Collection of data related to the emission and absorption of greenhouse gases

Development of a system for collecting and storing data retrieved from the carbon polygon

Skoltech supervisor

Alexander Bernstein


offline

Photonics and Quantum Materials (PQM)

Students	22
Companies	13
Projects total	21
Group projects	1
Online projects	0
Offline projects	16
Hybrid projects	5

1. **Company name is protected by NDA*

2. Bioimaging

3. Cryptochemistry

4. FlexLab

5. IPG

6. Novaprint 3D

7. Russian Quantum Centre (RQC)

8. PhisTech
9. Perm Research and Production Instrument-Making Company (PNPPK)

10. Qrate

11. TetraQuant

12. Tirphotronics

13. Troitsk Engineering Center



Industrial Immersion Coordinator

Dmitry Krasnikov



Students Number






Group Project



Interdisciplinary Group Project

Photonics and Quantum Materials

<div>1 </div> <div>Company name is protected by NDA</div> <div>Testing and verification of fiber optic measurements interpretation algorithms</div> <div>Skoltech supervisor Dmitry Krasnikov</div> <div>hybrid</div>	<div>1 </div> <div>BIOIMAGING</div> <div>Optimization of methods of multispectral imaging and computer vision for the analysis of pathological skin areas</div> <div>Skoltech supervisor Dmitry Gorin</div> <div>offline</div>	<div><div>Sk resident</div><div>Skoltech startup</div><div>1 </div></div> <div>Cryptochemistry</div> <div>Recognition and processing of experimental analysis of chemical code</div> <div>Skoltech supervisor Dmitry Krasnikov</div> <div>offline</div>
<div><div>1 </div></div> <div>Mixed halide perovskites as Energy harvesters for Indoor photovoltaics and their optimization</div> <div>Skoltech supervisor Dmitry Krasnikov</div> <div>offline</div>	<div><div>1 </div></div> <div>Theoretical and practical determination of the properties of the BPO4 structure</div> <div>Skoltech supervisor Artem Oganov</div> <div>offline</div>	<div><div>1 </div></div> <div>Prototyping of a new laser scheme with ultrashort UPL pulses</div> <div>Skoltech supervisor Arkady Shipulin</div> <div>offline</div>

Photonics and Quantum Materials



1 person

Разработка системы детектирования наличия волоконного инструмента приборов FiberLase U

Skoltech supervisor
Arkady Shipulin

offline



1 person

Coupling experiment and simulation for optimization of acousto-optic devices within the AOM-1030-10-PM project

Skoltech supervisor
Arkady Shipulin

offline



Sk resident


Skoltech startup

1 person

Investigation of the features of the formation of "microplastics" from composite materials used for 3D printing

Skoltech supervisor
Dmitry Krasnikov

hybrid



Sk resident

Skoltech startup

1 person

Evaluation of the reproducibility of the characteristics of multi-sensor chips in the analysis of the smell of food-grade plastic

Skoltech supervisor
Fedor Fedorov

hybrid




1 person

Investigation of diode-laser self-injection locking to the eigenmode of integrated microring resonator

Skoltech supervisor
Dmitry Krasnikov

offline



Sk resident

Skoltech startup







1 person

Development of components for a tunable laser and modulator on InP chip

Skoltech supervisor
Arkady Shipulin

offline

Photonics and Quantum Materials

<div><p>PERM SCIENTIFIC-INDUSTRIAL INSTRUMENT MAKING COMPANY</p></div> <div>Improvement of digital models for fiber lenses to optimize the input of optical radiation from semiconductor lasers</div> <div><div>Sk resident</div><div>1 person icon</div></div> <div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div><div>hybrid</div></div>	<div></div> <div>Proofreading and adaptation of a set of laboratory works for the scientific and educational complex of quantum key distribution</div> <div><div>Sk resident</div><div>1 person icon</div></div> <div><div>Skoltech supervisor</div><div>Yuriy Gladush</div><div>offline</div></div>	<div></div> <div>Development of immunomagnetic particles based on nano- and submicron particles for specific isolation of biomarkers</div> <div><div>Sk resident</div><div>Skoltech startup</div><div>2 people icon</div></div> <div><div>Skoltech supervisor</div><div>Dmitry Gorin</div><div>offline</div></div>
<div></div> <div>Development of technology for the formation of core-shell structures containing quantum dots</div> <div><div>Sk resident</div><div>Skoltech startup</div><div>1 person icon</div></div> <div><div>Skoltech supervisor</div><div>Dmitry Gorin</div><div>offline</div></div>	<div></div> <div>Optimization of edge coupling of light into photonic integrated circuits with carbon nanotube films</div> <div><div>Sk resident</div><div>1 person icon</div></div> <div><div>Skoltech supervisor</div><div>Yuriy Gladush</div><div>offline</div></div>	<div></div> <div>Quantum detectors based on two-dimensional van der Waals structures and their optimization</div> <div><div>Sk resident</div><div>1 person icon</div></div> <div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div><div>offline</div></div>

Photonics and Quantum Materials



Sk resident1

Tuning photonic Integrated circuits with microfluidic channel


Skoltech supervisor
Vasiliy Chernyshevoffline



Sk resident1

Development of broadband transitions for terahertz waveguides of various configurations

Skoltech supervisor
Dmitry Krasnikovoffline



1

Study of the features for the operation of new models of plasma sources for broadband radiation

Skoltech supervisor
Dmitry Krasnikovoffline

Space and Engineering Systems (SES)

Students	20
Companies	14
Projects total	15
Group projects	4*
Online projects	0
Offline projects	9
Hybrid projects	6

1. **Company name is protected by NDA*

2. Integrant

3. Intelligent Ideas

4. Knowledge Genesis

5. Kosima

6. KosmoLab

7. Matrix Wave

8. Navigine
9. Plan-S Satellite and Space Technologies

10. Samsung

11. Sberbank

12. Tsuru Robotics

13. Space Technology and Services Centre

14. Yandex



Industrial Immersion Coordinator

Antonina Gromyko



Students Number



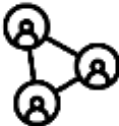









Group Project









Interdisciplinary Group Project

** Including 1 interdisciplinary project with IoTWT*

Space and Engineering Systems

<div>2/3* </div> <div>Company name is protected by a NDA</div> <div>Development of a UAV with a landing platform and testing in a physical simulator</div> <div>Developing methods for planning the group UAV flight for autonomous seismic exploration</div> <div><i>* Interdisciplinary with IoTWT</i></div> <div>Skoltech supervisor Dmitry Tsetserukou</div> <div> hybrid</div>	<div>2 </div> <div></div> <div>Research and development of algorithms and software components of driverless car control system</div> <div>Skoltech supervisor Dmitry Tsetserukou</div> <div> offline</div>	<div>1 </div> <div></div> <div>Enhancing personnel development platform in VR</div> <div>Skoltech supervisor Dmitry Tsetserukou</div> <div>offline</div>
<div>Sk resident </div> <div></div> <div>Improvement of digital models for fiber lenses to optimize the input of optical radiation from semiconductor lasers</div> <div>Skoltech supervisor Anton Ivanov</div> <div>hybrid</div>	<div>Sk resident </div> <div></div> <div>Development of the prototype for electromyograph</div> <div>Skoltech supervisor Mikhail Lebedev</div> <div>offline</div>	<div>Sk resident </div> <div></div> <div>Development of conceptual framework for cubesat deployer</div> <div>Skoltech supervisor Anton Ivanov</div> <div> hybrid</div>

Space and Engineering Systems

<div><div><div>Sk resident</div><div>1</div></div><div></div><div>Software defined W-band Satellite constellations</div><div><div>Skoltech supervisor</div><div>Anton Ivanov</div><div>hybrid</div></div></div>	<div><div><div>Sk resident</div><div>1</div></div><div> Navigine</div><div>Development of Automated robot navigation system in urban environments</div><div><div>Skoltech supervisor</div><div>Gonzalo Ferrer</div><div>offline</div></div></div>	<div><div><div></div><div>1</div></div><div></div><div>Connecta IoT Constellation</div><div><div>Skoltech supervisor</div><div>Anton Ivanov</div><div>offline</div></div></div>
<div><div><div></div><div>1</div></div><div></div><div>Study and Implementation of RGBD key point learning</div><div><div>Skoltech supervisor</div><div>Gonzalo Ferrer</div><div>hybrid</div></div></div>	<div><div><div></div><div>1</div></div><div></div><div>Trajectory planning system for a mobile sidewalk robot with wheel slippage</div><div><div>Skoltech supervisor</div><div>Lev Rapoport</div><div>offline</div></div></div>	<div><div><div>Sk resident</div><div>Skoltech startup</div><div>1</div></div><div></div><div>Python implementation of supplemental tools integrated into a Blender Add-on</div><div><div>Skoltech supervisor</div><div>Dmitry Tsetserukou</div><div>offline</div></div></div>

Space and Engineering Systems

<div><div><div>Tsuru Robotics</div><div>Sk resident</div><div>Skoltech startup</div></div><div>1 person icon</div></div>	<div><div><div>Space Technology and Services Centre</div><div>1 person icon</div></div><div>Development of algorithms for assessing tree amount based on laser scanning and aerial photography data</div><div>Skoltech supervisor Anton Ivanov</div><div>offline</div><div>hybrid</div></div>	<div><div><div></div><div>3 people icon</div></div><div>Development of computer vision for warehouse robot</div><div>Development of load gripper and movement system for mobile robot</div><div>Study of algorithms of warehouse robotic swarm</div><div>Skoltech supervisor Dmitry Tsetserukou</div><div>offline</div></div>
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Contacts



Zhanna Turubarova
Head of Industrial Studies

+7 (916) 288-37-88
z.turubarova@skoltech.ru



Victoria Brighton
Industrial Studies program Specialist

+7 (982) 928-14-90
v.aleshina@skoltech.ru

internships@skoltech.ru