

Skoltech Doctoral Programs

Student Orientation

26 October 2017

What is in the very end ?

PhD Thesis Defense

<http://www.skoltech.ru/en/education/phd-defenses/>

The screenshot shows the Skoltech website's navigation menu and the main content area for PhD Thesis Defenses. The navigation menu includes: ABOUT, ADMISSIONS, EDUCATION (highlighted), RESEARCH, INNOVATION, FACULTY, INDUSTRY, STUDENT LIFE, and COLLOQUIA. The left sidebar lists: About Skoltech Education, Schedule, Academic Calendar, MSc Programs, PhD Studies (with sub-items: PhD Programs and PhD Thesis Defenses), Energy PhD seminar, Course Catalog, Resources, and Contacts. The main content area features a breadcrumb trail: Home > Education > PhD Thesis Defenses. The title is 'PhD Thesis Defenses' and the year is '2017'. There are four entries:

- September 21: Ignasi Lluçh I Cruz**
Thesis Title: A Framework for Architecting Federations of Engineering Systems
Supervisor: Professor Alessandro Golkar
PhD Program: Engineering Systems
- October 16: Sergey Shmakov**
Thesis title: Computational approaches for discovery of novel CRISPR-Cas systems
Supervisor: Professor Konstantin Severinov
PhD program: Life Sciences
- October 17: Olga Musharova**
Thesis title: Investigation of DNA-binding specificity of Cas1-Cas2 CRISPR adaptation complex in *Escherichia coli*
Supervisor: Professor Konstantin Severinov
PhD program: Life Sciences
- October 24: Aleksandra Strotskaya**
Thesis title: Effects of targeting by *Escherichia coli* I-E CRISPR-Cas system on infection by different phages

Skoltech

Skolkovo Institute of Science and Technology

THE SKOLKOVO INSTITUTE OF SCIENCE AND TECHNOLOGY
UPON THE RECOMMENDATION OF THE FACULTY HEREBY CONFERS ON

IGNASI LLUCH I CRUZ

THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN RECOGNITION OF SCIENTIFIC AND RESEARCH ACHIEVEMENTS IN THE FIELD OF
ENGINEERING SYSTEMS

WITH ALL THE RIGHTS AND PRIVILEGES THERETO PERTAINING
GIVEN AT SKOLKOVO, MOSCOW REGION, RUSSIAN FEDERATION
ON SEPTEMBER 21, 2017



ALEXANDER KULESHOV
PRESIDENT

ANNA DEREVNINA
ASSOCIATE PROVOST, DEAN OF EDUCATION

What about 'candidate of science' degree ?

Doctoral Degree and Diploma in Skoltech

PhD Program

- Skoltech Degree
- Doctor of Philosophy in the field of XXX

Aspirantura

- Russian State Diploma
- “Researcher. Lecturer-Researcher”

Defense in (Partner’s) VAK Committee

- State Degree
- “Candidate of science” in physics and math sciences, bio, chemistry..

What are the requirements ?

PhD Thesis Requirements

- A. Course credits requirement - **30 ECTS**
 - B. Thesis Research (incl. Thesis Proposal Defense etc.) - **198 ECTS**
 - C. Pedagogical Experience (Teaching Assistance) – **3 ECTS**
 - D. Qualifying Exam – **3 ECTS**
 - E. Thesis Defense – **6 ECTS**
-
- F. Publish at least two papers with Skoltech affiliation in WoS
(Requirement may vary within different educational programs)
 - G. 2 conference talks with Skoltech affiliation at the International reputable conferences

**There are many programs.
Who is responsible ?**

Ph.D. Program Committee

Academic Governance : admission, individual doctoral committees, thesis proposal and qualifying exam, annual progress review, Juries for PhD thesis defense

PhD Program	PhD Program Committee
Mathematics and Mechanics	Chair - Igor Krichever Andrei Marshakov, Mikhail Bershtein, Mikhail Finkelberg, Alexander Gaifullin, Grigory Olshanski, Evgeny Feigin Co-Chair – Iskander Akhatov , Oleg Vasiliev
Physics	Chair - Mikhail Skvortsov Nikolay Gippius, Vladimir Drachev, Vasili Perebeinos, Alexey Buchachenko,
Materials Science and Engineering	Chair - Alexei Buchachenko Keith Stevenson, Artem Abakumov, Pavel Troshin, Andriy Zhugayevich, Sergei Tretyak, Albert Nasibulin, Fardad Azarmi, Sergey Abaimov
Life Sciences	Chair - Konstantin Severinov Co-chair - Mikhail Gelfand, Georgii Bazykin, Dmitry Pervouchine, Yuri Kotelevtsev, Petr Sergiev
Computational and Data Science and Engineering	Chair - Maxim Fedorov Alexander Bernshtein, Evgeny Burnaev, Grigory Kabatyansky, Stamatios Lefkimmiatis, Ivan Oseledets
Engineering Systems	Chair - Clement Fortin Alessandro Golkar, Dzmitry Tsetserukou, Zeljko Tekic, Ighor Uzhinsky, Kelvin Willoughby, Michael Chertkov, Aldo Bischì
Petroleum Engineering	Chair – Mikhail Spasennykh Alexey Cheremisin, Yuri Popov, Artyem Myasnikov, Marwan Charara, Andrey Osiptsov, Dmitry Koroteev

Ph.D. Programs Map

PhD Program	Aspirantura	Research Area	CREI
Mathematics and Mechanics	01.06.01 – Mathematics and Mechanics	01.01.03 Mathematical Physics 01.01.04 Geometry and Topology 01.02.05 Fluid and Gas Mechanics	CAS CDMM
Physics	03.06.01 – Physics and Astronomy	01.04.02 Theoretical Physics 01.04.05 Optics 01.04.07 Condensed Matter Physics	CPQM
Materials Science and Engineering	04.06.01 - Chemistry 22.06.01 - Materials Technology	02.00.04 Physical Chemistry 05.16.09 Materials Science	CEES CDMM
Life Sciences	06.06.01 – Biological Sciences	03.01.03 Molecular Biology 03.01.07 Molecular Genetics 03.01.09 Bioinformatics	CDIBB CBR
Computational and Data Science and Engineering	09.06.01 – Computer Science	05.12.13 Telecommunication Equipment, Systems and Networks 05.13.01 System Analysis and Information Processing 05.13.11 Mathematics and Software for Computers and Networks 05.13.17 Theoretical Foundations of Informatics 05.13.18 Mathematical Modeling, Numerical Methods and Software	CDISE
Engineering Systems	27.06.01 – Control in Technical Systems	05.13.01 System Analysis and Information Processing 05.13.06 Automation and control of technological processes 05.13.18 Mathematical Modeling, Numerical Methods 05.07.10 Innovative Technologies in Aerospace	CSR CEI CDMM CES
Petroleum Engineering	21.06.01 - Geology	25.00.10 Geophysics 25.00.17 Development and Exploitation of Oil and Gas 25.00.20 Geomechanics	CHR

Courses ?

General Doctoral Courses - 18 ECTS:

Philosophy of Science, Technology and Innovation (6 ECTS) *;

Pedagogy (3 ECTS)

Innovation Studies (6 ECTS);

Research Methodology (3 ECTS); (Research Seminar)

Advanced Major-Field Courses - 12 ECTS:

Advanced Major-Field Course 1 (6 ECTS)

Advanced Major-Field Course 2 (6 ECTS)

Recommended Elective - 3 ECTS:

English (3ECTS) *

* - pass English and Philosophy candidate exams for State Diploma

PhD Course Catalog

Skoltech

Skolkovo Institute of Science and Technology

<http://www.skoltech.ru/en/education/course-catalog/>

← → ↻ ⓘ www.skoltech.ru/en/education/course-catalog/ 🔍 🗨️ ☆ 🌐

Skoltech
Skolkovo Institute of Science and Technology

MIT In collaboration with
Massachusetts Institute of Technology

Founders We're in the Media Press Enquiries Join Staff Contact & Visit Us **RU**

🐦 f B 📺 📷 📡

ABOUT **ADMISSIONS** **EDUCATION** **RESEARCH** **INNOVATION** **FACULTY** **INDUSTRY** **STUDENT LIFE** **COLLOQUIA** 🔍

Filter by program: ([reset](#))

MSc Programs:

- Advanced Manufacturing and Materials
- Biotechnology
- Computational Science and Engineering
- Data Science
- Energy Systems
- Materials Science
- Mathematical and Theoretical Physics
- Petroleum Engineering
- Photonics and Quantum Materials
- Space and Engineering Systems

PhD Programs:

- Computational and Data Science and Engineering
- Engineering Systems
- Life Sciences
- Materials Science and Engineering
- Mathematics and Mechanics
- Petroleum Engineering
- Physics

Jump to a particular term:

- [Term 1](#)
- [Term 2](#)
- [Term 3](#)
- [Term 4](#)

How should I plan all these ?

Individual Plans

online link is :

is.gd/phd_ip4

- responsible for a particular PhD student mentorship including regular monitoring of the PhD student's progress
- **the committee should consist of 3 members (including the supervisor)**, which could be Faculty at Skoltech or external faculty member working closely with a PhD student
- **committee members are assigned by the supervisor.** All Committee members should confirm their involvement

Academic Year Calendar 2017-2018

<http://www.skoltech.ru/en/education/academic-calendar>

Term 2 : November – December. **Research & Individual Plan**

Winter Term: January. **Individual Plan Submission**

Term 3 : February – March. **Thesis Proposal Defense**

Term 4: April-May.

Summer Term: June-July.

Term 5: September-October. **Annual Progress Review**

Individual Plans

Deadline for submission is **February 1, 2018**

General Structure - Example

Year 1	Year 2	Year 3	Year 4
	Annual progress review within PhD Program Committee	Annual progress review	Annual progress review
Individual study plan submission			
Research (42 ECTS)	Research (45 ECTS)	Research (51 ECTS)	Complete research (54 ECTS)
Minimum course credits requirement (12 ECTS)	Courses (12 ECTS)	Complete course credits requirement (6 ECTS)	
	Qualifying Exam (3 ECTS)	Pedagogical experience (3 ECTS)	Thesis Final Review
Thesis proposal defense (6 ECTS)			Thesis Defense (6 ECTS)
60 ECTS	60 ECTS	60 ECTS	60 ECTS

Other Important Information

- Grading and Credit System
- How to use SIS/Canvas

Where to Find Information

- Resources – Student Information System (SIS). Every student has/will have a login/password
- Skoltech website - skoltech.ru
- Education Office – 3rd floor, Open Office Area 337
- E-mail education@skoltech.ru

** This presentation will also be saved in SIS - Resources*

Grading and Credit System

- Grading scale A-F (or Pass/Fail); No “+” or “-“;
- A-E are passing grades**. Students receive full number of credits;
- F is a failing grade. Students receive 0 credits;
- Fx grade allows improvement of the grade after completion of a particular task (resubmission of assignment, etc.). Max. grade – D/E
- Grading scheme for each class is set by the Course Instructor.
- Course Instructor makes the final decision about the grade.
- Grade appeals may be sent to education@skoltech.ru

Number of credits indicates workload,
Grade – student performance

Term Registration. Drop/Add

- Start - 3 weeks prior to beginning of the term
- Drop/add date - Monday of week 2

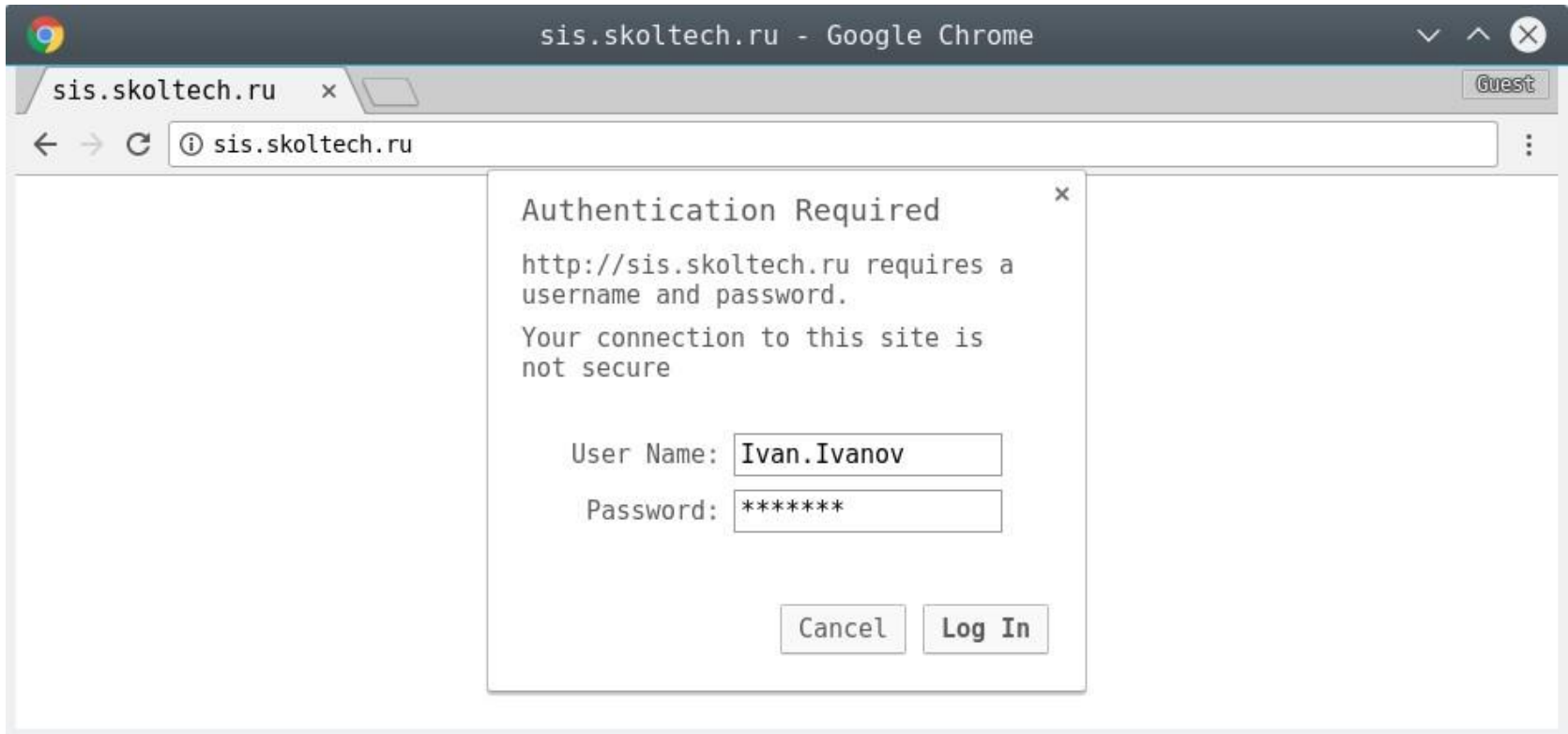
How to use SIS/Canvas?

Access to SIS/Canvas

Locate email from IT Helpdesk with your credentials to Skoltech Services (SIS/Canvas).

If you have any issues with your login, please email to IT Helpdesk at helpdesk@skoltech.ru

Access to SIS



1. Follow the link <http://sis.skoltech.ru/>
2. Insert your username (you email alias) and password to Skoltech Services

SIS: Enroll / Drop a Course

<http://sis.skoltech.ru>

The screenshot shows a web browser window with the URL `sis.skoltech.ru/skpages/learning/default.aspx`. The page features a green header with the Skoltech logo and the text "Skolkovo Institute of Science and Technology". A navigation menu on the left includes links for "Welcome", "Schedule & Academic Calendar", "Registration / Course Catalog", "My Courses", "My Requests", "Grades", "Library", and "Resources". The main content area displays a "WELCOME!" message from the Edu office, addressing students and faculty, and providing information about the Students Information System, including links to the Students Manual and Faculty Manual.

SharePoint

Accred Expert

BROWSE PAGE FOLLOW

Skoltech Home

Skolkovo Institute of Science and Technology

Welcome

- Schedule & Academic Calendar
- Registration / Course Catalog
- My Courses
- My Requests
- Grades
- Library
- Resources

WELCOME!

Dear students and faculty,

Welcome to the Students Information System. Please use it to register for courses, get acknowledged with policies, find various templates, etc. Although the user interface is intuitively comprehensive we prepared a [Students Manual](#) and [Faculty Manual](#) for your reference. Please look through it and start your registration for courses.

With best wishes,

Edu office

SIS: Enroll into a Course

Find your program

The screenshot shows a web browser window with the URL `sis.skoltech.ru/skpages/learning/CourseActual.aspx?categoryId=c2011283-d565-497a-92d1-bf632e763840`. The page is a SharePoint site for Skoltech. A red circle with the number '1' is placed over the 'Home' link in the top navigation bar. A red arrow points from this circle to the 'Registration / Course Catalog' link in the left sidebar. Another red circle with the number '2' is placed over the 'Registration / Course Catalog' link, with a red arrow pointing to a red-bordered box that highlights the 'MSc Programs' section of the course catalog. The 'MSc Programs' section lists the following programs: Advanced Manufacturing and Materials, Biotechnology, Computational Science and Engineering, Data Science, Energy Systems, Materials Science, Mathematical and Theoretical Physics, Petroleum Engineering, Photonics and Quantum Materials, and Space and Engineering Systems. Other sections visible include 'RESEARCH/E&I projects' (E&I project, Research project) and 'Terms' (Term 1, 2017-2018; Term 1A, 2017-2018; Term 1B, 2017-2018; Term 2, 2017-2018; Term 3, 2017-2018; Term 4, 2017-2018). The 'PhD Programs' section is partially visible at the bottom, listing 'Computational and Data Science and'.

SIS: Enroll into a Course

Select course

The screenshot shows a Google Chrome browser window with the address bar displaying 'sis.skoltech.ru'. The page title is 'Topics in Neurobiology (MA03104 (Term 1, 2017-2018))'. The page features a green header with 'SharePoint' and 'Accred Expert' options. The main content area includes the Skoltech logo, the course title 'Topics in Neurobiology', and a search bar. The instructor is listed as Dmitry Artamonov, and the term is Term 5. A blue button labeled 'Enroll in Course' is prominent on the right. Below it, the course details are listed: Credits: +3 and Type: Available. The description of the course is provided at the bottom left.

Instructor(s): Dmitry Artamonov

Term: Term 5

Description:

A research paper-based course. Overview of current research relating to various 'hot topics' in neurobiology and discussion of current research articles on the subject. Analysis of experiments and research described in scientific papers are presented by students and critically discussed by the class led by the instructor. Novel methods in neurobiology - optogenetics, molecular magneto technique, FLARE, transparent tissues imaging will be discussed in depth. Topics include mapping of the brain and behavior, optogenetic manipulation of memory engrams, mouse models of Alzheimer disease, synaptic plasticity, dendritic spines morphology, pathology and neurodegenerative diseases.

Enroll in Course

Credits: +3
Type: Available

SIS: Enroll into a Course

Wait for supervisor approval

The screenshot shows a web browser window displaying the Skoltech SIS portal. The browser address bar shows 'sis.skoltech.ru/skpages/learning/My courses.aspx'. The page features a green header with 'SharePoint' and 'Accred Expert' options. A navigation menu on the left includes 'My Courses', which is highlighted with a red box. The main content area, titled 'NO DUE DATE', lists two courses:

Course Name	Credits	Status
Innovation Workshop (MC06001 (Term 1A, 2017-2018))	+6 Credits, Available	APPROVED
Topics in Neurobiology (MA03104 (Term 1, 2017-2018))	+3 Credits, Available	PENDING

The 'PENDING' status for the second course is highlighted with a red box. A search bar is visible in the top right corner.

SIS: Drop a Course

Find course under "My Courses"

Topics in Neurobiology (MA03104 (Term 1, 2017-2018)) - Google Chrome

sis.skoltech.ru/_layouts/ShareKnowledge/Assignments/CourseAssignment/Show/2de18121-6ed6...

SharePoint

Accred Expert

Home

Skoltech

Skolkovo Institute of Science and Technology

Topics in Neurobiology

Search this site

YOUR ENROLLMENT IS NOW UNDER CONSIDERATION

Instructor(s): Dmitry Artamonov

Term: Term 5

Description:

A research paper-based course. Overview of current research relating to various 'hot topics' in neurobiology and discussion of current research articles on the subject. Analysis of experiments and research described in scientific papers are presented by students and critically discussed by the class led by the instructor. Novel methods in neurobiology - optogenetics, molecular magneto technique, FLARE, transparent tissues imaging will be discussed in depth. Topics include mapping of the brain and behavior, optogenetic manipulation of memory engrams, mouse models of Alzheimer disease, synaptic plasticity, dendritic spines morphology, pathology and neurodegenerative diseases.

Go to Home

Drop

Credits: +3

Type: Available

Access to Canvas

← → ↻ <https://skoltech.instructure.com/login/canvas>

Skoltech
Skolkovo Institute of Science and Technology

[Browse courses](#)

Login

Password

Stay signed in

[Forgot Password?](#)

[Log In](#)

[User Research](#) [Help](#) [Privacy policy](#) [Terms of service](#)
[Facebook](#) [Twitter](#)

BY INSTRUCTURE

1. Follow the link <https://skoltech.instructure.com/login/canvas>
2. Insert your username (your email alias) and password to Skoltech Services
3. Review **NOTIFICATION** settings and add **PHOTO**
4. When the terms starts, please check your you **SPAM folder** on daily basis, as your Gmail spam filter can block Canvas notifications

← → ↻ <http://skoltech.instructure.com>



Home

Topics in Neurobiology

[Jump to today](#) [Edit](#)

Announcements

Assignments

Discussions

Grades

People

Pages

Files

Syllabus

Outcomes

Quizzes

Modules

Conferences

Collaborations

Chat

Attendance

Google Drive

Settings

A research paper-based course. Overview of current research relating to various 'hot topics' in neurobiology and discussion of current research articles on the subject. Analysis of experiments and research described in scientific papers are presented by students and critically discussed by the class led by the instructor. Novel methods in neurobiology - optogenetics, molecular magneto technique, FLARE, transparent tissues imaging will be discussed in depth. Topics include mapping of the brain and behavior, optogenetic manipulation of memory engrams, mouse models of Alzheimer disease, synaptic plasticity, dendritic spines morphology, pathology and neurodegenerative diseases.

Course schedule and assessment criteria -

[0_Topics in Neuro_2017_Schedule.pdf](#)

Course summary:

Date	Details	
Mon, 4 Sep 2017	First Seminar: False memory in the hippocampus	due by 23:59
Wed, 6 Sep 2017	2nd Seminar: DREADD & FLARE	due by 23:59
Mon, 11 Sep 2017	Transparent Tissue Imaging	due by 23:59
Wed, 13 Sep 2017	Transparent Tissue Imaging 2	due by 23:59
Mon, 18 Sep 2017	PolyQ neurodegenerative disorders: HD and SCA2	due by 23:59
Wed, 20 Sep 2017	Huntington's disease: approaches	due by 23:59
Mon, 25 Sep 2017	Alzheimer's disease: 1	due by 23:59
Wed, 27 Sep 2017	Alzheimer's disease: Cont	due by 23:59
Mon, 2 Oct 2017	Emotions	due by 23:59

- Account
- Admin
- Dashboard
- Courses
- Calendar
- Inbox
- Commons
- Help
-

Skoltech

Skolkovo Institute of Science and Technology



Skoltech Library

October 2017

Skoltech library – library page

www.skoltech.ru/en/education/library/

Skoltech

Skolkovo Institute of Science and Technology

 In collaboration with
Massachusetts Institute of Technology

Founders We're in the Media Press Enquiries Join Staff Contact & Visit Us RU



ABOUT ADMISSIONS STUDENT LIFE FACULTY **EDUCATION** RESEARCH INNOVATION INDUSTRY COLLOQUIA

- About Skoltech Education
- MSc Programs
- Educational Partners
- Academic Calendar
- Course Catalogue
- Academic Term Scheduling
- Energy PhD seminar
- Library**
- Software for Students
- Contact

Home > Education > Library Resources

Library Resources

Students have access to the information systems and information and telecommunications networks.

Library catalogue (go to)

Search

Skoltech faculty, students and employees have direct access to following databases:

- [IEEE](#) within the Skoltech network
- [Scopus](#) within the Skoltech network
- [Springer](#) within the Skoltech network
- [eLibrary](#) within the Skoltech network
- [ScienceDirect](#). To access ScienceDirect you need to register your own account using Skoltech email address when you are in the Skoltech network at the [website](#).
- Wiley Full Journal collection. Subscription in progress. Please contact the librarian if you need a particular paper. We apologize for the temporary inconvenience.
- [HeinOnline](#) within the Skoltech network (click "Login"- "Heinonline")
- [Web of Knowledge](#) within the Skoltech network



Abstract
In the last few months, several space missions have set their sights on exploring distant worlds, including planets, comets and galaxies. Space science research has also pushed the boundaries of our knowledge and led to the discovery of new planets in our galaxy. The next step will be taken on a journey through the solar system and beyond and it is time to start thinking about the technology development necessary to achieve the success of such

Seminar: Planets, Comets, Galaxies and Beyond: a Journey Through Our Universe



Abstract
Presentation of Universal Robots



За гранью дисциплин - Found in Translation

Skoltech library service – what we do

Answer enquiries

Books borrowing

Help you to use databases and access content

Advise on research including search for particular papers, books and reports

Services: Physical books library

Based in room 409

Open Mo-Fr 9AM-12PM – **Limited open hours**

More than 500 books

Library catalogue available at library web page

Librarian (Ivan Smagin) is always accessible via email library@skoltech.ru

or by phone +7 916 555-09-27

Services: Borrowing books

You may borrow up to 6 books at a time

Standard loans – you can have them up to 4 weeks and renew via email after

One week loans for most required books

Services: databases

Full text journal databases

ScienceDirect, Springer, IEEE, Wiley Full Journal collection, Nature, Institute of Physics, American Physical society, American Institute of Physics, Royal Society of Chemistry, Ebsco Energy & Power Source , HeinOnline

Bibliographic databases

Scopus, Web of Knowledge, MathSciNet, eLibrary

Analytical tools

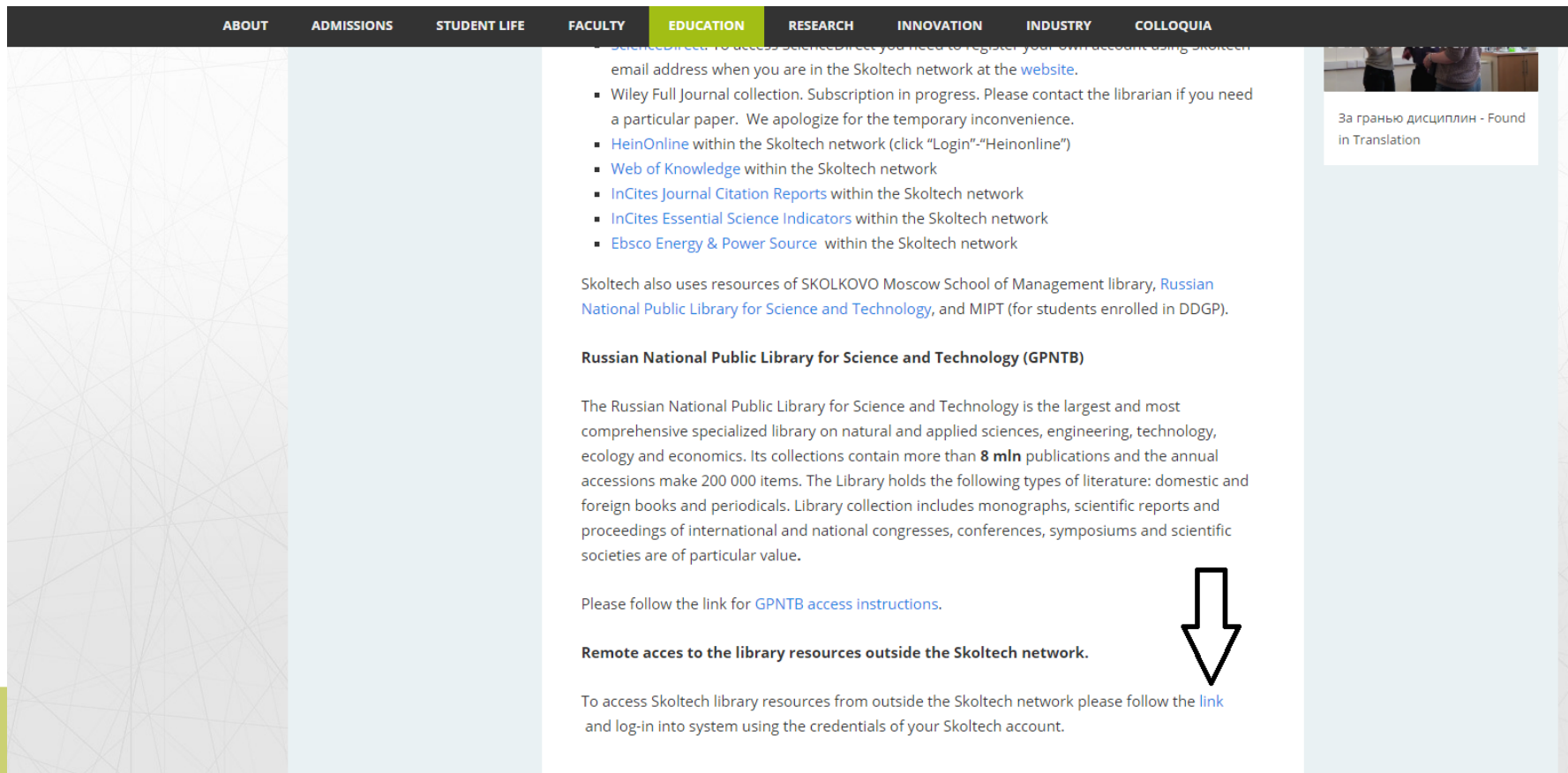
InCites Journal Citation Reports, InCites Essential Science Indicators

Patent database Cipher

At the page you can also find Skoltech [single search access point](#) to our online and print collections. Using single search you can also dynamically rank, filter and categorize your search results.

Services: remote access to databases

Remote access via <http://proxilib.skoltech.ru:2048/login> (log-in using the credentials of your Skoltech account)



The screenshot shows the 'EDUCATION' section of the Skoltech website. The navigation bar includes links for ABOUT, ADMISSIONS, STUDENT LIFE, FACULTY, EDUCATION (highlighted), RESEARCH, INNOVATION, INDUSTRY, and COLLOQUIA. The main content area lists several database services available to Skoltech users:

- Wiley Full Journal collection. Subscription in progress. Please contact the librarian if you need a particular paper. We apologize for the temporary inconvenience.
- HeinOnline within the Skoltech network (click "Login"-Heinonline")
- Web of Knowledge within the Skoltech network
- InCites Journal Citation Reports within the Skoltech network
- InCites Essential Science Indicators within the Skoltech network
- Ebsco Energy & Power Source within the Skoltech network

Below the list, it states: "Skoltech also uses resources of SKOLKOVO Moscow School of Management library, Russian National Public Library for Science and Technology, and MIPT (for students enrolled in DDGP)."

Russian National Public Library for Science and Technology (GPNTB)

The Russian National Public Library for Science and Technology is the largest and most comprehensive specialized library on natural and applied sciences, engineering, technology, ecology and economics. Its collections contain more than **8 mln** publications and the annual accessions make 200 000 items. The Library holds the following types of literature: domestic and foreign books and periodicals. Library collection includes monographs, scientific reports and proceedings of international and national congresses, conferences, symposiums and scientific societies are of particular value.

Please follow the link for [GPNTB access instructions](#).

Remote access to the library resources outside the Skoltech network.

To access Skoltech library resources from outside the Skoltech network please follow the [link](#) and log-in into system using the credentials of your Skoltech account.

A large white arrow points downwards from the text "Remote access to the library resources outside the Skoltech network." to the "link" mentioned in the following paragraph.

On the right side of the page, there is a small image of people in a library setting with the caption "За гранью дисциплин - Found in Translation".

Thank you!

PhD Thesis Requirements

PhD Program	PhD Degree Requirements
Mathematics and Mechanics	2 papers in WoS indexed journals + 2 reputable conference presentations
Physics	2 papers in WoS indexed journals + 2 reputable conference presentations
Materials Science and Engineering	2 papers in WoS indexed journals + 2 reputable conference presentations
Life Sciences	2 papers in WoS indexed journals + 2 reputable conference presentations IF>2, at least one first/shared first/corresponding author publication. No review papers are accepted towards the requirement.
Computational and Data Science and Engineering	3 peer-reviewed publications from which 2 in WoS/Scopus indexed journals/conference proceedings, 2 publications should be published either (i) in Q1/Q2 journals or (ii) published in conference proceedings having CORE rating A/A* or (iii) belong to the list of journals and conferences specially selected by the PhD program committee, and 1 publication as the main (first/shared first/corresponding) author of the publication
Engineering Systems	3 WoS / Scopus papers (or 2 WoS/Scopus papers and patent) incl. 2 reputable conference presentations
Petroleum Engineering	3 WoS / Scopus papers (or 2 WoS/Scopus papers and patent) incl. 2 reputable conference presentations