ANR lab

International Laboratory
for Applied Network Research

Master's programme "Data Analytics and Social Statistics"

formerly - MASNA "Applied Statistics with Network Analysis"

Introduction

We are on a mission to make modern data and network analytics available to everyone

If you are a practitioner or former student with non-mathematical or non-IT background and want to dive into the world of analytics, then you should consider applying to our program.

Here we introduce HSE University and ANR-lab that offers applied mathematics and computer science DASS master's programme with a focus on applied statistics, data, and network analytics.

Learn more about us

ANR-lab

- About us
- Founders and scientific advisors
- Research groups
- HSE University

Master's programme

- About the programme
- Opportunities
- Skills
- Best choice
- Education
- Application process
- Career

Contacts

- Websites
- Social media

* Press the line to navigate through the document
* Press the logo on top to come back to the menu

Part 1

ANR-Lab

What we do

We develop and test new methods for analyzing network data and apply them in empirical research in various scientific fields

Who we are

The ANR-Lab members are researchers from sociology, political science, economics, statistics, management, computer linguistics, and computer science

Worldwide cooperation

We maintain cooperation with Russian and international scientists and research groups working in the field of network analysis

About ANR-lab

ANR-lab

International laboratory for Applied Network Research

Press for more info

A full-service think tank

Research

* Development of school of applied network analysis
* Popularization of network-analytic methods, starting with bachelor's students
* Tight integration into Russian and international academic community

Education

* Master's programme "Data Analytics and Social Statistics"
* Short educational events in Russia and internationally

Research

* Applied consulting (fee-based) for business, governments and NGO
* Among clients:

VOLKSWAGEN GROUP RUS

ROSATOM

Meet the founders and scientific advisors

Vladimir Batagelj

PhD, Professor Emeritus
University of Ljubljana

* Senior Research Fellow, ANR-Lab
* Program Pajek for analysis and visualization of large network data

Anuška Ferligoj

PhD, Professor Emeritus,
University of Ljubljana

* Scientific advisor since 2018, ANR-Lab
* Head, Center for Social Informatics and Methodology, University of Ljubljana

Current leadership of the programme

Ivan Klimov

Candidate of Sciences

- Programme Academic Supervisor
- Senior Research Fellow, ANR-Lab
- Associate Professor, Faculty of Social Sciences

Daria Matlseva

Candidate of Sciences

- Head of the ANR-Lab
- Leading Research Fellow, ANR-Lab
- Visiting Lecturer, Faculty of Social Sciences

ANR-lab has several research groups

* The Laboratory regularly organizes scientific seminars for joint discussion of projects and their presentation to a broad audience, and summer schools and special events for advanced training with leading experts in Social network analysis (SNA)
* ANR-Lab's members regularly attend scientific conferences and events, and have scientific publications in their research areas

Study of IT, Media, and Communications

Research of social groups, communities and collectives

Study of Science and Education

Economic, financial and political structures

Social trust and satisfaction

HSE University in numbers

HSE University is a Russian leader in education and one of the prominent economics and social sciences universities in Eastern Europe and Eurasia

Press for more info

5 campuses	**55 000+** students	**90 400+** graduates of main programmes
227 online courses	**5 mln** course participants	**195** countries

Top ranks

HSE University is top-ranked

by many internationally recognized agencies

QS WORLD UNIVERSITY RANKINGS by subject

Top 79

- Mathematics

Top 101-150

- Statistical and operations research

Top 136

- Computer science & information systems

Part 2

Master's Programme "Data Analytics and Social Statistics"

About the programme:

2 years full-time degree (online)

4 modules in a study year

10 points HSE university grading system

Modes of sessions

- HSE SmartLMS
- Zoom – synchronous sessions (Moscow evening time)
- Pre-recorded sessions

Programme name: **DASS - Data Analytics and Social Statistics**
(Ex-MASNA – Applied Statistics with Network Analysis)

Educational direction: **"Applied Mathematics and Informatics"**
(taught fully in English with some electives available in Russian)

DASS programme offers state-of-the-art analytics with networks

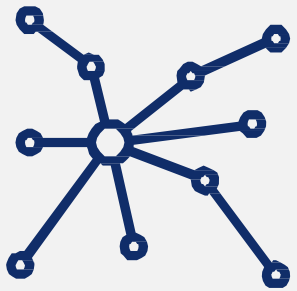
1

APPLIED DATA

ANALYTICS

2

NETWORK



We teach analytics to everyone

If you want to use complex models in your analytics career

If you need some additional knowledge in applying methods for solving problems

If you never had any analytical training, but want to join the field

Business professionals

Students with non-mathematical background

Professionals who want to dive into data analytics

New trends and knowledge paradigms

01 State-of-the art software analytics tools

02 Largest network-analytic center in Russia

03 New analytic capabilities

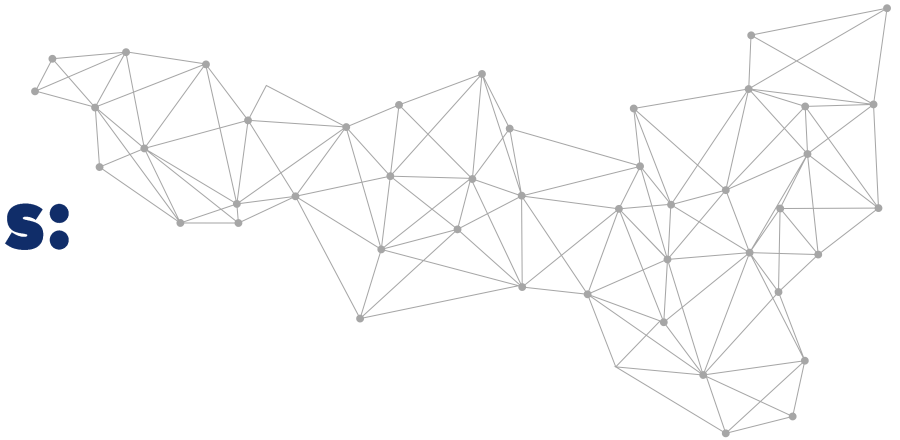
04 World-renowned professors

05 Applied, hands-on approach to master's education in analytics

We provide skills that markets demand today

- Exploratory data analysis
- Linear models
- Time-series analysis
- **Social network analysis**
- Machine learning
- Neural networks
- Big data analysis
- Data mining
- Nonparametric methods
- Text and unstructured data analysis
- **Structural equation modelling**
- Multivariate data analysis

Responding to market signals: hands-on skills



What programming languages?

- Python
- R

What data analysis packages?

- R
- Python
- SAS
- STATA
- Orange

What network analytics software?

- R
- Pajek
- Gephi

Best choice

6 reasons to study with us

01 Most of the courses are offered at different levels – basic and advanced

02 Course menu – you create your own study plan from the menu of over 30 courses

03 Applied focus and final capstone project: it can be a research paper or real-life case

04 Community of experts and analytics enthusiasts

05 World-renowned professors. We invited the "stars" of analytics profession

06 We teach to formulate the problem first, and then select a method for solving the problem

More benefits

Fully online

Ability to study from anywhere in the world on a set schedule

Individual approach

Teachers are available in group chat, videoconference and real-time communication in class

Deferment from the army

Deferment from military service is granted to students in accordance with the legislation of the Russian Federation

Convenient class time

Classes take place in the evening in real time and can be replayed afterwards

Additional courses

Broad choice of additional courses for more in-depth study of the program during the course

Student privileges

Access to information resources of the university, free access to campuses, benefits for students

You will go through sophisticated and rigorous education in data analytics

Let's start your learning path

1. Theory-based

- foundations of statistics, network analysis and machine learning
- working knowledge base in data analytics in business and academics

2. Problem solving

- define problems and choose the right tools and approaches to solve them

3. Math and models

- mathematics, tailored to your comfort level
- understand how to use different types of models in practice

4. Practical cases

- work with real-world problems and understand how data analytics can solve them

We offer two tracks for your education

Computational Social and Network Sciences

01

Study of actively developing quantitative methods in the social sciences, including network analysis:

- Mathematical apparatus and methods of statistical analysis
- Methods and tools of computer science for data collecting, processing, and modeling
- Theoretical and methodological apparatus of social sciences for research design, interpretation and presentation of results.

Applied Statistics and Data Science

02

Study of advanced methods of mathematical statistics and modern advances in the field of data sciences:

- Variety of advanced statistical methods of data analysis,
- Methods and tools of computer science for data collection, processing, and analysis
- Solving research problems and implementing applied projects for making business decisions.

Education component: overall curriculum

General component

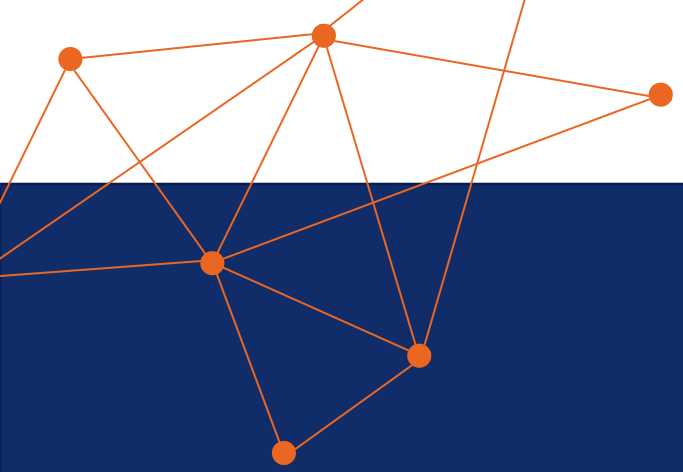
- Adaptive courses (R & Python, Intro to Statistics)
- Contemporary Data Analysis
- Contemporary Decision Sciences Methods
- Linear Models
- Intro to SNA
- Probability Theory
- Data Mining
- Structural Equation Modelling

Electives

- Pool of university courses
- Advanced Topics in SNA
- SNA in R
- Machine Learning
- Bayesian data analysis
- Exploratory data analysis
- Stochastic models
- Time Series
- Nonparametric Data Analysis
- Multivariate data analysis
- Unstructured Data Analysis

Research and consulting

- Research Seminars (Computational Social and Network Sciences Applied Statistics and Data Science, Working with Network Data,)
- Project Seminar
- Statistical Consulting
- Internship
- Term Paper
- Master Thesis



$$B > \frac{1}{n} \sum_{i=1}^{n} x_i$$

We want you to be the best you can be

… and we'll do what it takes to help you get there

* We offer the range of choices and opportunities simply not available anywhere else
* We give you the best career choice possible

How to apply

1. Application deadlines and enrollment:

April, 1 — Applications call is open

September, 16 — Deadline for submission of all necessary documents

September, 23 — Deadline to sign agreements and enrollment forms

2. Portfolio

	Max points
Basic education	15
Motivation letter	20
Letters of recommendation (2 letters)	10
Interview in English	10
CV	20
TOEFL, IELTS or equivalent	10
Other supplementing documents	15

Payment

400 000 RUB/year

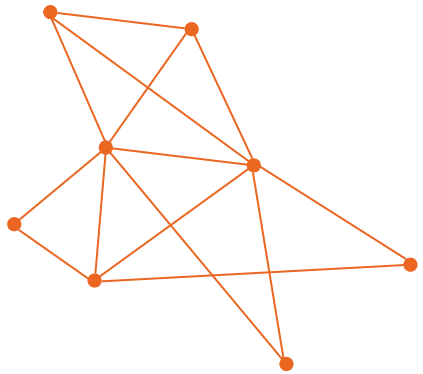
Tuition fee

Payment is made per year / per semester

Discounts

5% for early submission before 31.05.2024

10% for portfolio assessment (90+ points)

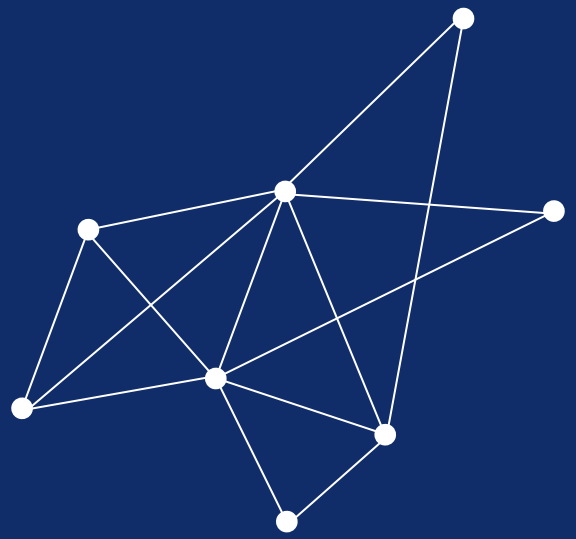


10% for HSE graduates

10% for winners (for diploma holders of I, II and III degrees) of the Olympiads "Major League" («Высшая Лига»), "I am a Professional" («Я – профессионал»), student research contests (НИРС) in the indicated areas and tracks corresponding to the programme

Amazing career tracks

Students and graduates become experts in data analysis and visualization, machine learning, network analysis, and business analytics.



All needed skills

We equip our students with necessary skills for cross-disciplinary work in industry and academia

01 Data analysts in all fields (product analysts., business analysts, etc.)

02 Statistical consultants

03 Researchers in major consulting firms

04 Background for future PhD studies

Our graduates work in top Russian and international companies

Finance and IT

SAS VTB CROC

Consulting

McKinsey & Company Deloitte. pwc

Research

ELSEVIER WORLD BANK GROUP THOMSON REUTERS

Markets

Yandex VOLKSWAGEN JTI

Opinion

"It gave me a clear understanding of algorithms for working with absolutely different data"

- Alexander Alimov -

"The knowledge base is significantly replenished, and I want to test it in practice as soon as possible"

- Maria Ilyina -

Feedback and reviews of our graduates

Press for more info

First places at Kaggle competitions

Publications in renowned academic journals

Winners of HSE student research competition

Winners of different scholarships (named after Potanin, Grodsky)

Winners

Great achievements

Press for more info

Part 3

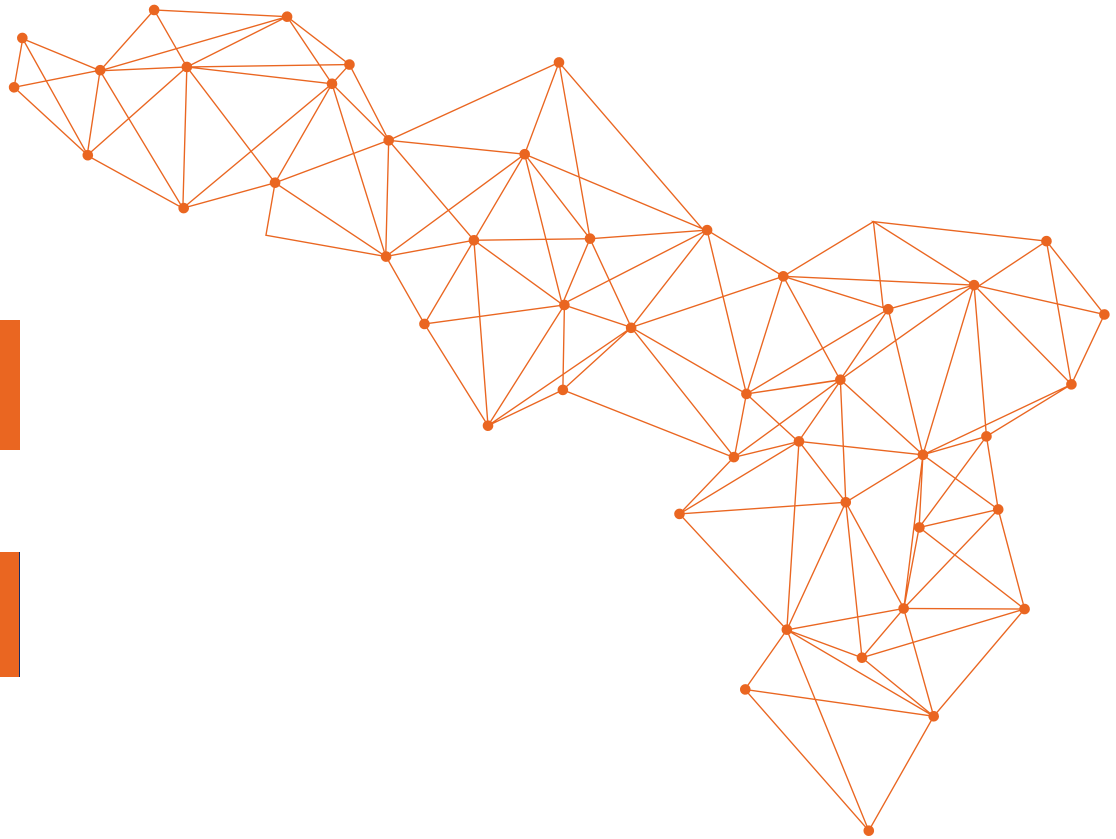
Our contacts

Our programme websites

Where to find more information?

DASS
HSE website

ANR-Lab
HSE website



Press the figures above to follow the link

Be the first one to know the news

Find the recordings of Open House events, listen to what students say about their education and enjoy the ANR-lab online seminars on YouTube

https://vk.com/hsemasna

https://t.me/anrlab

Press the logo to follow the link

ANR lab

See you among our students

Press the icon above to follow the link