

Summary

Key skills and personal qualities

- Ability to think strategically and analytically
- Ability to multi-task
- ability to organize work, plan, take solutions to solve problems independently
- ability to analyze problems, effectively find ways their permissions
- Ability to learn quickly
- communication skills, business correspondence, including foreign language

work experience

2018 to present - Deputy Director for International Affairs of the Institute of Mathematics and Information Technologies named after Professor N.I. Chervyakova

North Caucasian Federal University

2012 to present - Associate Professor of the Department of Information Security of Automated Systems of the North Caucasus Federal University

2006 - 2012 - Associate Professor of the Department of Information Security of the North Caucasus State Technical University

2003 - 2006 - Assistant, Senior Lecturer, Department of Applied Mathematics and Informatics, Stavropol State University

Education

2003 - Stavropol State University, specialty "Mathematics", qualification "Mathematician Lecturer, diploma with honors. **2003** -

Stavropol State University, specialty "Jurisprudence", qualification "Lawyer".

2005 - Stavropol State University, postgraduate study specialty 05.13.18 "Mathematical modeling, numerical methods and software packages".

2005 - Stavropol State University, diploma with the qualification "Teacher of Higher Education".

2005 - defense of a dissertation for the degree of candidate of physical and mathematical sciences.

2009 - Academic title Associate Professor at the Department of Information Security.

2015 - North Caucasian Federal University, master's degree in the direction of training 10.04.01 Information security, diploma with honors.

2020 - St. Petersburg State University, professional retraining "Software development and data analysis"

2021 - National Research Nuclear University MEPhI, professional retraining "Management of project activities in the digital educational environment of the university"

Maria Anatolyevna Lapin



Contacts

Email: mlapina@ncfu.ru

Tel.: +7(918)761-00-38

Additional Information

Date of birth: 02/23/1981

**Scientific-pedagogical
and Pedagogical experience:**

19 years

General work experience:

21 years old

Foreign language:

English, B2

Scopus profile:

[57205116248](#)

Web of Science profile:

[AAY-2311-2021](#)

ORCID profile:

[0000-0001-8117-9142](#)

Training under advanced training programs in 2021

- "Management of digital transformation in educational institutions of higher education", ANO VO "University of Innopolis", Innopolis
- "Management of digital transformation in educational institutions of higher Education", Institute for Advanced Studies and Digital Solutions in the Field of Science and Higher Education, RUDN University, Moscow
- "Practical Aspects of Ensuring Information Security in the Implementation of a Digital Transformation Strategy", Siberian State University of Telecommunications and Informatics, Novosibirsk
- Fundamentals of Digital Transformation, Russian Academy of National Economy and Public Administration under the President of the Russian Federation, Moscow

Training under advanced training programs in 2020

- "Methods and technologies based on working with data", ANO "University of National Technology Initiative 2035"
- Fundamentals of the Theory of Artificial Intelligence, ANO DPO "Sberbank Corporate University"
- "Microsoft Azure Technologies for Education. Modern technologies for preparation generations of the future", ANO PO IT HUB, Moscow
- "Some Aspects of Teaching Mathematical Disciplines", Higher School of Economics, Moscow city
- "Fundamentals of Algebra and Geometry", Higher School of Economics, Moscow
- "Modern trends in the development of the international activities of the university", Center for Education "Horizon" of the Peoples' Friendship University of Russia, Moscow
- "Mathematical English", Higher School of Economics, Moscow
- "Implementation of blended forms of education based on the integration of digital and analogue formats for organizing the educational process", State University of Management, Moscow
- "Individualization in Higher Education, or How to Transform the Educational Space of the University", Tyumen State University, Tyumen
- "Consultant in the field of development of digital literacy of the population, ANO DPO "Network University "Knowledge", Moscow

Internships 2018 – 2021

- Scientific internship at the Sapienza University of Rome (Italy), language English, 2018.
- Scientific internship at the University of Ljubljana (Slovenia), language English, 2018.
- Educational internship within the International Staff Training Week "Navigating the Challenges of Modern Universities" at the Technical University of Dresden (Germany), language English, 2019
- Educational internship "Organization of educational programs in the field of mathematics, computer science and digital technologies", Higher School of Economics, Moscow, 2020.
- Scientific internship at the innovative laboratory of higher education "The role of universities in innovative ecosystems of artificial intelligence", 2nd ASEF Higher Education Innovation Laboratory (ASEFInnoLab) "Universities' Role in Artificial Intelligence Innovation Ecosystems" supported by the Asia-Europe Foundation (ASEF) and Fudan University, Shanghai, China, English language, 2021

Experience, knowledge and skills in the field of digital transformation

- Participation in foresight sessions, including the "National Projects Navigator" of UrFU Business School, conducting classes in disciplines in the field of data processing and artificial intelligence, organizing scientific conferences and educational courses with foreign partners formed a basic knowledge of technologies and skills in working with data, possession of trends in the field of digital technologies

- Participation in the online conference “Best innovation practices in Russian and international universities”, organizer of SurTU, EdCrunch on Demand, organizer of MISiS and University 20.35 in the track “Universities of the future, training for the era of artificial intelligence”, holding international conferences in the field of digitalization of education
- Studying the issues of personalization of education, analysis of the digital footprint, development of individual educational trajectories, improvement of electronic educational environment, in order to form the competencies necessary to solve the problems of the digital economy.

Subjects taught

- Multivariate data analysis
- Mathematical and program methods of working with algebraic structures
- Software methods for solving spatial problems
- Fundamentals of information security
- Organizational and legal support of information security
- Research work

Publications indexed in Scopus and Web of Science

The results of scientific and practical activities are reflected in more than 160 scientific papers, including 31 articles in Scopus and 2 articles in WoS.

Scopus profile: [57205116248](#)

Web of Science profile : [AAY-2311-2021](#)

ORCID profile: [0000-0001-8117-9142](#)

RSCI: 5472-6001

Contest wins

- Winner of the competition "League of Lecturers" of the All-Russian Society "Knowledge", 2021

Supported applications for participation in international projects in 2021

- Higher Education Innovation Laboratory "The Role of Universities in Artificial Intelligence Innovation Ecosystems", 2nd ASEF Higher Education Innovation Laboratory (ASEFInnoLab) "Universities' Role in Artificial Intelligence Innovation Ecosystems", Asia-Europe Foundation (ASEF) and Fudan University, Shanghai, China, 2021
- Developing Leadership Skills for Women, Women's Leadership Skills, Department of Culture and Education, British Embassy in Moscow, University of York, England, 2021

Supported applications for funding in 2021

- Potanin Foundation, development of the online course “Multivariate Data Analysis”, 2021 – 500,000 rubles.

Submitted applications to funds to receive funding in 2020-2021

- Foundation of the German Academic Exchange Service DAAD, application for a scientific internship for scientists and university professors in 2021 at the University of Applied Sciences (HTWK-Leipzig), Germany, 2020, 2021
- Foundation for European Cooperation in Science and Technology (COST), application for a scientific study “Technical and Human aspects of AI for Secondary School students” in collaboration with universities in Europe, 2020, 2021
- Forum "Strong Ideas for the New Time", project "International School of Information Technology "IT-TREK"", 2020
- Rosmolodezh grant competition “School of mentors for personal development “iSkills”, 2020

Organization of cooperation with foreign scientists, support of visiting professors of NCFU

- Prof. Massimo Mecella, Sapienza University of Rome, Italy. Conducting joint scientific research, publishing in indexed publications, organizing joint international conferences, educational courses and scientific seminars on software engineering and smart environment.
- Prof. Fabrizio d'Amore, Sapienza University of Rome, Italy. Organization of joint international conferences.
- Prof. Joze Rugelj, University of Ljubljana, Slovenia. Carrying out joint scientific research in the field of gamification and the use of IT technologies in education, publication in indexed publications, organization of international conferences, educational courses.
- Prof. GS Prakasha, Bangalore Christian University, India. Conducting joint scientific research in the field of application of IT technologies in education, publication in indexed publications, organization of international conferences.
- Prof. Steffen Hoelldobler, Dresden University of Technology (Germany). Escort educational program with the possibility of obtaining two diplomas "Knowledge Management", organization of international conferences, educational courses.
- Prof. Peter Peer, University of Ljubljana, Slovenia. Organization of international conferences, educational courses.
- Prof. Carlos Grilo, Polytechnic University of Leiria, Portugal. Joint leadership masters of the Polytechnic University of Leiria, organization of international conferences.

Co-delivery and support of courses in English with support in LMS Moodle

- "IT in Education" ("Application of IT technologies in education"), together with Prof. Jose Rugelj, University of Ljubljana, Slovenia
- "Human Reasoning and the Weak Completion Semantics", with Prof. Steffen Hoelldobler, Dresden University of Technology, Germany
- "Image-Based Biometrics" ("Image-Based Biometrics"), in collaboration with Prof. Peter Peer, University of Ljubljana, Slovenia

Organization of conferences (Co-Chair of the Program Committee)

- AISMA-2021: International Workshop on Advanced in Information Security Management and Applications, International Conference on Modern Information Security Management Technologies and Applications, in collaboration with Sapienza University of Rome (Italy), <https://easychair.org/cfp/aisma-2021>
- DMAI-2021: International Workshop on Data Mining and AI, International Conference on data processing and artificial intelligence, in collaboration with Sapienza University of Rome (Italy), <https://easychair.org/cfp/DMAI-2021>
- SLET-2020, SLET-2021: International Conference Innovative Approaches to the Application of Digital Technologies in Education, in collaboration with the University of Ljubljana (Slovenia), <http://ceur-ws.org/Vol-2861/>
- YRID-2020: International Workshop on Data Mining and Knowledge Engineering, International conference on data mining and knowledge engineering, jointly with Rimsky Sapienza University (Italy) and University of Innsbruck (Austria), <http://ceur-ws.org/Vol 2842/>

Organization of conferences

(member of the Organizing and Program Committees)

- SLET-2019: International Conference Innovative Approaches to the Application of Digital Technologies in Education, International Conference on the Application of IT Technologies in Education, together with the University of Ljubljana (Slovenia), Member of the Organizing Committee, <http://ceur-ws.org/Vol-2494/>
- YSIP-2019, YSIP-2017: Young Scientist's Third International Workshop of Trends in Information Processing, International Youth School "Information Technology Development Trends", together with the Technical University of Dresden (Germany), member of the organizing committee, <http://ceur-ws.org/Vol-2500/>, <http://ceur-ws.org/Vol-1837/>
- REMS-2018: International Multidisciplinary Symposium on ICT Research "Integrating Research Agendas and Devising Joint Challenges", International Symposium on ICT Research "Integrating Modern Research Problems to Solve Global Challenges", together with Sapienza University of Rome (Italy), executive secretary of the organizing committee, <http://ceur-ws.org/Vol-2254/>
- All-Russian scientific and technical conference "Student science for the development of the information society", member of the organizing committee, 2017-2020.
- All-Russian scientific and technical conference "Building the IT future together", member of the organizing committee, initiator of the first conference, 2016-2020.
- Scientific-practical conference "Actual solutions for the effective work of IT infrastructure", organizing committee coordinator, 2017

Development of the concept and organization of events

- Regional educational forum "IT-JUMP"
- Information Security Forum
- Regional festival "IT-intervention"

Participation as an expert in events

- Travel hackathon "HackGround", Zheleznovodsk, 2021
- Hackathon on artificial intelligence, Organizer "Russia is a country of opportunities", Stavropol, 2021
- The program for the formation of the student personnel reserve "Personnel program" K-Labs ", Stavropol, 2021

Participation in international and national events

- Interregional Expert Forum "North Caucasus - 2030: Digital Transformation", Magas, 2021
- Forum on digital transformation in education, business and government, Digital Innopolis Days, Innopolis, 2021
- Project intensive "Archipelago 2121", Veliky Novgorod, 2021
- Army-2021 Forum, 2021
- International Forum on Teacher Education, Kazan, 2021
- Information Security Forum "Infoforum-2019: North Caucasus", Stavropol, 2019
- Information Security Forum "Infoforum-2018", "Infoforum-2019", session Federal UMO in the field of information security, Moscow, 2018, 2019
- International conference "Step into the future. New trends and IT solutions", Baku (Azerbaijan), 2018
- International Conference on Information Security with the support of Kaspersky Lab in Tbilisi (Georgia), 2017.

Organization of Olympiads

- Interregional Olympiad for Schoolchildren in Informatics and Computer Security, together with the Institute of Cryptography of Communications and Informatics of the Academy of the Federal Security Service of the Russian Federation
- Interregional Olympiad for Schoolchildren in Mathematics and Cryptography, together with
Institute of Communications Cryptography and Informatics of the Academy of the Federal Security Service of the Russian Federation
- All-Russian Team Programming Olympiad "Highest Standard", HSE
- International Certification Olympiad "Trajectory of the Future"
- International Olympiad "IT PLANET"

Thanks

- A letter of thanks from the Governor of the Stavropol Territory for his contribution to the development of the education system in the Territory, the training of qualified specialists and many years of conscientious work, 2015.
- Gratitude of the Director of the Institute of Cryptography of Communications and Informatics of the Academy of the FSB of Russia for the great contribution to the organization and holding of the Interregional Olympiad for schoolchildren in mathematics and cryptography, 2016
- A letter of thanks from the director of the non-profit organization Interregional association "Center for additional education "Leader", Stavropol in the framework of the program "Career Matrix", 2020
- A letter of thanks from the General Director of ANO "Russia - a Land of Opportunities" for assistance in organizing the All-Russian competition "Digital Breakthrough-2021" in Stavropol, 2021
- Letter of thanks from the vice-rector-head of the department for design and scientific research activities of ANO VO "Innopolis University" for participation as a speaker in the Forum on Digital Transformation in Education, Business and Public Administration, Digital Innopolis Days-2021.
- A letter of thanks from the NCFU Vice-Rector for Youth Policy for active participation in the implementation of youth policy, socially significant initiatives, as well as assistance in organizing and implementing projects in 2021.
- A letter of thanks from the Vice-Rector for Youth Policy of the NCFU for participating as expert in the program for the formation of the student personnel reserve "Personnel program K-Labs, 2021

Publications indexed in Scopus and Web of Science

The results of scientific and practical activities are reflected in more than 160 scientific papers, including 29 articles in Scopus publications and 2 articles in WoS.

Scopus profile: [57205116248](#)

Web of Science profile : [AAY-2311-2021](#)

OCRID profile: [0000-0001-8117-9142](#)

Rinz: 5472-6001

More than 20 educational and methodical works have been published, including 9 manuals.

Main publications in international editions:

- Proshkin, N., Basan, E., Lapina, M. Radio Frequency Method for Emulating Multiple UAVs // 17th International Conference on Intelligent Environments, IE 2021 – Proceedings, 2021, 9486599
- Kostyuchenko, E., Rakhmanenko, I., Lapina, M. Evaluation of a method for measuring speech quality based on an authentication approach using a correlation criterion // 17th International Conference on Intelligent Environments, IE 2021 – Proceedings, 2021, 9486435
- Chistousov, NK, Kalmykov, IA, Lapina, MA, Kalmykov, MI Application of Information Security Technologies for Improving the Imitation Resistance of Low-Orbital Satellite Communication Systems. Lecture Notes in Networks and System, 2021, 228, pp. 54-63, https://doi.org/10.1007/978-3-030-77448-6_6
- Grigoryan, K., Olefirenko, E., Basan, E., Lapina, M., Mecella, M. Analysis of Security Problems in Groups of Intelligent Sensors. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2021, 12689 LNCS, pp. 26-37, https://doi.org/10.1007/978-3-030-78743-1_3
- Basan, E., Lapina, M., Mudruk, N., Abramov, E. Intelligent Intrusion Detection System for a Group of UAVs, Lecture Notes in Computer Science, 2021, 12690 LNCS, pp. 230-240, https://doi.org/10.1007/978-3-030-78811-7_22
- Basan, AS, Basan, ES, Lapina, MA, Lapin, VG Behavior-Based Assessment of Trust in a Cyber-Physical System. Communications in Computer and Information Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2021, 1395 CCIS, pp. 190-201, https://doi.org/10.1007/978-981-16-1480-4_17
- Basan, E., Lapina, M., Mecella, M. Protected group control system for mobile robots. Paper presented at the YRID-2020 Proceedings of the International Workshop on Data Mining and Knowledge Engineering Stavropol, Russia, October 15-16, 2020, CEUR Workshop Proceeding 2021, 2842, pp. 4-12
- Alexandrova, L., Mozhaeva, G., Karabasheva, M., Lapina, M., & Rugelj, J. Use of IT for student centered learning approach to education at modern university. Paper presented at the CEUR Workshop Proceedings SLET-2020: International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education, 2861, 2020, pp. 32-40. <http://ceurws.org/Vol-2861/>
- Sherbakov, S., Lapina, M., Lapin, V., & Rugelj, J. Methodological support of game modeling in the educational process. Paper presented at the SLET-2020: International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education, CEUR Workshop Proceedings, 2861, 2020, pp. 351-361. <http://ceur-ws.org/Vol-2861/>
- Kormakova, VN, Klepikova, AG, Lapina, MA, Rugelj, J. ICT competence of a teacher in the context of digital transformation of education // CEUR Workshop Proceedings, 2021, 2914, pp. 138-150 <http://ceur-ws.org/Vol-2914/>
- Privalov, AN, Bogatyreva, YI, Lapina, MA, Lapin, VG, Mysina, YA Decision support information system for patient treatment procedures in hospital // CEUR Workshop Proceedings, 2021, 2914, pp. 441-448 <http://ceur-ws.org/Vol-2914/>
- Parfenov, DI, Bolodurina, IP, Lapina, MA Development of a model for detecting security incidents in event flows from various components in a network of telecommunication service providers // IOP Conference Series: Materials Science and Engineering 2020, 873(1), 012020, <https://doi.org/10.1088/1757-899X/873/1/012020>
- Basan, AS, Basan, ES, Lapina, MA, Kormakova, VN, Lapin, VG Security methods for a group of mobile robots according to the requirements of Russian and foreign legislation // IOP Conference Series: Materials Science and Engineering, 2020, 873(1), 012031, <https://doi.org/10.1088/1757-899x/873/1/012031>

- Proshkin, NA, Basan, ES, Lapina, MA, Klepikova, AG, Lapin, VG Developing models of IoT infrastructures to identify vulnerabilities and analyse threats // IOP Conference Series: Materials Science and Engineering, 2020, 873(1),012018 , <https://doi.org/10.1088/1757-899X/873/1/012018>
- Kurcheeva, GI, Klochkov, GA, Aletdinova, TA, Lapina, MA Digital city: The characteristics of development indicators of new technologies // Journal of Physics: Conference Series, 2019, 1333(7),072013, <https://doi.org/10.1088/1742-6596/1333/7/072013>
- Rugelj J., Lapina M. Game Design Based Learning of Programming: CEUR Workshop Proceedings SLET- 2019 – Proceedings of the International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research, 2494, 2019. pp. 29-42 <http://ceur-ws.org/Vol-2494/>
- Parfenov, D., Zaporozhko, V., Lapina, M., Sora, D. Development and Research of Algorithms for the formation of the Individual Educational Trajectories of Students in the Digital Educational Platform: CEUR Workshop Proceedings SLET-2019 – Proceedings of the International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research, 2494, 2019. Pp. 258-265. <http://ceur-ws.org/Vol-2494/>
- Kormakova, V., Klepikova, A., Musaelian, E., Baybikowa, G., Lapina, M. Formation of ICT Competencies of Postgraduate Students of Teacher Education Based on Interactive Techniques: CEUR Workshop Proceedings SLET-2019 – Proceedings of the International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research, 2494, 2019. Pp. 11-21. <http://ceur-ws.org/Vol-2494/>
- Aletdinova, A., Konshina, A., Lapina, M. Implementation of the Gamification Method in the Development of a Distance Course "Crowdsourcing Management": CEUR Workshop Proceedings SLET-2019 – Proceedings of the International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research, 2494, 2019. pp. 60-69. <http://ceur-ws.org/Vol-2494/>
- Dochshanov, A., Lapina, M. Robotics in STEM Education: a Multiperspective Strategy Case Study: CEUR Workshop Proceedings SLET-2019 – Proceedings of the International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research, 2494, 2019. Pp. 123-130. <http://ceur-ws.org/Vol-2494/>
- Basan, E., Lapina, M. and Orel, D. Host-based Method and System for Detecting Anomalies in Network Traffic for a Robotic System: CEUR Workshop Proceedings YSIP3 – Proceedings of the Young Scientist's Third International Workshop on Trends in Information Processing, 2019.
- Kalmykov, I., Lapina, M., Kalmykov, M., Voloshin, E. and Provornov, I. Development of Imitation-resistable Authentication Protocol for Low-orbital Space Satellite Communication System: CEUR Workshop Proceedings YSIP3 – Proceedings of the Young Scientist's Third International Workshop on Trends in Information Processing, 2019.
- Kalmykov, I., Lapina, M., Kononova, N., Kalmikov, M. Development of the protocol "electronic cash" with inspection correction rules of the electronic e-cash number for e-commerce systems: CEUR Workshop Proceedings REMS 2018 – Proceedings of the 2018 Multidisciplinary Symposium on Computer Science and ICT. 2018. Pp. 147-153.
- Linets, GI, Melnikov, SV, Govorova, SV, Medenec, VV, Lapina, MA Decrease energy consumption of transport telecommunication networks due to the usage of stage-by-stage controlling procedure: CEUR Workshop Proceedings REMS 2018 – Proceedings of the 2018 Multidisciplinary Symposium on Computer Science and ICT. 2018. Pp. 181-190.