

Faculty of Informatics and Control Systems

Control Systems Department

List of scientific works of Professor Nino Mchedlishvili 2015-2025:

1. G. Jandieri, Z. Sanikidze and N. Mchedlishvili. Application of a probabilistic-statistical methods of scattered radio waves in turbulent plasma. Transactions of A. Razmadze Mathematical Institute. Vol. 179 (2025), no. 2, pp. 247-255.
2. George Jandieri, Akira Ishimaru, Nika Tugushi, Nino Mchedlishvili. Temporal Power Spectrum of Scattered Electromagnetic Waves in the Equatorial Terrestrial Ionosphere. Transactions of A. Razmadze Mathematical Institute. Vol. 178 (2024), issue 1, pp. 77-86
3. G. Jandieri, A. Ishimaru, V. Gavrilenko, N. Mchedlishvili and O. Kharshiladze, Power Spectra of Radio Waves Scintillation in the High-Latitude Conductive Terrestrial Ionosphere. Bulletin of TICMI (Tbilisi International Centre of Mathematics and Informatics) vol. 27 №2, 2023, 81-94. ISSN 1512-0082.
4. G. V. Jandieri, N. F. Mchedlishvili and N. K. Tugushi, "Compensation Effect in the Conductive Polar Ionosphere," *2023 Photonics & Electromagnetics Research Symposium (PIERS)*, Prague, Czech Republic, 2023, pp. 1928-1932, doi: 10.1109/PIERS59004.2023.10221484.
5. Nino Mchedlishvili, Nodar Narimanashvili, Natia Chincharauli. Computer modeling of management objects with distributed parameters. International scientific-practical conference dedicated to the 100th and 65th anniversary of the Faculty of Informatics and Control Systems of the Technical University of Georgia, "Innovations and modern challenges - 2022", collection of works. Georgia, Tbilisi, 18-19. 11.2022.
6. Nino Mchedlishvili, Nodar Narimanashvili. Modeling distributed objects. Works on automated management systems, No. 1(32), Vol. 2, Gam. "Technical University", Tbilisi, 2021, pp. 55-59.
7. Irma Davitashvili, Nino Mchedlishvili, Zurab Tsveraidze, Levan Laliashvili. THE STUDY OF INTERNET DYNAMICS THROUGH. ASSESSMENT OF SCALE FEATURE OF A NETWORK ECHO MECHANISM. Papers on Automated Control Systems, No. 1(32), Vol. 1, St. "Technical University", Tbilisi, 2021, pp. 131-134.
8. George Jandieri, Akira Ishimaru, Nino Mchedlishvili. Compensation Effect in the Conductive Auroral Regions of the Terrestrial Atmosphere. Progress in Electromagnetics Research M, Vol. 105, 119-129 p. 2021.
9. Sophio Barnovi, et. al. "Recognition of Antimicrobial Peptides by Neural Networks." American Journal of Engineering Research (AJER), vol. 10(5), 2021, pp. 163-169.

10. Georgi Jandieri, Jaromir Pistora, Nino Mchedlishvili. Power Spectrum in the Conductive Terrestrial Ionosphere Journal of Environmental & Earth Sciences | Volume 02 | Issue 01 | April 2020, pp.21-30.
11. G.V. Jandieri, A.Ishimaru, B.Rawat, N.Mchedlishvili. Spatial Power Spectrum of Scattered Electromagnetic Waves in The Conductive Anisotropic Magnetized Plasma, International Journal of Microwave and Optical Technology, vol.14, no.6, 2019, pp. 440-449
12. I. Mosashvili, N. Mchedlishvili, N. Chachava. The students' mobility is supported by a double diploma. Proceeding of the international conference, Internationalization of High Education: Strategies and Challenges. Georgian Technical University. Tbilisi, 2017.
13. A. Mgeladze, N. Mchedlishvil, Neuroinformatics Systems. International Scientific Conference of Globalization and Modern Business Challenges, GTU, p.275-282, Tbilisi, 2017.
14. Jandieri G., Diasamidze Zh., Mchedlishvili N., Nemsadze I. Statistical Characteristics of Multiple Scattered Electromagnetic Waves in the Collision Magnetized Turbulent Plazma, "WORLDCOMP'16 (The 2016 World Congress in Computer Science, Computer Engineering and Applied Computing), CSC'16 (the 11<sup>th</sup> International Conference of Scientific Computing): "Numerical methods, Approximation and estimation techniques, Optimization methods", pp.97-103, July 25-28, Las Vegas, Nevada, Usa, 2016.
15. Ia Mosashvili, Nino Mchedlishvili, Irma Davitashvili. The control problems of voice sensors. Proceedings of Automated Control Systems, №2(20), "Technical University", Tbilisi, 2015, p. 157-161.
16. Kervalishvili G.P., Gasitashvili Z.A., Khutsishvili S.A., Mchedlishvili N.P., Khartishvili M.P. Classification of transport logistics centers and the method of determining their optimal location, GEORGIAN ENGINEERING NEWS, No.2, 2015. GEN LTD, pp. 30-37.

#### Books

1. N. Mchedlishvili, I. Davitashvili Methodical instructions for laboratory works Tbilisi: Stu, 2015. 128 p. CD-2303;
2. N. Mchedlishvili lecture course in the subject of management theory 2, Tbilisi: Stu, 2015. 58 p. CD-2302;
3. N. Mchedlishvili, I. Davitashvili. Methodological guidelines for laboratory work in the subject Theory of Management 2, Tbilisi: Stu, 2015. 64 p. CD-2304;
4. N. Mchedlishvili, I. Davitashvili programming in MATLAB environment. Tbilisi: Stu, 2015. 110 p. CD-2626
5. N. Mchedlishvili, I. Davitashvili. Programming in Matlab environment. Sat. Technical University, Tbilisi, 2015. 109 p.
6. Nino Mchedlishvili, Irma Davitashvili, Theory of automatic control of linear systems. Tbilisi: Stu, 2016. 208 p.
7. Nino Mchedlishvili, Irma Davitashvili, theory of control of nonlinear and discrete systems. Tbilisi: Stu, 2017. 152 p.
8. M. Akhobadze, N. Mchedlishvili. Making Decisions Based on Inaccurate Data. Fuzzy - Technologies, Georgian Technical University, Tbilisi, 2017.

9. M. Akhobadze, N. Mchedlishvili. Modeling and managing in the face of imprecise data. Fuzzy - Technologies, Sat. Technical University, Tbilisi, 2018. 123 p.
10. N. Mchedlishvili, N. Narimanashvili. Non-linear and Discrete Control Systems, Georgian Technical University, Tbilisi, 2019.
11. Archil Frangishvili, Nino Mchedlishvili, Oleg Namicheishvili. Artificial Neural Networks. Computer Modeling, Georgian Technical University, Tbilisi. 2020.
12. N. Mchedlishvili, I. Davitashvili. Programming in Matlab environment. second edition. Sat. Technical University, Tbilisi, 2021. 145 p.
13. Nino Mchedlishvili, Irma Davitashvili. Modeling and Simulation of Engineering Systems Using Simulink and Simscape. 2025. 122 p.
14. Nino Mchedlishvili, Nodar Narimanashvili, Tea Khutsishvili. Solving Optimization Problems in the Matlab Environment. Tbilisi, 2025. 99p. ISBN 978-9941-520-72-3 (Approved by the Editorial Board, transferred to the Publishing House "Technical University")