

HSE ISSEK

INTRODUCTION

ABOUT HSE UNIVERSITY

Rapid growth over two decades into a well-renowned research university: now consistently ranked as one of Russia's top universities, as a leader in Russian higher education.

Offers outstanding educational programmes from bachelor to doctoral studies, with top departments and research centres in a number of fields.

One of the preeminent economics and social sciences universities in Eastern Europe and Eurasia; dedicated to maintaining the highest academic standards.

Distinguished by its international presence and cooperation. HSE faculty, researchers, and students represent over 100 countries.

Newly-adopted structural reforms support HSE University's drive to internationalize and conduct groundbreaking research. HSE cooperates with over 400 universities worldwide through bi- and multilateral projects, as well as international associations and network memberships.

Ranked among the top 100 universities worldwide in Politics & International Studies, Sociology, History, Economics & Econometrics in the QS — World University Rankings by Subject.

**RANKED IN
45 SUBJECT
RANKING**

QS, ARWU, THE: Top 100 in 16 subject categories (2nd among Russian universities)

**THE ONLY RUSSIAN
UNIVERSITY
IN THE TOP 100**

of THE Young University Rankings 2022

SSEK

4

CAMPUSES

51 000+

STUDENTS

100 000+

ALUMNI

7 000+

FACULTY &
RESEARCHERS

312

DEGREE
PROGRAMMES

227

LARGE-SCALE OPEN
ONLINE COURSES

4

RESEARCH PROJECTS
PER YEAR

51 000+

PUBLICATIONS IN
LEADING JOURNALS

100 000+

INTERNATIONAL
LABORATORIES

1st

PLACE IN FORBES
RANKING OF RUSSIAN
UNIVERSITIES
(2021)

1st

PLACE IN RUSSIA IN THE
HEADHUNTER RECRUITING
PLATFORM RANKING OF
UNIVERSITIES THAT TRAIN
THE MOST SUCCESSFUL
PROFESSIONALS (2022)

2nd

PLACE IN RUSSIA BY LEVEL
OF GRADUATE SALARIES
ACCORDING TO SUPERJOB
RANKING (2021)

ISSEK-HSE INSTITUTE FOR STATISTICAL STUDIES AND ECONOMICS OF KNOWLEDGE

Founded in 2002, HSE Institute for Statistical Studies and Economics of Knowledge (ISSEK) is Russia's leading research centre and think tank in the field of science, technology, and innovation (STI) measurement, policy studies, and foresight. In 2014, ISSEK was granted the status of HSE Centre for Advanced Studies in STI.

The largest HSE research unit, ISSEK involves almost 200 scholars full time, including more than 60 doctorate holders. Each year, around 60 HSE undergraduate and postgraduate students undergo internships and take part in research activities at the Institute. About a third of the ISSEK staff are young researchers and research assistants under 30 years of age.

ISSEK includes 19 research centres; and its 2 international laboratories—the Laboratory of Economics of Innovation and the Laboratory for Science and Technology Studies—are headed by prominent foreign scholars. Its International Advisory Board (IAB), involving leading scientists from the UK, Germany, Canada, China, Korea, US, Japan, and other countries, has been operating since 2011.

500+

RESEARCH PROJECTS

350+

ARTICLES IN LEADING
SCIENTIFIC JOURNALS

170 000+

PAID DOWNLOADS OF
BOOK CHAPTERS EDITED
BY ISSEK STAFF



- Leading centre of excellence in STI
- Largest HSE research unit
- iFORA—unique big data analysis system



- 19 research centres
- 2 international laboratories
- International Advisory Board



- ≈ 200 staff members
- 60+ doctorate holders +
- 4 new PhDs defended (2021)
- 10+ invited foreign professors
- 60+ research assistants annually
- 80% of young scholars (below 39 y.o.) published in journals indexed in Scopus/WoS

RESEARCH AREAS

The Institute carries out a wide range of basic and applied interdisciplinary research as well as empirical studies (statistical, sociological and expert surveys) in such areas as: measurement of STI, education and digital economy; foresight, technology roadmapping and monitoring of global technology trends; behaviour patterns of innovation systems actors (companies, universities, research organisations, highly qualified R&D personnel, knowledge-intensive business services and creative industries, the general public); design and evaluation of STI policy tools including national, regional and cluster policies, etc.

ISSEK commercializes its research outcomes by conducting a large number of applied research projects (over 500 projects in 2002—2022) and providing policy advice in the field of STI for the federal and regional authorities, development institutions, large companies, R&D organisations and universities.

ISSEK is also a part of the University's strategic development programme 'Priority 2030', and of the recently established Human Capital Multidisciplinary Research Centre, and of the Artificial Intelligence Research Centre.



MEASUREMENT

Advanced methodologies and tools for statistical measurement of science, technology and innovation and its socio-economic impacts



FORESIGHT

Foresight for sustainable economic growth, social welfare, and competitiveness of industries, regions, companies



POLICY ANALYSIS

Design and evaluation of impact-oriented policies for innovation-driven growth: theory, toolkit, empirical studies, practical recommendations



DIGITAL ECONOMY

Foresight for sustainable economic growth, social welfare, and competitiveness of industries, regions, companies

RESEARCH INFRASTRUCTURE

The research infrastructure of ISSEK consists of information and analytical systems, databases of technological trends, statistical indicators of STI, foresight cases and methods, and database of experts (includes about 10 000 leading Russian and foreign experts).

In recent years, ISSEK has promoted and implemented, in many research projects, the intelligent FOResight Analytics system — iFORA, developed in-house by ISSEK IT-specialists.

iFORA uses advanced semantic analysis, machine learning and artificial intelligence algorithms to integrate diverse information sources (including scientific articles, patents, grants, media, and analytical reports, among others) with the aim of generating and exploring new knowledge, especially that concerning emerging and evolving trends. Providing a new evidence base, such big data analysis makes valuable contributions to foresight and policy analysis.

DATABASES

Statistical data, quantitative and qualitative data from multiple empirical studies (economics of education, innovative behaviour of enterprises and population, science and technology (S&T) labour force, etc.)

FORESIGHT STUDIES DATABASE

Trends (5 000+), wild cards, weak signals, Russian and foreign experts (10 000+)

KNOWLEDGE SHARING PLATFORM (‘KNOWLEDGE BASE’)

Access to the obtained research results, planning and monitoring of publications

DATABASE ON METHODS OF S&T AND SOCIO-ECONOMIC FORECASTING

A detailed description of each method, stages of its implementation, advantages and disadvantages, the possibility of combination with other methods, cases of application

FREE ANALYTICAL NETWORK (FAN)

A functional node of the IPChain Platform for IPR protection and legal exchange of socio-economic data (accompanied by smart contracts) for research and educational purposes, as well as for commercial use

IFORA (INTELLIGENT FORESIGHT ANALYTICS SYSTEM)

A unique big data system based on cutting-edge technologies in mathematical statistics, machine learning and semantic analysis

INTELLIGENT FORESIGHT ANALYTICS SYSTEM iFORA

750+ million

SOURCES

- Research grants & reports
- International conferences
- Clinical trials
- Job vacancies
- Professional media
- Research articles
- Patents
- Analytical reports
- Legal documents
- Experts database

≈ 30 000

DOCUMENTS UPLOADED DAILY



Functional modules

- Trends
- Markets
- Education and skills
- Benchmarking and risk assessment
- Forecasts
- Policy analysis
- Networks
- Project management

iFORA is based on a modular approach and allows combining specialized modules for specific tasks



In 2020, iFORA® was featured in Nature as an effective decision support tool (Nature, 2020, Vol. 583)



In 2018, the OECD noted iFORA® as a successful initiative in the field of digitization of science (OECD Science, Technology and Innovation Outlook 2018)

Technologies

- Computational Linguistics and Natural Language Processing
- Machine Learning and Artificial Intelligence
- Big Data Analysis and Data Mining
- Supercomputer Data Cluster

Languages

- English
- Russian
- Chinese
- Other Cyrillic & Roman languages

Clients

- Companies
- Public agencies
- Universities
- Research centres

RESEARCH OUTPUTS

Steady increase in publication activity of the ISSEK staff over recent years. Over 350 articles were published in high-ranked academic journals.

ISSEK publishes 'Foresight and STI Governance' (in Russian and English), an academic journal indexed in Scopus (Q1) and Web of Science and taking leading positions in the Russian Science Citation Index.

ISSEK, in cooperation with the Springer Nature, is responsible for a series of English-language monographs 'Science, Technology and Innovation Studies'.

A series of annual statistical databooks ('Indicators of Science', 'Indicators of Innovation Activity', 'Indicators of the Digital Economy', 'Indicators of Education') have become ISSEK's branded analytical products within the expert and policy maker communities.

The results of ISSEK research projects are continuously being translated into analytical reports, methodological guidelines, newsletters, information bulletins, and other materials that receive wide media coverage.

1st

AMONG HSE UNITS BY THE
MEDIAN SNIP OF SCOPUS-
INDEXED PUBLICATIONS

2nd

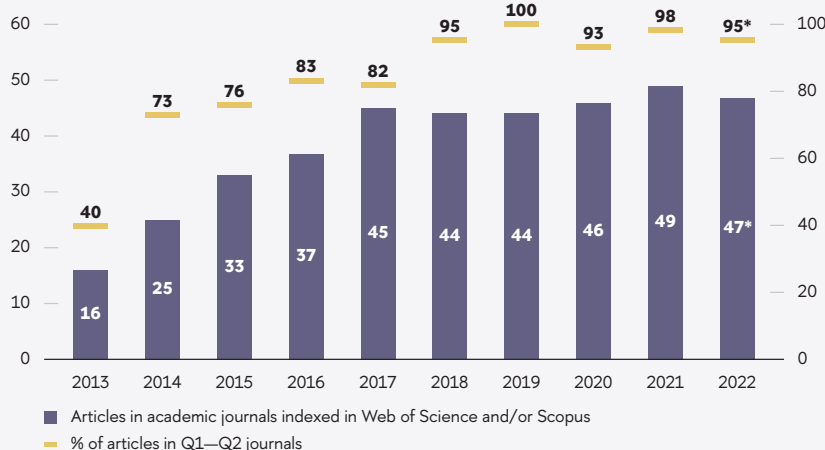
AMONG HSE UNITS BY THE NUMBER
OF HIGHLY CITED PAPERS

among top-10

MOST CITED HSE AUTHORS

100+

REGISTERED IP ITEMS



*AS OF OCTOBER 2022

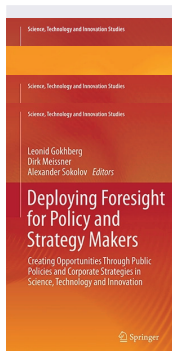
PUBLICATIONS



FORESIGHT AND STI GOVERNANCE JOURNAL

Published quarterly since 2007 in Russian and since 2014 in English

Indexed in Scopus (Q1) and Web of Science

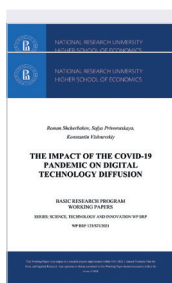


HSE-SPRINGER NATURE BOOK SERIES 'SCIENCE, TECHNOLOGY AND INNOVATION STUDIES'

> 170 000 paid downloads

EDITING OF INTERNATIONAL JOURNALS

14 scholars are editors/ editorial board members at leading STI journals



HSE WORKING PAPERS 'SCIENCE, TECHNOLOGY AND INNOVATION'

Indexed in SSRN; Over a half published in international scientific journals

HSE data books



URL: WWW.HSE.RU/EN/PRIMARYDATA/

Contributions to international reports



GLOBAL INNOVATION INDEX

WIPO / INSEAD / Cornell University

OECD STI SCOREBOARD

OECD STI OUTLOOK

2014, 2016, 2018, 2021

OECD FRASCATI MANUAL

2015

OECD OSLO MANUAL

2018

UNESCO SCIENCE REPORT

2010, 2016, 2021

UNCTAD CREATIVE ECONOMY OUTLOOK

2022

BRICS INNOVATIVE COMPETITIVENESS REPORT

2018, 2020, 2023

Information bulletins

45+

IN 2021 (230+ IN TOTAL)

4 series:

SCIENCE, TECHNOLOGY & INNOVATION, DIGITAL ECONOMY, IFORA-EXPRESS, HUMAN CAPITAL

URL: WWW.HSE.RU/EN/PRIMARYDATA/

MASTER'S PROGRAMME 'SCIENCE, TECHNOLOGY AND INNOVATION MANAGEMENT AND POLICY'

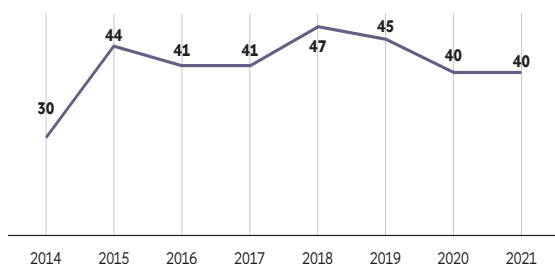
Since 2014, ISSEK has been implementing the English-language Master's Programme 'STI Management and Policy'.

The Master's Programme has double degree programmes with Seoul National University (Republic of Korea), Technical University of Berlin (Germany), University of Maastricht (Netherlands) and Politecnico di Torino (Italy), as well as international student exchanges with Seoul National University (Republic of Korea).

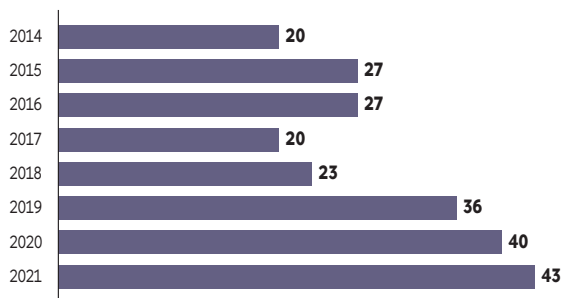
ISSEK regularly conducts short-term training courses in STI measurement, policy and foresight for employees of leading universities, enterprises, and government agencies, including from other countries (e.g. Vietnam, CIS countries).



Enrollment (number of students)



Foreign students, %



Graduates

252

PEOPLE

Partner universities



UNIVERSITY OF MAASTRICHT
(THE NETHERLANDS)



TECHNICAL UNIVERSITY
OF BERLIN (GERMANY)



SEOUL NATIONAL UNIVERSITY
(REPUBLIC OF KOREA)



POLYTECHNIC UNIVERSITY
OF TURIN (ITALY)

INTERNATIONAL CO-OPERATION

ISSEK is strongly integrated into the global academic community: it has partnerships with international organisations (OECD, Eurostat, UNESCO, UNIDO, UNCTAD, APEC, BRICS, ITU, etc.), leading universities and research centres in more than 20 countries.

ISSEK staff members frequently participate in international research networks and collaborations.

The leading researchers of the Institute are members of expert groups and committees of international organisations. They have been involved in the development of statistical standards (such as the OECD Frascati Manual and the OECD/Eurostat Oslo Manual) and in the preparation of analytical reports (the OECD's STI Outlook, UNESCO's Science Report, the Global Innovation Index, etc.).

ISSEK hosts many international academic and expert events including the annual International Conference on Foresight and STI Policy, which OECD lists among major events to promote futures research methodology and best practices.

UNESCO Chair on Future Studies

SINCE SEPTEMBER 2021

Partners: 18 organisations from Europe, Asia, Africa & Latin America

Key planned activities: methodologies, research, short-term training, institutional development, knowledge dissemination

Global Innovation Index Academic Network

Partners: 9 academic institutions from Brazil, China, Colombia, Egypt, France, Mexico, Nigeria, USA and Russia

Expert and research networks in Asia

Asian STI Think Tanks Network (ASTN)
Asia-Pacific Futures Network (APFN)
Asia-Pacific Research and Training Network on STI Policy (ARTNET)

Collaboration with BRICS



Tsinghua University



CHINA



UNICAMP



BRAZIL



TIFAC

INDIA



National Science and Technology Forum



science & technology
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

SOUTH AFRICA

CO-OPERATION OPPORTUNITIES

Research areas

- Measurement of STI
- STI Policy
- Foresight
- Innovation studies
- Big data analysis
- Digital economy
- Creative industries

Institutional initiatives

- UNESCO Chair on Future Studies
unescofutures.hse.ru/en/
- Human Capital Multidisciplinary Research
Centre ncmu.hse.ru/en/
- National Centre for Socio-Economic
and S&T Foresight
- Artificial Intelligence Research Centre
- HSE Global Cities Innovation Index
gcii.hse.ru/en/

Academic and expert events

- Annual International Academic Conferences
on STI Policy and Foresight
(April and November)
- Annual International Academic Conference
and Young Researchers Forum on Creative
Economy (November)
- International workshops
- Lectures and master classes for students

Publications

- Joint research papers
- Special issues in academic journals
- Analytical reports and policy papers
- Contributions to book series





Competence building

- Advanced training programmes
- Academic exchange/Visiting researchers
- Postdocs

Contacts

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-  [www.youtube.com/channel/
UCWOINOI4OACwU3jPVpv1VA](http://www.youtube.com/channel/UCWOINOI4OACwU3jPVpv1VA)
-  t.me/iFORA_knows_how

MASTER'S PROGRAMME 'SCIENCE,
TECHNOLOGY AND INNOVATION
MANAGEMENT AND POLICY'
www.hse.ru/en/ma/sti/

HSE-SPRINGER NATURE BOOK SERIES
'SCIENCE, TECHNOLOGY AND
INNOVATION STUDIES'
www.springer.com/series/13398

FORESIGHT AND STI
GOVERNANCE JOURNAL
foresight-journal.hse.ru/en/

