

2021

**Internship program
of Skoltech
MSc Students
«Industrial Immersion»**

Skolkovo
Institute of Science
and Technology

Skoltech

project book

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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. Results obtained within the project belong to the host Company.

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** Accept results, assess report and approve project poster for Industry Day Conference.

Statistics

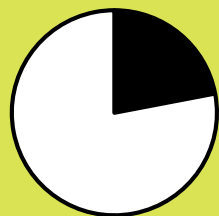
48 Companies —
Skolkovo residents

20 Companies —
Skoltech startups
inclusively

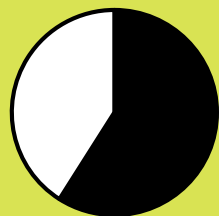
	Students	Companies	Projects	Team Projects	Format		
					online	offline	hybrid
Data Science	110	37	90	15	73	12	5
Information Science & Technology							
Advanced Manufacturing Technologies	16	13	14	1	6	5	3
Petroleum Engineering	21	11	18	2	9	9	0
Energy Systems	13	7	8	4	7	0	1
Materials Science	20	14	18	2	6	7	5
Photonics and Quantum Materials	21	13	17	4	3	13	1
Space and Engineering Systems	26	12	17	7	6	7	4
Life Sciences	39	19	36	3	12	4	20
Bcero	266	116	218	38	122	57	39

27%

LARGE COMPANIES



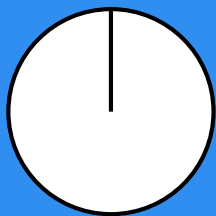
22%
STATE
78%
PRIVATE



59%
RUSSIAN
41%
INTERNATIONAL*

8%

MEDIUM-SIZED COMPANIES



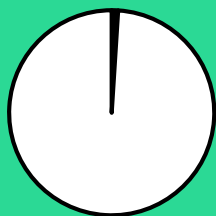
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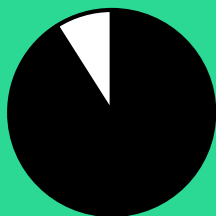
60%
RUSSIAN
40%
INTERNATIONAL*

64%

SMALL COMPANIES & MICRO-ENTITIES



1%
STATE
99%
PRIVATE



91%
RUSSIAN
9%
INTERNATIONAL*

* including Russian companies with foreign capital

Companies - program participants in 2021

- | | | | |
|--|-----------------------------|---|-------------------------------------|
| 1. Academy of Management. Russian Ministry of the Interior | 29. Generuim | 59. MRM Proteomics R | 89. Siberian Generating Company |
| 2. Adoptomedia | 30. Genetico | 60. Mehrafarid Sazeh Parsian Co. | 90. Sibur PolyLab |
| 3. Arrival Robotics | 31. Geonom | 61. Nanosemantics Lab | 91. Skolkovo Gymnasium |
| 4. Art.Lebedev | 32. Geonaft | 62. Native Robotics | 92. SMA |
| 5. Biomimetix | 33. GeoAlert | 63. Neurotrend | 93. Smart solutions |
| 6. BostonGene | 34. Haut.ai | 64. Nissan | 94. SOKO |
| 7. Boeing | 35. Head Kraken | 65. Novaprint 3D | 95. Spark Beyond |
| 8. Big Three | 36. Hevel | 66. New Spintronic Technologies | 96. Spektr - M |
| 9. Center for Testing, Certification, Standardization of Functional Materials and Technologies | 37. Huawei | 67. Numerical Engineering platform | 97. Stochastic Analysis Lab. HSE |
| 10. CityAir | 38. IBM | 68. O3-Coatings | 98. Syntelly |
| 11. CML | 39. IN3D | 69. Oz Forensics | 99. TekhnoScan |
| 12. Collins aerospace | 40. Intel | 70. OZNA | 100. Tensor Fields |
| 13. Core Technologies | 41. Insilico | 71. Pertamina Hulu | 101. Tesart |
| 14. Cryptochemistry | 42. InEnergy | 72. Piklema Predictive | 102. TetraQuant |
| 15. Dance School online | 43. IPG | 73. PNPPK | 103. Tevian |
| 16. Deco Geophysical | 44. Ira Labs | 74. PrimeBioMed | 104. Tion |
| 17. Dentistry center Vysshaya Shkola | 45. IT universe | 75. Ptt | 105. Tirphotonics |
| 18. Digital Petroleum | 46. K+ | 76. RamMics | 106. Topaz |
| 19. D-Orbit | 47. KAMAZ Innovation Center | 77. Rosneft - Bashneft Research Institute | 107. Tsuru Robotics |
| 20. DokaGene. Phytoengineering Research center | 48. Key to Energy | 78. Rosseti Belgorod | 108. Twin3D |
| 21. EVRAZ | 49. Kintech | 79. Russian Quantum Center | 109. Vector |
| 22. EvoCargo | 50. LabAdvance | 80. RT-Climate | 110. VisionLabs |
| 23. Farmadoc | 51. Lenta | 81. Rustor | 111. VNIIneft |
| 24. FitPlay | 52. LyghtJet | 82. Samsung | 112. VNIIA Dukhova. Rosatom |
| 25. Gazpromneft - Digital Solutions | 53. M&S decisions | 83. SberBank | 113. Vyksa metallurgical plant. OMK |
| 26. Gazprom VNIIGAZ | 54. Market Council | 84. SberHealth | 114. WareVision |
| 27. Gazpromneft NTC | 55. Milaboratory | 85. SberMarket | 115. Watts battery |
| 28. Gazpromneft – Technological Partnerships | 56. MMK - Informservice | 86. Scontel | 116. Yandex |
| | 57. Motorica | 87. Semantic Hub | |
| | 58. MolTech | 88. SIMETRA | |

Projects areas

Projects archives:

2020



2019



2018



2017



Data Science	machine Learning, Data Analytics, Artificial Intelligence, IoT
Information Science & Technology	
Advanced Manufacturing Technologies	cyber-physical systems, additive technologies, composite materials, Industrial robotics, thermal spray and functional coatings, mechanical testing
Space and Engineering Systems	systems Engineering (+MBSE), the Earth remote sensing image processing, small space devices, robotics, machine learning
Photonics and Quantum Materials	laser technologies, hybrid photonic/optoelectronic quantum devices, spectroscopy, nanomaterials
Energy Systems	smart grids, energy markets, power electronics; power systems modeling and optimization; energy storage and renewable energy; monitoring and control of power systems; microgrids
Petroleum Engineering	EOR, drilling geomechanics, mathematical modelling, unconventional and hard to recover hydrocarbons, geophysics, basin modelling, seismic modeling and interpretation, data-driven reservoir characterization, machine learning based resource allocation
Materials Science	materials for electrochemical energy storage
Life Sciences	bioinformatics, drug discovery, agro biotech, neurotechnologies, medical software

Data Science

Information Science & Technology

Students	110
Companies	37
Projects total	90
Team projects	15
Online projects	73
Offline projects	12
Hybrid projects	5

1. Academy of Management. Russian Ministry of the Interior

2. Adoptomedia

3. Art.Lebedev

4. Dance School online

5. EVRAZ

6. EvoCargo

7. FitPlay

8. Haut.ai

9. Head Kraken

10. Huawei

11. IN3D

12. Intel

13. Ira Labs
14. KAMAZ Innovation Center

15. Lenta

16. MMK-Informservice

17. Motorika

18. MRM Proteomics R

19. Nanosemantics Lab

20. Oz Forensics

21. Piklema Predictive

22. Samsung

23. SberBank

24. SberHealth

25. SberMarket

26. Siberian Generating Company

27. SIMETRA
28. SOKO

29. Spark Beyond

30. Stochastic Analysis Lab. HSE

31. Syntelly

32. Tensor Fields

33. Tesart

34. Tevian

35. Twin3D






36. VisionLabs

37. Yandex

Industrial Immersion Coordinator
Maria Pukalchik






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A-E

<div><div><div>Academy of Management. Russian Ministry of the Interior</div></div><div>Automatic analysis of publications in the media, determination of the sentiment of publications and their visualization</div><div><div>Skoltech supervisor</div><div>Maria Pukalchik</div></div><div>Hybrid</div></div>	<div><div><div>Sk resident</div></div><div>Development of an econometric model for evaluating the effectiveness of advertising investments</div><div><div>Skoltech supervisor</div><div>Pavel Osinenko</div></div><div>online</div></div>	<div><div></div><div>Generating images from a text description</div><div><div>Skoltech supervisor</div><div>Ivan Oseledets</div></div><div>offline</div></div>
<div><div><div>Dance School Online</div><div>Skoltech startup</div></div><div>Development of algorithms for a step-by-step dance training system based on neural networks</div><div><div>Skoltech supervisor</div><div>Andrey Somov</div></div><div>online</div></div>	<div><div></div><div>Development of an expert system for Coke Oven Battery No1.</div><div><div>Skoltech supervisor</div><div>Ivan Oseledets</div></div><div>Online</div></div>	<div><div></div><div>Development of a neural network model for determining the lane</div><div><div>Skoltech supervisor</div><div>Maxim Panov</div></div><div>online</div></div>







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E-H

<div><div></div><div>Development of a prototype of a system of following cars in a column</div><div><div>Skoltech supervisor</div><div>Maria Pukalchik</div></div><div>online</div><div>1 person</div></div>	<div><div>FitPlay</div><div>Development of AI methods for human pose estimation and physical activity identification in conditions of fitness centres</div><div><div>Skoltech supervisor</div><div>Maria Pukalchik</div></div><div>online</div><div>1 person</div></div>	<div><div><div></div><div>Sk resident</div></div><div>Development of an algorithm for detecting skin on various images of body areas</div><div><div>Skoltech supervisor</div><div>Dmitry Dylov</div></div><div>hybrid</div><div>2 people</div></div>
<div><div><div></div><div>Sk resident</div></div><div>Development of an algorithm for decomposition of skin images into interpretable components</div><div><div>Skoltech supervisor</div><div>Maria Pukalchik</div></div><div>online</div><div>2 people</div></div>	<div><div><div></div><div>Skoltech startup</div></div><div>AI-assistance for Epilepsy detection and segmentation</div><div><div>Skoltech supervisor</div><div>Maxim Panov</div></div><div>online</div><div>2 people</div></div>	<div><div><div></div><div>Skoltech startup</div></div><div>Analysis of psycho-emotional and physical conditions of eSports players</div><div><div>Skoltech supervisor</div><div>Andrey Somov</div></div><div>online</div><div>1 person</div></div>













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H

<div><div>HUAWEI</div></div> <div>1</div> <div><div>Development of a model for estimating the uncertainty of the position and orientation of pedestrians based on signals from inertial sensors</div></div> <div><div>Skoltech supervisor</div><div>Gonzalo Ferrer</div></div> <div>online</div>	<div><div>HUAWEI</div></div> <div>3</div> <div><div>Errors in wireless communication systems and their impact on spatial multiplexing in massive MIMO</div></div> <div><div>Skoltech supervisor</div><div>Maria Pukalchik</div></div> <div>hybrid</div>	<div><div>HUAWEI</div></div> <div>1</div> <div><div>Topological Data Analysis for NL</div></div> <div><div>Skoltech supervisor</div><div>Alexander Bernstein</div></div> <div>online</div>
<div><div>HUAWEI</div></div> <div>1</div> <div><div>High-fidelity portrait segmentation</div></div> <div><div>Skoltech supervisor</div><div>Vladimir Spokoiny</div></div> <div>online</div>	<div><div>HUAWEI</div></div> <div>2</div> <div><div>Development of high throughput parallel decoding algorithms for polar codes</div></div> <div><div>Skoltech supervisor</div><div>Alexey Frolov</div></div> <div>online</div>	<div><div>HUAWEI</div></div> <div>1</div> <div><div>Development of algorithms for simulation and improvement of the optical system based on Zernike polynomials</div></div> <div><div>Skoltech supervisor</div><div>Andrzej Cichocki</div></div> <div>offline</div>




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H-I

<div></div> <div>HUAWEI</div> <div>Analysis and construction of the 3D mesh segmentation network algorithm</div> <div><div>Skoltech supervisor</div><div>Evgeny Burnaev</div></div> <div>1 </div> <div>online</div>	<div></div> <div>HUAWEI</div> <div>Shelf estimation in soft decoding of spatially related codes like Staircase and oFEC</div> <div><div>Skoltech supervisor</div><div>Alexey Frolov</div></div> <div>1 </div> <div>online</div>	<div></div> <div>HUAWEI</div> <div>Adversarial attacks for machine translation problems</div> <div><div>Skoltech supervisor</div><div>Alexey Zaytsev</div></div> <div>1 </div> <div>offline</div>
<div></div> <div>Development of tissue simulation algorithms using neural networks</div> <div><div>Skoltech supervisor</div><div>Ivan Oseledets</div></div> <div>1 </div> <div>online</div>	<div></div> <div>Development of new tools and hybridization of GPU application in HPC</div> <div><div>Skoltech supervisor</div><div>Sergey Rykovanov</div></div> <div>1 </div> <div>online</div>	<div></div> <div>Skoltech startup</div> <div>Automatic body composition analysis using medical image segmentation</div> <div><div>Skoltech supervisor</div><div>Mikhail Belyaev</div></div> <div>2 </div> <div>online</div>

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I-M

<div><div></div><div>Skoltech startup</div><div>1 person</div></div> <div>Active learning in the problem of analyzing large samples of medical images</div> <div><div>Skoltech supervisor</div><div>Maxim Panov</div><div>online</div></div>	<div><div></div><div>Skoltech startup</div><div>2 people</div></div> <div>Development of a method for visualizing pathologies of great vessels based on automatic analysis of medical images</div> <div><div>Skoltech supervisor</div><div>Mikhail Belyaev</div><div>online</div></div>	<div><div></div><div>Sk resident</div><div>1 person</div></div> <div>Development of industrial computer vision methods for unmanned vehicles</div> <div><div>Skoltech supervisor</div><div>Maria Pukalchik</div><div>online</div></div>
<div><div></div><div></div><div>1 person</div></div> <div>Development of an analytical predictive model for predicting incoming traffic to retail stores and organizing the work of the checkout line without queues</div> <div><div>Skoltech supervisor</div><div>Pavel Osinenko</div><div>online</div></div>	<div><div></div><div></div><div>1 person</div></div> <div>Forecasting the prices of hot rolled coils on the basis of FOB Black Sea</div> <div><div>Skoltech supervisor</div><div>Andrzej Cichocki</div><div>online</div></div>	<div><div></div><div>Sk resident</div><div>1 person</div></div> <div>Monitoring of physiological parameters when controlling a bioelectric hand prosthesis</div> <div><div>Skoltech supervisor</div><div>Mikhail Lebedev</div><div>online</div></div>




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M-N

<div><div>MRM Proteomics R</div><div><div>Skoltech startup</div><div>2</div></div></div> <div><div>Blood biomarkers assessment by highly multiplexed proteomics mass spectrometry based quantitative tests for precision medicine</div><div>Skoltech supervisor Ivan Oseledets, Christoph Borchers</div><div>offline</div></div>	<div><div><div>Nanosemantics</div><div><div>Sk resident</div><div>1</div></div></div><div><div>Multilingual speech synthesis with preservation of natural language accent</div><div>Skoltech supervisor Ivan Oseledets</div><div>online</div></div></div>	<div><div><div>Nanosemantics</div><div><div>Sk resident</div><div>1</div></div></div><div><div>Development of a module for filtering an incoming audio stream containing human speech from background noises affecting the operation of keyword spotting models using deep learning</div><div>Skoltech supervisor Maxim Fedorov</div><div>online</div></div></div>
<div><div><div>Nanosemantics</div><div><div>Sk resident</div><div>3</div></div></div><div><div>Development of algorithms for identity verification by voice</div><div>Skoltech supervisor Nikolay Brilliantov, Ivan Oseledets, Sergey Rykovanov</div><div>online</div></div></div>	<div><div><div>Nanosemantics</div><div><div>Sk resident</div><div>1</div></div></div><div><div>Development of algorithms for determining gender, age and emotions by voice</div><div>Skoltech supervisor Alexey Vishnyakov</div><div>online</div></div></div>	<div><div><div>Nanosemantics</div><div><div>Sk resident</div><div>3</div></div></div><div><div>Development of algorithms for generating chatbot responses using neural networks</div><div>Skoltech supervisor Mikhail Belyaev, Alexey Frolov, Alexander Panchenko</div><div>online</div></div></div>

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O-S

<div></div> <div>1</div> <div>Development of an algorithm that makes it possible to increase the efficiency of biometric identification by using a variety of face images in the video sequence</div> <div>Skoltech supervisor Maria Pukalchik</div> <div>online</div>	<div><div>Sk resident</div></div> <div>1</div> <div>Digital driver advisor to optimize your driving style</div> <div>Skoltech supervisor Pavel Osinenko</div> <div>online</div>	<div><div>Sk resident</div></div> <div>2</div> <div>Development of decision support system to optimize driving style</div> <div>Skoltech supervisor Dmitry Yarotsky, Andrey Somov</div> <div>online</div>
<div>SAMSUNG</div> <div>2</div> <div>Improving sound quality with reduced bandwidth using deep generative models</div> <div>Skoltech supervisor Evgeny Burnaev, Maria Pukalchik</div> <div>online</div>	<div>SAMSUNG</div> <div>1</div> <div>Neural image-based rendering without test-time optimization</div> <div>Skoltech supervisor Maria Pukalchik</div> <div>online</div>	<div>SAMSUNG</div> <div>1</div> <div>High resolution video synthesis for single image reenactment</div> <div>Skoltech supervisor Victor Lempitsky</div> <div>online</div>

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S


<div><div>SAMSUNG</div><div>1</div><div>Improving quality and efficiency of diffusion denoising probabilistic models</div><div>Skoltech supervisor Vladimir Spokoiny</div><div>online</div></div>	<div><div>SAMSUNG</div><div>1</div><div>Integration of a full-body avatar generating model into an Android AR application</div><div>Skoltech supervisor Victor Lempitsky</div><div>online</div></div>	<div><div>SAMSUNG</div><div>1</div><div>Personalized portrait editing</div><div>Skoltech supervisor Victor Lempitsky</div><div>online</div></div>
<div><div>SAMSUNG</div><div>1</div><div>Development of a training method for the depth of completion of models on mixtures of datasets</div><div>Skoltech supervisor Victor Lempitsky</div><div>online</div></div>	<div><div>SAMSUNG</div><div>1</div><div>Camera pose confidence estimation for visual localization task</div><div>Skoltech supervisor Dmitry Dylov</div><div>online</div></div>	<div><div>SAMSUNG</div><div>1</div><div>Training Discrete Hidden Variable Models</div><div>Skoltech supervisor Vladimir Spokoiny</div><div>online</div></div>


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S

<div><div>SAMSUNG</div><div>1</div><div>Creation of photorealistic avatars using 3D neural network methods</div><div>Skoltech supervisor Dmitry Dylov</div><div>online</div></div>	<div><div>SAMSUNG</div><div>1</div><div>Development of interactive segmentation models</div><div>Skoltech supervisor Victor Lempitsky</div><div>online</div></div>	<div><div>SAMSUNG</div><div>1</div><div>StyleGAN distillation for feed-forward video synthesis</div><div>Skoltech supervisor Pavel Osinenko</div><div>online</div></div>
<div><div><div>SBER BANK</div></div><div>1</div><div>Uncertainty estimation for reliable and accountable medical diagnostics via Transformer-based text classification models</div><div>Skoltech supervisor Alexander Panchenko</div><div>online</div></div>	<div><div><div>SBER BANK</div></div><div>1</div><div>Aggregation of heterogeneous data in deep learning models</div><div>Skoltech supervisor Alexey Zaytsev</div><div>online</div></div>	<div><div><div>SBER BANK</div></div><div>1</div><div>Methods for extraction of communities in large networks based on clustering and link prediction</div><div>Skoltech supervisor Alexey Zaytsev</div><div>online</div></div>

Data Science. Information Science & Technology





1 

Vehicle motion prediction, data-driven approach

Skoltech supervisor
Gonzalo Ferrer

online



1 

Visual SLAM algorithm using semantic information in wheeled robots

Skoltech supervisor
Gonzalo Ferrer

online





1 

Data engineering for signals for legacy human computer interface

Skoltech supervisor
Maria Pukalchik

offline





1 

Modern approaches to assessing the sensitivity of demand based on uplift models and neural networks

Skoltech supervisor
Alexey Zaytsev

online





1 

Pedestrian motion prediction, data-driven approach

Skoltech supervisor
Gonzalo Ferrer

online



1 







Embeddings of categorical features for RNNs

Skoltech supervisor
Alexey Zaytsev

online


Data Science. Information Science & Technology







S

<div><div>SBER BANK</div><div>1 person icon</div></div> <div>Analysis of credit risk leading indicators based on transaction embeddings</div> <div><div>Skoltech supervisor</div><div>Alexey Zaytsev</div><div>online</div></div>	<div><div>СБЕР ЗДОРОВЬЕ SBER HEALTH</div><div>1 person icon</div></div> <div>Recognition of the voice command of the recording to the doctor in the audio files of the call center</div> <div><div>Skoltech supervisor</div><div>Andrey Somov</div><div>online</div></div>	<div><div>СБЕР MARKET SBER MARKET</div><div>1 person icon</div></div> <div>Development of methods for predicting customer churn</div> <div><div>Skoltech supervisor</div><div>Andrey Somov</div><div>online</div></div>
<div><div>СБЕР MARKET SBER MARKET</div><div>1 person icon</div></div> <div>Development of ML classification of customers by demographic features and purchase history</div> <div><div>Skoltech supervisor</div><div>Dmitry Yudin</div><div>offline</div></div>	<div><div>СБЕР MARKET SBER MARKET</div><div>1 person icon</div></div> <div>Forecasting the number of service orders</div> <div><div>Skoltech supervisor</div><div>Vladimir Spokoiny</div><div>online</div></div>	<div><div>SIMETRA ЗАДАВАТЬ КРАСОТУ ДВИЖЕНИЯ</div><div>1 person icon</div></div> <div>Enrichment of transport network graph data based on satellite images and / or DVR data (georeferenced video)</div> <div><div>Skoltech supervisor</div><div>Vladimir Palyulin</div><div>online</div></div>

Data Science. Information Science & Technology







S

<div><div><div><div>СИБИРСКАЯ ГЕНЕРИРУЮЩАЯ КОМПАНИЯ</div><div>Siberian Generating Company</div></div></div><div>1</div></div> <div>Development of a service for standardization of FIAS address records</div> <div><div>Skoltech supervisor</div><div>Maria Pukalchik</div><div>online</div></div>	<div><div><div>Skoltech</div><div>Skolkovo Institute of Science and Technology</div></div><div>1</div></div> <div>Data-driven parameters estimation for decentralized finance</div> <div><div>Skoltech supervisor</div><div>Maria Pukalchik</div><div>online</div></div>	<div><div><div>Skoltech</div><div>Skolkovo Institute of Science and Technology</div></div><div>1</div></div> <div>Using machine learning for design and investigation of a multi-layered absorbing material with tunable parameters for FDTD simulations</div> <div><div>Skoltech supervisor</div><div>Maria Pukalchik</div><div>online</div></div>
<div><div><div>Skoltech</div><div>Skolkovo Institute of Science and Technology</div></div><div>1</div></div> <div>Development of methods for assessing inhomogeneities</div> <div><div>Skoltech supervisor</div><div>Ivan Oseledets</div><div>online</div></div>	<div><div><div>Skoltech</div><div>Skolkovo Institute of Science and Technology</div></div><div>1</div></div> <div>Artistic molecular structure visualization</div> <div><div>Skoltech supervisor</div><div>Petr Popov</div><div>online</div></div>	<div><div><div>Skoltech</div><div>Skolkovo Institute of Science and Technology</div></div><div>1</div></div> <div>Artistic molecular structure visualization</div> <div><div>Skoltech supervisor</div><div>Maria Pukalchik</div><div>online</div></div>

<div></div> <div>3 people</div> <div>Development of AI system for detecting phenotypic stages of plant</div> <div>Skoltech supervisor Maria Pukalchik</div> <div>hybrid</div>	<div></div> <div>1 person</div> <div>Time Series and Sequence Pattern Analysis and Insights</div> <div>Skoltech supervisor Maria Pukalchik</div> <div>online</div>	<div></div> <div>Skoltech startup</div> <div>1 person</div> <div>Environment-based descriptor for molecules</div> <div>Skoltech supervisor Alexey Vishnyakov</div> <div>online</div>
<div></div> <div>Skoltech startup</div> <div>1 person</div> <div>Applying Mask-R-CNN and RetinaNet Deep Learning Models to Recognize and Predict Apple Decay</div> <div>Skoltech supervisor Alexey Frolov</div> <div>online</div>	<div></div> <div>Skoltech startup</div> <div>1 person</div> <div>Application of deep learning models to recognize individual signs of growth and development of apple trees</div> <div>Skoltech supervisor Andrey Somov</div> <div>online</div>	<div></div> <div>Skoltech startup</div> <div>1 person</div> <div>Assimilating remote sensing information into the crop simulation models</div> <div>Skoltech supervisor Ivan Oseledets</div> <div>online</div>








Data Science. Information Science & Technology

T

<div><div><div><div></div><div>1</div></div></div><div><div>Signal generation and processing for narrowband IoT systems</div><div>Skoltech supervisor Dmitry Lakontsev</div><div>offline</div></div></div>	<div><div><div><div></div><div>Sk resident</div><div>1</div></div></div><div><div>Development of algorithms for detecting fake documents by photo and video</div><div>Skoltech supervisor Alexey Zaytsev</div><div>offline</div></div></div>	<div><div><div><div></div><div>Sk resident</div><div>1</div></div></div><div><div>Development of algorithms for detecting different tables based on photo</div><div>Skoltech supervisor Evgeny Burnaev</div><div>offline</div></div></div>
<div><div><div><div></div><div>Skoltech startup</div><div>1</div></div></div><div><div>Few-shot photorealistic 3D face reconstruction</div><div>Skoltech supervisor Maria Pukalchik</div><div>online</div></div></div>	<div><div><div><div></div><div>Skoltech startup</div><div>1</div></div></div><div><div>Development of IoT PCB for shooting triggers of DSLR cameras</div><div>Skoltech supervisor Dmitry Yudin</div><div>online</div></div></div>	<div><div><div><div></div><div>Skoltech startup</div><div>1</div></div></div><div><div>Improving 3D human reconstruction with Novel view synthesis and super-resolution</div><div>Skoltech supervisor Alexey Zaytsev</div><div>online</div></div></div>

Data Science. Information Science & Technology

U-Z

<div><div></div><div><div>1 person</div><div>Variance reduction in Monte Carlo and Markov Chain Monte Carlo algorithms with applications</div><div><div>Skoltech supervisor</div><div>Vladimir Spokoiny</div><div>online</div></div></div></div>	<div><div><div>Sk resident</div></div><div><div>1 person</div><div>One shot liveness detection algorithm improvement on replay testset</div><div><div>Skoltech supervisor</div><div>Ivan Oseledets</div><div>online</div></div></div></div>	<div><div></div><div><div>1 person</div><div>Depth Inpainting: Dynamic Objects' Point Cloud Registration</div><div><div>Skoltech supervisor</div><div>Maxim Panov</div><div>offline</div></div></div></div>
<div><div></div><div><div>1 person</div><div>Development of methods and approaches to segmentation of the lidar cloud and lidar points</div><div><div>Skoltech supervisor</div><div>Ferrer Gonzalo</div><div>offline</div></div></div></div>	<div><div></div><div><div>1 person</div><div>Computer vision to automate the production of HD maps for a drone</div><div><div>Skoltech supervisor</div><div>Dmitry Dylov</div><div>hybrid</div></div></div></div>	<div><div></div><div><div>1 person</div><div>Development of conversion and semantic search methods</div><div><div>Skoltech supervisor</div><div>Maria Pukalchik</div><div>offline</div></div></div></div>

Advanced Manufacturing Technologies





Students	16
Companies	13
Projects total	14
Team projects	1
Online projects	6
Offline projects	5
Hybrid projects	3

- | | | |
|--|---------------------------------------|--|
| 1. Arrival Robotics | 5. CML | 11. Rosneft - Bashneft
Research Institute |
| 2. Boeing | 6. Collins Aerospace | 12. Sibur PolyLab |
| 3. BIG Three | 7. Gazpromneft - Digital
Solutions | 13. Vyksa metallurgical plant.
OMK |
| 4. Center for Testing,
Certification,
Standardization of
Functional Materials and
Technologies | 8. IPG | |
| | 9. Numerical Engineering
platform | |
| | 10. O3-Coatings | |

Industrial Immersion Coordinator
Dmitry Krasovsky

Advanced Manufacturing Technologies

A-F

<div><div><div>AGFIVAL</div></div></div> <div>Development of an automated system for selecting the manipulator grip applicable to a particular part</div> <div><div>Skoltech supervisor</div><div>Ighor Uzhinsky</div><div>online</div></div>	<div><div><div></div></div></div> <div>Machine Learning for Flat Plate Buckling Prediction</div> <div><div>Skoltech supervisor</div><div>Sergey Abaimov</div><div>offline</div></div>	<div><div><div><div><div>Б</div><div>БОЛЬШАЯ ТРОЙКА</div></div><div>BIG Three</div></div><div>Sk resident</div></div></div> <div>Analysis of garbage container occupancy data for the creation of electronic services in the field of solid waste management</div> <div><div>Skoltech supervisor</div><div>Ighor Uzhinsky</div><div>offline</div></div>
<div><div><div><div></div><div>Center for Testing, Certification, Standardization of Functional Materials and Technologies</div></div></div><div>Analysis of thermoplastic pultrusion composites</div><div><div>Skoltech supervisor</div><div>Alexander Safonov</div><div>offline</div></div></div>	<div><div><div><div></div></div></div><div>FE analysis of dynamic processes (NVH, strength) in an electric truck chassis parts</div><div><div>Skoltech supervisor</div><div>Ighor Uzhinsky</div><div>online</div></div></div>	<div><div><div><div></div></div></div><div>Optimization of the machining process for the obtained geometric features</div><div><div>Skoltech supervisor</div><div>Sergey Abaimov</div><div>hybrid</div></div></div>

Advanced Manufacturing Technologies

G-R



ЦИФРОВЫЕ
РЕШЕНИЯ

Gazpromneft
Digital Solutions

1 

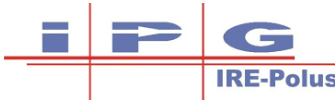
Evaluation of the prospects for the practical application of 3D printing of ceramic products in the framework of the programs for the development of new materials of Gazpromneft

Skoltech supervisor

Igor Shishkovsky

hybrid

18




Laser treatment of coatings obtained by Cold Gas-Dynamic Sputtering

Skoltech supervisor
Dmitriy Dzhurinskiy

offline

Numerical
Engineering
Platform

Sk resident

1 

Numerical calculation of detonation in a channel
with obstacles


Skoltech supervisor

Aslan Kasimov

offline

Numerical
Engineering
Platform

Sk resident


1 

Analysis of one model of hyperbolic systems on the basis of dynamic mode decomposition


Skoltech supervisor

Aslan Kasimov

online

 O3-Coatings

Sk resident

1 

Study of electrochemical properties of protective coating materials, including analysis of industry standards API-571, NACE MR0175

Skoltech supervisor

Dmitriy Dzhurinskiy

online

РН-БашНИПИнефть



РОСНЕФТЬ

ROSNEFT

Bashneft Research

Institute

1 

Machine learning algorithm for automatic determination of the number of modes for studies at steady-state production / injection modes

Skoltech supervisor

Sergey Abaimov

online

Advanced Manufacturing Technologies

S-Z



Sk resident

1

SIBUR PolyLAB

Designing injection molds for recycled materials

Skoltech supervisor
Igor Shishkovsky

hybrid



ОМК ВЬКСУНСКИЙ
МЕТАЛЛУРГИЧЕСКИЙ
ЗАВОД

1

OMK - metallurgical plant Vyksa

Development of an algorithm for detecting
microstructure boundaries

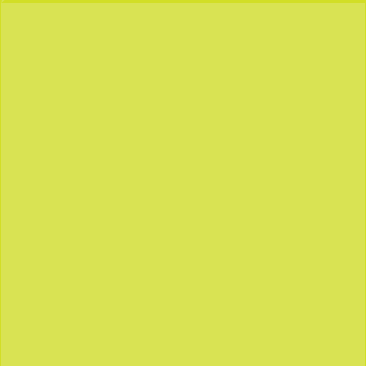
Skoltech supervisor
Ighor Uzhinsky

online

Petroleum Engineering

Students	21
Companies	11
Projects total	18
Team projects	2
Online projects	9
Offline projects	9

- | | | |
|----------------------|---|-----------------------------|
| 1. Deco Geophysical | 5. Gazpromneft – Technological Partnerships | 8. OZNA |
| 2. Digital Petroleum | | 9. Pertamina Hulu Indonesia |
| 3. Gazprom VNIIGAZ | | 10. SMA |
| 4. Gazpromneft NTC | 6. Geonaft | 11. VNIIneft |
| | 7. LabAdvance | |



Industrial Immersion Coordinator
Natalia Kiani



1 person icon

Development of geological models building techniques based on seismoacoustic survey data

Skoltech supervisor
Dmitry Pissarenko

online



Skoltech startup

1 person icon

Hydrocarbon reserves mapping based on material balance models of reservoir

Skoltech supervisor
Dmitry Koroteev

online



Skoltech startup

2 person icon

Petrophysical property estimation in target well with help of Kriging and data from neighboring wells.

Skoltech supervisor
Dmitry Koroteev, Alexey Tchistiakov

online



1 person icon

Development of a numerical model of hydrate deposition in wells producing gas from low-temperature fields

Skoltech supervisor
Vladimir Istomin

online



3 person icon

Analysis of the applicability of the VOI methodology for assessing the conduct of well logging and laboratory studies of the core

Skoltech supervisor
Dmitry Koroteev, Mikhail Spasennykh, Yuri Popov

online



1 person icon


Mathematical modeling of multiphase flow in the process of cleaning of a hydraulic fracture and bringing the well into operation


Skoltech supervisor
Andrey Osiptsov

offline

Petroleum Engineering

G-K




1 


EOR agent selection based on 3D digital core model

Skoltech supervisor

Alexey Cheremisin

online




1 


Spectral decomposition of the wave field

Skoltech supervisor

Sergey Stanchits

offline




1 


Identifying anomalies in time series based on parameterizing a nonlinear manifold

Skoltech supervisor

Dmitry Koroteev

offline



1 

Interpretability of geological relationships within fluid flow simulation of semi-synthetic field case

Skoltech supervisor

Alexey Cheremisin

offline




1 

Rheological properties of alternative fracturing fluids


Skoltech supervisor

Andrey Osiptsov

online



Sk resident

1 

Application of the results of 3D geomechanical modeling of the reservoir for solving practical problems in the well construction and in the field operation

Skoltech supervisor

Alexey Tchistiakov

offline



LABADVANCE
Petroleum Service Provider

Skoltech startup

1 person icon

Experimental studies using microfluidic technology

Skoltech supervisor

Alexey Cheremisin

offline



1 person icon

Production testing of the wells with Mobile test separator “Massomer” located on truck

Skoltech supervisor

Andrey Osiptsov

offline




1 person icon

Carbonate Reservoir Characterization in the Bekapai Field, Mahakam Delta, Kutai Basin, Indonesia

Skoltech supervisor

Alexey Tchistiakov

offline



1 person icon

Sample preparation of geological samples for microtomography and electron microscopy

Skoltech supervisor

Alexey Cheremisin

offline




1 person icon

Study of the relationship between leaching zones and sequence-stratigraphic surfaces in carbonate reservoirs

Skoltech supervisor

Alexey Tchistiakov

online



1 person icon

Influence of sequence-stratigraphic boundaries on the distribution of zones of diagenetic cementation in carbonate reservoirs

Skoltech supervisor

Alexey Tchistiakov

online

Energy Systems

Students	13
Companies	7
Projects total	8
Team projects	4
Online projects	7
Hybrid projects	1

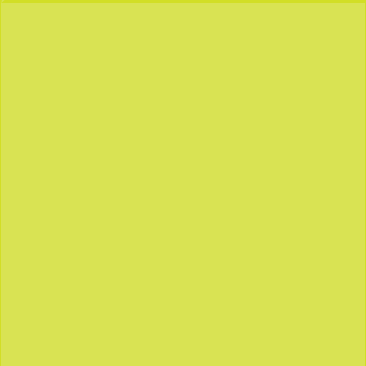
1. Key to Energy

2. Market Council

3. Mehrafarid Sazeh Parsian
4. Rosseti Belgorod

5. Tion

6. Topaz
7. Watts battery



Industrial Immersion Coordinator
Ekaterina Guseva




1 person

Optimization of the Power To Gas Model in the Long-Term Scenario for the Russian / Italian Energy Market

Skoltech supervisor

David Pozo

online



1 person

Integration of 100 number of 5 KW PV sites into the national power grid through PowerFactory software

Skoltech supervisor

Petr Vorobev

online




2 people

Development of a high-quality measurement system for energy storage devices

Skoltech supervisor

Petr Vorobev

online




2 people

Development of the principle (algorithm) for the formation of a multi-zone maintenance rate as part of the tariff for services for the transmission of electricity through the networks of territorial grid organizations

Skoltech supervisor

David Pozo

online



1 person

Development of an algorithm (methodology) for generating a price signal for a power transmission service (rate for maintenance and technological consumption - power losses) for a consumer or a group of consumers, depending on the flow of electricity in the supply network infrastructure

Skoltech supervisor

David Pozo

online






2 people

Development of an integrated environment for creating "digital twins" and modeling the indoor climate

Skoltech supervisor

Henni Ouerdane

online



Sk resident


1

Optimizing New Methods for Efficient Electrochemical Energy Storage

Skoltech supervisor

Henni Ouerdane

online



Sk resident

3

Design and implementation of a modular system for MPPT solar panel controllers

Skoltech supervisor

Federico Ibanez

hybrid

Materials Science

Students	20
Companies	14
Projects total	18
Team projects	2
Online projects	6
Offline projects	7
Hybrid projects	5

1. Biomimetix

2. CityAir

3. Core Technologies

4. Cryptochemistry

5. Hevel
6. InEnergy

7. K+

8. Kintech

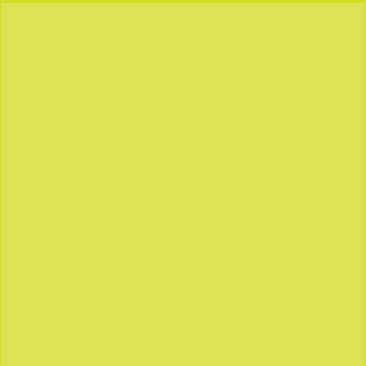
9. Nissan

10. Novaprint 3D
11. Ptt


12. Rustor

13. TetraQuant

14. Vector



Industrial Immersion Coordinator
Ekaterina Guseva

 **BIOMIMETIX**
Materials. Naturally

Study of the features of self-healing processes in hydrogels based on polyvinyl alcohol

Skoltech supervisor
Alexey Salimon


1 person icon hybrid

 **Sk resident**

Development of sensor systems for selective monitoring of gas environments

Skoltech supervisor
Fedor Fedorov

1 person icon offline

 **Skoltech startup**

Automation the elastic tensor calculations combined with Machine learning interatomic potentials with Active learning

Skoltech supervisor
Artem Oganov

1 person icon online

 **Skoltech startup**

Replication of Crystal GAN for superconducting hydrides

Skoltech supervisor
Artem Oganov


1 person icon online

 **1 person icon**

Fabrication and characterization of perovskite/silicon tandem solar cells

Skoltech supervisor
Aleksandra Boldyreva

offline

 **1 person icon**

Development of a method for assessing the degree of charge of a vanadium flow battery

Skoltech supervisor
Victoria Nikitina

offline



Skoltech startup2

Energy Technology for Better Life

Fabrication of electrodes based on hard carbon and their characterization by Raman spectroscopy. Synthesis of high-voltage cathode material KVPO4F and characterization of its electrochemical properties

Skoltech supervisor
Sergey Ryazantsev, Stanislav Fedotov hybrid



1

Calculation of defect properties in metal oxides


Skoltech supervisor
Sergey Levchenko hybrid

Cryptochemistry

Skoltech startup1

Fine-tuning of the reagent injection system in the coding particle production reactor


Skoltech supervisor
Dmitry Krasnikov offline



1

Finding ways to improve low-temperature lithium-ion batteries for use in electric cars

Skoltech supervisor
Stanislav Fedotov online



1

Analysis of promising thermoelectric materials for efficient conversion of thermal energy using the magnetocaloric effect


Skoltech supervisor
Andriy Zhugayevych online




Skoltech startup1

Critical analysis of the development of elastomers and new devices based on them

Skoltech supervisor
Dmitry Krasnikov online



Petroleum Authority of Thailand


1 

Multiwall carbon nanotubes – a novel material for applications


Skoltech supervisor

Dmitry Krasnikov

offline



Skoltech startup


2 

Development of a method for obtaining gas-tight membranes based on LLZO as an electrolyte in solid-state lithium-ion batteries. Computer simulation of charge transfer via the Li / Li interface


Skoltech supervisor

Alexandra Savina, Dmitry Aksenov

hybrid



Skoltech startup

1 

Development of a hydrothermal method for the synthesis of cathode materials based on layered transition metal oxides

Skoltech supervisor

Alexandra Savina

hybrid



Skoltech startup


1 

Review of Lithium Conducting Solid State Electrolytes: Approaches for Thin, Hybrid and Safe Materials


Skoltech supervisor

Mariam Pogosova

online



Skoltech startup


1 

Development of the methods for Au nanoparticle production in the reactor CR-1B


Skoltech supervisor

Dmitry Gorin

offline



State Research Center of Virology and Biotechnology VECTOR

1 

Cortisol biosensor based on semiconductor carbon nanotubes

Skoltech supervisor

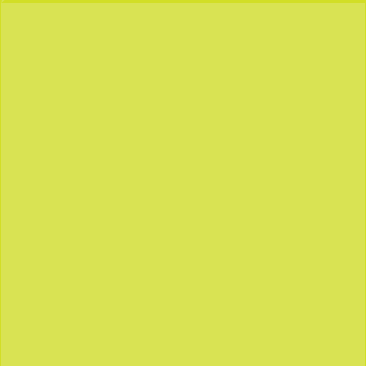
Fedor Fedorov

offline

Photonics and Quantum Materials

Students	21
Companies	13
Projects total	17
Team projects	4
Online projects	3
Offline projects	13
Hybrid projects	1

- | | | |
|-------------------------------------|----------------|----------------------------|
| 1. Cryptochemistry | 6. PNPPK | 12. Tifotonics |
| 2. Dentistry center Vysshaya Shkola | 7. RamMics | 13. VNIIA Dukhova. Rosatom |
| 3. IBM | 8. RQC | |
| 4. Novaprint 3D | 9. Scontel | |
| 5. New Spintronic Technologies | 10. Spektr-M | |
| | 11. TekhnoScan | |









Industrial Immersion Coordinator
Dmitry Krasnikov

Photonics and Quantum Materials


A-P

<div><div><div><div><div></div><div>центр стоматологии</div><div>ВЫСШАЯ ШКОЛА</div></div></div><div>Dentistry center</div><div>Vyssaya Shkola</div></div><div>1</div><div>Development of methods for mathematical processing of medical images with the calculation of physical and mechanical characteristics of biological tissues</div><div><div>Skoltech supervisor</div><div>Sergey Rykovanov</div></div><div>online</div></div>	<div><div><div><div></div><div>IBM</div></div></div><div>Switching time and bandwidth of organic polariton gates</div><div><div>Skoltech supervisor</div><div>Pavlos Lagoudakis</div></div><div>online</div></div> <div>1</div>	<div><div><div><div></div><div>Skoltech startup</div></div></div><div>Cryptochemistry</div><div>Segmentation and analysis of the coding devices and nanomaterials market</div><div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div></div><div>online</div></div> <div>1</div>
<div><div><div><div></div><div>NovaPrint 3D</div></div></div><div>Skoltech startup</div><div>1</div><div>Verification of the protocol for assessing the smell of food polymers</div><div><div>Skoltech supervisor</div><div>Fedor Fedorov</div></div><div>offline</div></div>	<div><div><div><div></div><div>HCT</div><div>New Spintronic Technologies</div></div></div><div>Sk resident</div><div>1</div><div>Computer simulation of a magnetic logic element at the position of the domain boundary</div><div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div></div><div>offline</div></div>	<div><div><div><div></div><div>PNPPK</div><div>PERM SCIENTIFIC-INDUSTRIAL INSTRUMENT MAKING COMPANY</div></div></div><div>Optimization of the radiating semiconductor structure of the near-infrared range</div><div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div></div><div>hybrid</div></div> <div>1</div>

<div><div></div><div><div>Sk resident</div><div>2</div><div></div></div></div> <div><p>Development of an analytical database of Raman spectra of gases and gas mixtures. Creating a software package for working with a medical spectrometer</p></div> <div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div><div>offline</div></div>	<div><div></div><div><div>Sk resident</div><div>2</div><div></div></div></div> <div><p>Development of methods for creating optical sensors for determining trace amounts of molecules. Optimization of the morphology of metal nanostructures on the dielectric surface in order to create highly sensitive optical sensors for detecting biological molecules</p></div> <div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div><div>offline</div></div>	<div><div></div><div><div>Sk resident</div><div>1</div><div></div></div></div> <div><p>Optimization of the sensitivity of sub-THz frequency range detectors</p></div> <div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div><div>offline</div></div>
<div><div></div><div><div></div><div>1</div><div></div></div></div> <div><p>Study of the interaction of exciton-polariton condensates using optically-induced potentials</p></div> <div><div>Skoltech supervisor</div><div>Pavlos Lagoudakis</div><div>offline</div></div>	<div><div></div><div><div></div><div>1</div><div></div></div></div> <div><p>Study and design of an ultra-fast optical classifier based on spinor polariton lattice as an associative network</p></div> <div><div>Skoltech supervisor</div><div>Mael Brossard</div><div>offline</div></div>	<div><div></div><div><div></div><div>1</div><div></div></div></div> <div><p>Measurement of internal relaxation time in ultrathin NbN films</p></div> <div><div>Skoltech supervisor</div><div>Dmitry Krasnikov</div><div>offline</div></div>

Photonics and Quantum Materials

S-Z




1

Development of an analytical database of Raman spectra of gases and gas mixtures

Skoltech supervisor
Dmitry Krasnikov

offline




Sk resident

1

Development of elements of femtosecond fiber lasers elements

Skoltech supervisor
Yuriy Gladush

offline




Sk resident

2

Development of ultrafast graphene-based photodetectors

Skoltech supervisor
Dmitry Krasnikov

offline




Sk resident

1

Investigation of thermooptic properties of photonic integrated devices made of silicon nitride

Skoltech supervisor
Dmitry Krasnikov

offline



2

Development of a measuring complex for quantum electronics elements in ultra-low temperatures

Skoltech supervisor
Dmitry Krasnikov

offline

Space and Engineering Systems

Students	26
Companies	12
Projects total	17
Team projects	7
Online projects	6
Offline projects	7
Hybrid projects	4

1. Art.Lebedev

2. Boing

3. D-Orbit

4. EvoCargo

5. GeoAlert
6. LyghtJet

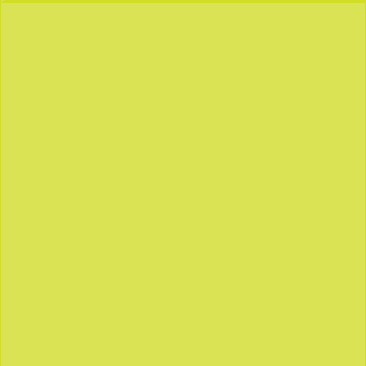
7. Native Robotics

8. Smart Solutions

9. RT-Climate

10. SOKO
11. Tsuru Robotics

12. WareVision



Industrial Immersion Coordinator
Anastasia Ilina







Space and Engineering Systems

A-L

<div><div>ART. LEBEDEV</div><div>1</div></div> <div><div>Creation of algorithms for generating images from a text description</div><div>Skoltech supervisor Evgeny Burnaev</div><div>offline</div></div>	<div><div><div>BOEING</div><div>1</div></div><div><div>3D Variation Analysis auto-report project</div><div>Skoltech supervisor Tatiana Podladchikova</div><div>offline</div></div></div>	<div><div><div><div></div><div>D-ORBIT</div></div><div>2</div></div><div><div>System architecture study of on-orbit servicing (OOS) Infrastructure. Satellite constellations for internet of things connectivity for Earth observation</div><div>Skoltech supervisor Alessandro Golkar</div><div>online</div></div></div>
<div><div><div>EVOCARGO</div><div>1</div></div><div><div>Development of algorithms for controlling the angular position of the platform of an unmanned vehicle with air suspension</div><div>Skoltech supervisor Dzmitry Tsetserukou</div><div>offline</div></div></div>	<div><div><div><div>GEOALERT</div><div>Skoltech startup</div><div>1</div></div><div><div>Conducting numerical experiments to develop new deep machine learning models</div><div>Skoltech supervisor Vladimir Ignatiev</div><div>offline</div></div></div></div>	<div><div><div>Lyght Jet</div><div>1</div></div><div><div>Designing Vtol aircraft (vertical take-off and landing) powered by fuel cell</div><div>Skoltech supervisor Anton Ivanov</div><div>hybrid</div></div></div>






Space and Engineering Systems

M-S

<div><div></div><div>2</div></div> <div><div>Development of a computer vision system for determining the pose of parts</div><div><div>Skoltech supervisor</div><div>Dzmitry Tsetserukou</div></div><div>offline</div></div>	<div><div></div><div>1</div></div> <div><div>CubeSat Attitude and Orbit Control Flight Software Verification and Validation</div><div><div>Skoltech supervisor</div><div>Anton Ivanov</div></div><div>hybrid</div></div>	<div><div></div><div>3</div></div> <div><div>Design of intelligent control systems and technologies for constellations of small spacecraft (SSC)</div><div><div>Skoltech supervisor</div><div>Anton Ivanov</div></div><div>online</div></div>
<div><div></div><div>1</div></div> <div><div>The use of a 3D-printed heat exchanger for space purposes in thermal installations for general economic purposes</div><div><div>Skoltech supervisor</div><div>Nikolay Mullin</div></div><div>online</div></div>	<div><div></div><div>1</div></div> <div><div>Development of an algorithm for predicting high-speed solar wind fluxes and geomagnetic activity based on coronal holes in the Sun</div><div><div>Skoltech supervisor</div><div>Tatiana Podladchikova</div></div><div>online</div></div>	<div><div></div><div>2</div></div> <div><div>Development of Integrated Robotic Systems and Machine Learning Approaches for Agricultural Purposes</div><div><div>Skoltech supervisor</div><div>Anton Ivanov</div></div><div>hybrid</div></div>

Space and Engineering Systems

Q-Z

<div><div><div>Tsuru Robotics</div></div><div>Skoltech startup</div><div>2</div></div> <div>Development of a system for generating and conducting light shows of drones</div> <div><div>Skoltech supervisor</div><div>Dzmitry Tsetserukou</div><div>online</div></div>	<div><div><div>WAREVISION</div></div><div>Skoltech startup</div><div>1</div></div> <div>Development and testing of a control system for a group of UAVs aimed at exploration purposes</div> <div><div>Skoltech supervisor</div><div>Dzmitry Tsetserukou</div><div>hybrid</div></div>	<div><div><div>WAREVISION</div></div><div>Skoltech startup</div><div>3</div></div> <div>Creation of the SLAM algorithm for a delivery robot for work in street and city conditions</div> <div><div>Skoltech supervisor</div><div>Dzmitry Tsetserukou</div><div>offline</div></div>
<div><div><div>WAREVISION</div></div><div>Skoltech startup</div><div>2</div></div> <div>Development of a prototype of a robot for the delivery of small-sized cargo</div> <div><div>Skoltech supervisor</div><div>Dzmitry Tsetserukou</div><div>offline</div></div>	<div><div><div>WAREVISION</div></div><div>Skoltech startup</div><div>1</div></div> <div>Development of the two-wheeled mobile platform for plant disease detection. Specific tasks: development of localization and navigation algorithms for autonomous work indoor and outdoor</div> <div><div>Skoltech supervisor</div><div>Dzmitry Tsetserukou</div><div>online</div></div>	

Life Sciences

Students	39
Companies	19
Projects total	36
Team projects	3
Online projects	12
Offline projects	4
Hybrid projects	20

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|------------------|-------------------|------------------------|
| 1. BostonGene | 6. Geonome | 13. MRM Proteomics R |
| 2. DokaGene. | 7. Insilico | 14. Neurotrend |
| Phytoengineering | 8. IRA labs | 15. PrimeBioMed |
| Research center | 9. IT universe | 16. Skolkovo Gymnasium |
| 3. Farmadoc | 10. M&S decisions | 17. Semantic Hub |
| 4. Generuim | 11. Milaboratory | 18. SOKO |
| 5. Genetico | 12. MolTech | 19. Syntelly |

Industrial Immersion Coordinator
Vera Rybko

BostonGene

1

Annotation of T and B cell biomarker data.
Creating a database of annotated biomarkers

Skoltech supervisor

Vera Rybko

hybrid

BostonGene

1

Clinical and molecule analytics of imaging projects

Skoltech supervisor

Vera Rybko

hybrid

BostonGene

1

Identification and validation of expression signatures associated with the tumor microenvironment

Skoltech supervisor

Vera Rybko

hybrid

BostonGene

1

Ranking of anticancer therapies based on predictive biomarkers

Skoltech supervisor

Vera Rybko

hybrid

BostonGene

1

Development of methods for analysis of B cell repertoire

Skoltech supervisor

Vera Rybko

hybrid

BostonGene

1

Compositional analysis of tumor microenvironment

Skoltech supervisor

Vera Rybko

hybrid

Farmadoc

1 person

Allergen immunotherapy competitive landscape analysis

Skoltech supervisor

Vera Rybko

online

Farmadoc


1 person

Heterologous expression of recombinant protein slpA in L.rhamnosus

Skoltech supervisor

Vera Rybko

hybrid




2 people

Development of PCR-based test systems for differential diagnosis of phytopathogenic bacteria Pectobacterium and Dickeya. PCR-based test systems development for phytopathogenic viruses differentiatinal diagnostics

Skoltech supervisor

Vera Rybko

online




1 person

Optimization of the technology of pseudo-suspension cultivation of human mesenchymal stromal cells using microcarriers

Skoltech supervisor

Vera Rybko

offline




2 people

Expression and purification of adeno-associated viral particles from HEK293 cell line

Skoltech supervisor

Vera Rybko

offline



Sk resident


1 person

Review of bioinformatic approaches for somatic variants calling of NGS data on tumor samples

Skoltech supervisor

Vera Rybko

online



Sk resident

2

Review of bioinformatic tools for analysis and interpretation of mitochondrial DNA variants using WGS data

Skoltech supervisor

Vera Rybko

online

Geonome

Skoltech startup

1

Estimating the parameters of oil well from its microbiom

Skoltech supervisor

Vera Rybko

hybrid

Geonome

Skoltech startup

1

Development of technical and scientific research documentation for microbiome products in the extractive industry

Skoltech supervisor

Vera Rybko

online

Geonome

Skoltech startup


1

Developing bioinformatic pipeline in oil metagenome analysis

Skoltech supervisor

Vera Rybko

online



Insilico Medicine

Sk resident


1

Development of the probabilistic models for differential gene expression

Skoltech supervisor

Vera Rybko

hybrid



IRA LABS

Skoltech startup

1

Development of a strategy aimed at improvement of IRA Labs valuation

Skoltech supervisor

Vera Rybko

online




1 

Development of a clinical system for olfactory neurorehabilitation


Skoltech supervisor

Vera Rybko

offline



Sk resident


1 

Investigation of different parametric time-to-event models for PFS and OS assessment in cancer


Skoltech supervisor

Vera Rybko

hybrid



Sk resident


1 

Industrialization: validation and benchmarking of the M&SD ODE solver in R system


Skoltech supervisor

Vera Rybko

hybrid



Sk resident


2 

Development of an additional education program in biology and bioinformatics for secondary education students of natural sciences track


Skoltech supervisor

Vera Rybko

hybrid



Skoltech startup

1 

Comparative analysis of vaccination technologies against tumor-associated antigens and tumor neoantigens

Skoltech supervisor

Vera Rybko

hybrid



Skoltech startup


1 

Comparing algorithms for building and analysis of immunoglobulin trees

Skoltech supervisor

Vera Rybko

hybrid



Skoltech startup


1

Investigation of vaccine X properties

Skoltech supervisor

Vera Rybko

hybrid



Skoltech startup


1

Development of efficient algorithms for working with data in the BAM format for the analysis of TCR and BCR repertoire sequencing data

Skoltech supervisor

Vera Rybko

hybrid



Skresident


1

Application of neural networks for prediction of drug structure

Skoltech supervisor

Vera Rybko

online



Skresident

1

Implementing a graph convolutional neural network (GCNN) for predicting affinity of a protein-ligand interaction

Skoltech supervisor

Vera Rybko

online

MRM Proteomics R

Skoltech startup

1

Compilation and visualization of the protein-disease associative graph

Skoltech supervisor

Vera Rybko

hybrid

MRM Proteomics R

Skoltech startup

1

Analysis of Potential Protein Biomarkers for Cardiovascular Diseases

Skoltech supervisor

Vera Rybko

hybrid

MRM Proteomics R

Skoltech startup

1 person

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

Skoltech supervisor

Vera Rybko

offline

NEUROTREND
НЕЙРОТРЕНД

Sk resident

1 person

Applying of electroencephalography in neuromarketing research

Skoltech supervisor

Vera Rybko

hybrid

PrimeBioMed

Наука. Диагностика. Здоровье.

Sk resident

1 person

Tumor marker PMS2 antibody for immunohistochemistry development plan

Skoltech supervisor

Vera Rybko

online

Semantic Hub

1 person

Analysis of oncology patients' needs in the countries of Latin America as a basis for training AI-platform

Skoltech supervisor

Vera Rybko

online

SOKO

1 person

Search for SNPs linked with valuable features of soy bean (Glycine max)

Skoltech supervisor

Vera Rybko

online

SYNTELLY

BETTER THAN CHEMISTS CAN DO

Skoltech startup

1 person

Molecular structure reconstruction from atomic densities

Skoltech supervisor

Vera Rybko

hybrid

Contacts



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