

Universitatea: *Academia Tehnică Militară „Ferdinand I”*

Facultatea: Facultatea de Sisteme Informatice și Securitate Cibernetică

Departament: Departamentul de Calculatoare și Securitate Cibernetică

Lect. univ. dr. NIȚĂ Ștefania Loredana

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

“Contributions to Searchable and Homomorphic Encryption”, Universitatea din București, Facultatea de Matematică și Informatică, Îndrumător științific: Prof.univ.dr.ing. Florentin Ipate

B. Cărți și capitole în cărți publicate

1. Mihailescu, M. I., Nita, S. L., Marascu, V., & Barna, V. (2025). *Applied Quantum Computing and Cryptography: Challenges, Opportunities, and Performance Analysis for Algorithms*. Springer.
2. Nita, S. L., Mihailescu, M. I. (2024) *Cryptography and Cryptanalysis in Java: Creating and Programming Advanced Algorithms with Java SE 21 LTS and Jakarta EE 11*. Apress – Springer Nature Company, ISBN: 979-8-8688-0441-0, <https://link.springer.com/book/10.1007/979-8-8688-0441-0>
3. Mihailescu, M. I., & Nita, S. L. (2024). *Securing Web Data and Privacy in AIoT Systems*. In Semantic Web Technologies and Applications in Artificial Intelligence of Things (pp. 128-172). IGI Global.
4. Nita, S. L., Mihailescu, M. I. (2023) *Advances to Homomorphic and Searchable Encryption*. Springer Cham, ISBN: 978-3-031-43213-2, <https://link.springer.com/book/10.1007/978-3-031-43214-9>
5. Mihailescu, M. I., & Nita, S. L. (2023). *Pro Cryptography and Cryptanalysis with C++ 23: Creating and Programming Advanced Algorithms*. Berkeley, CA: Apress, <https://link.springer.com/book/10.1007/978-1-4842-9450-5>
6. Nita, S. L., Mihailescu, M. I. (2022) *Cryptography and Cryptanalysis in Java*. Apress – Springer Nature Company, ISBN: 978-1-4842-8105-5, <https://link.springer.com/book/10.1007/978-1-4842-8105-5>
7. Mihailescu, M. I., & Nita, S. L. (2022). *Cryptography and Cryptanalysis in MATLAB: Creating and Programming Advanced Algorithms*. Apress – Springer Nature Company. ISBN: 978-1-4842-7334-0, <https://www.apress.com/gp/book/9781484273333>
8. Mihailescu, M. I., & Nita, S. L. (2021). *Pro Cryptography and Cryptanalysis using C++ 20*. Apress – Springer Nature Company. ISBN: 978-1-4842-6586-4, DOI: 10.1007/978-1-4842-6586-4, <https://www.springer.com/us/book/9781484265857#otherversion=9781484265864>
9. Mihailescu, M. I., & Nita, S. L. (2021). *Pro Cryptography and Cryptanalysis: Creating Advanced Algorithms with C# and .NET*. Apress – Springer Nature Company, 2021. ISBN: 978-1-4842-6367-9, DOI: 10.1007/978-1-4842-6367-9, <https://www.springer.com/us/book/9781484263662>

10. Mihailescu, M. I., & **Nita, S. L.** (2021). *CSAP: Cyber Security Asynchronous Programming With C++ 20 and C# 8 for Internet of Things and Embedded Software Systems*. In Examining the Impact of Deep Learning and IoT on Multi-Industry Applications (pp. 249-269). IGI Global.
11. **Nita, S. L.**, & Mihailescu, M. I. (2019). *Haskell Quick Syntax Reference: A Pocket Guide to the Language, APIs, and Library*. Apress – Springer Nature Company. ISBN: 978-1-4842-4507-1. DOI: 10.1007/978-1-4842-4507-1, <https://link.springer.com/book/10.1007/978-1-4842-4507-1>
12. **Nita, S. L.**, & Mihailescu, M. I. (2017). *Practical Concurrent Haskell: With Big Data Applications*. Apress – Springer Nature Company. ISBN: 978-1-4842-2781-7, DOI: 10.1007/978-1-4842-2781-7, <https://link.springer.com/book/10.1007/978-1-4842-2781-7>

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. Medvei, M. M., Bordei, A.-V., **Niță, Ș. L.**, & Țăpuș, N. (2025). *DeepSIGNAL-ITS—Deep Learning Signal Intelligence for Adaptive Traffic Signal Control in Intelligent Transportation Systems*. Applied Sciences, 15(17), 9396. <https://doi.org/10.3390/app15179396>
2. Modiga, M. M., **Nita, S. L.**, & Arseni, S. C. (2025, June). *Secure Embedding of Sensitive Identity Data in Surveillance Videos Using Steganography*. In 2025 17th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE.
3. Pantelimon, I. L., & **Nita, S. L.** (2025, May). *Development of a True End to End Email Encryption System*. In 2025 25th International Conference on Control Systems and Computer Science (CSCS) (pp. 663-666). IEEE.
4. Modiga, M. M., **Nita, S. L.**, & Arseni, S. C. (2025, May). *Evaluation of face detection algorithms for real-time surveillance application*. In 2025 25th International Conference on Control Systems and Computer Science (CSCS) (pp. 426-431). IEEE.
5. Mihailescu, M. I., **Nita, S. L.**, & Marascu, V. (2024, May). *CRANE: A Genuine Framework based on Verifiable Searchable Encryption Security and Resource Constraints Balancing on Client Side*. In 2024 International Conference on Smart Applications, Communications and Networking (SmartNets) (pp. 1-6). IEEE.
6. **Nita, S. L.**, & Mihailescu, M. I. (2024). *A Novel Authentication Scheme Based on Verifiable Credentials Using Digital Identity in the Context of Web 3.0*. Electronics, 13(6), 1137.
7. **Nita, S.L.**, Mihailescu, M.I. *Elliptic Curve-Based Query Authentication Protocol for IoT Devices Aided by Blockchain*. Sensors 2023, 23, 1371. <https://doi.org/10.3390/s23031371>
8. **Nita, S. L.**, Mihailescu, M. I., Marascu, V., & Rogobete, M. (2024, June). *Access Control Based on Self-Sovereign Identity*. In 2024 16th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-5). IEEE.
9. Marascu, V., Mihailescu, M. I., **Nita, S. L.**, & Rogobete, M. (2024, June). *Automated Recognition of Structures in Scanning Electron Microscopy Images Using Specialized Algorithms in MATLAB and Python: An Overview*. In 2024 16th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE.
10. Mihali, S. I., & **Niță, Ș. L.** (2024, May). *Credit card fraud detection based on random forest model*. In 2024 International Conference on Development and Application Systems (DAS) (pp. 111-114). IEEE.

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11. Mihali, S. I., & Niță, Ș. L. (2024, June). *Cybersecurity of online financial systems using machine learning techniques*. In 2024 16th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE.
12. Nita, S. L., Mihailescu, M. I., Marascu, V., & Rogobete, M. (2024, August). *Shaping the Future of Intelligent Computing Systems Through Cybersecurity and AI*. In 2024 Advanced Topics on Measurement and Simulation (ATOMS) (pp. 212-215). IEEE.
13. Mihailescu, M. I., & Nita, S. L. (2023). *Towards Data Science for Cybersecurity: Machine Learning Advances as Glowing Perspective*. In Proceedings of SAI Intelligent Systems Conference (pp. 26-48). Springer, Cham.
14. Mihailescu, M. I., Nita, S. L., Rogobete, M., & Marascu, V. (2023). *Unveiling Threats: Leveraging User Behavior Analysis for Enhanced Cybersecurity*. In 2023 15th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 01-06). IEEE.
15. Mihailescu, M. I., & Nita, S. L. (2022). *Blockchain Search Using Searchable Encryption Based on Elliptic Curves*. In International Conference on Advanced Information Networking and Applications (pp. 471-481). Springer, Cham.
- Nita, S. L., & Mihailescu, M. I. (2021). *Blockchain Applications in Computer Communication*. The 13th International Conference on Electronics, Computers And Artificial Intelligence ECAI 2021, July 1– July 3.
16. Mihailescu, M. I., & Nita, S. L. (2022). *A Searchable Encryption Scheme with Biometric Authentication and Authorization for Cloud Environments*. *Cryptography*, 6(1), 8.
17. Mihailescu, M. I., Nita, S. L., Asalomia, B. L., Rogobete, M. G., & Racuciu, C. (2022, June). *Customized Authorization Process for Cloud Computing and IoT Using Attribute-Based Encryption*. In 2022 14th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-4). IEEE.
18. Nita, S. L., & Mihailescu, M. I. (2022, June). *Fuel Monitoring System based on IoT: Overview and Device Authentication*. In 2022 14th International Conference on Communications (COMM) (pp. 1-4). IEEE.
19. Mihailescu, M. I., Nita, S. L., Rogobete, M. G. (2021). *Authentication Protocol for Intelligent Cars using Fog Computing and Software-Defined Networking*. The 13th International Conference on Electronics, Computers And Artificial Intelligence ECAI 2021, July 1– July 3.
20. Mihailescu, M. I., & Nita, S. L. (2020). *Three-Factor Authentication Scheme Based on Searchable Encryption and Biometric Fingerprint*. In 2020 13th International Conference on Communications (COMM) (pp. 139-144). IEEE.
21. Nita, S. L., & Mihailescu, M. I. (2020). *A Searchable Encryption Scheme Based on Elliptic Curves*. In Workshops of the International Conference on Advanced Information Networking and Applications (pp. 810-821). Springer, Cham.
22. Mihailescu, M. I., Nita, S. L., & Corneliu, P. V. (2020). *E-Learning System Framework Using Elliptic Curve Cryptography and Searchable Encryption*. *eLearning & Software for Education*, Vol. 1, pp. 545-552.
23. Mihailescu, M. I., Nita, S. L., & Corneliu, P. V. (2020). *Applied Cryptography in Designing E-Learning Platforms*. *eLearning & Software for Education*, Vol. 2, pp. 179–189.
24. Mihailescu, M. I., Nita, S. L., & Racuciu, C. (2020). *Multi-Level Access Using Searchable Symmetric Encryption with Applicability for Earth Sciences*. *Scientific Bulletin "Mircea cel Batran" Naval Academy*, Vol. 23(1), pp. 213A-220.

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25. Mihailescu, M. I., **Nita, S. L.**, & Racuciu, C. (2020). *Authentication protocol based on searchable encryption and multi-party computation with applicability for earth sciences*. Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 23(1), pp. 221A-230.
26. **Nita, S. L.**, Mihailescu, M. I., & Racuciu, C. (2020). *Secure Document Search in Cloud Computing using MapReduce*. Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 23(1), pp. 231A-235.
27. **Nita, S. L.**, Mihailescu, M. I., & Pau, V. C. (2018). *Security and cryptographic challenges for authentication based on biometrics data*. Cryptography, 2(4), Art. No. 39.
28. **Nita, S. L.**, & Mihailescu, M. I. (2018). *On Artificial Neural Network used in Cloud Computing Security-A Survey*. In 2018 10th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE.
29. **Nita, S. L.**, & Mihailescu, M. I. (2018). *Proposing a Secure e-Learning System Based on Biometric Authentication and Homomorphic Encryption*. eLearning & Software for Education, Vol. 4, pp. 47-52.
30. **Nita, S. L.**, & Mihailescu, M. I. (2018). *A Hybrid Searchable Encryption Scheme for Cloud Computing*. In International Conference on Security for Information Technology and Communications (pp. 85-96). Springer, Cham.
31. **Nita, S. L.**, & Mihailescu, M. I. (2017). *Proposing A Secure Framework for Elearning Platforms Using Attribute Based Encryption*. eLearning & Software for Education, Vol. 2, pp. 114-119.
32. **Nita, S. L.** (2016). *On Recommendation Systems Applied in Big Data*. In 2016 8th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE.
33. **Nita, S.**, & Mihailescu, M. (2017). *Importance of Big Data in Maritime Transport*. Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 20(1), pp. 485-489.
34. Dumitru, L. A., Eftimie, S., Mihailescu, M. I., **Nita, S. L.**, Opris, V., & Racuciu, C. (2016). *A Novel Architecture for Authenticating Scalable Resources in Hybrid Cloud*. In 2016 International Conference on Communications (COMM) (pp. 251-254). IEEE.
35. Mihailescu, M. I., **Nita, S. L.**, & Pau, V. C. (2016). *New Big Data Model Based on Social Learning Environment Using Artificial Intelligence*. In The International Scientific Conference eLearning and Software for Education (Vol. 1, pp. 428-435). "Carol I" National Defence University.
36. **Nita, S.L.** (2016). *Preventing SQL Injection Attacks using Hidden Markov Model and Viterbi Algorithm*. International Conference on Development and Application Systems (DAS) 13th Edition.
37. Mihailescu, M.I., **Nita, S.L.**, Pirloaga, M.D (2016). *Software Security Techniques: Risks and Challenges*. Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 19(1), pp. 458-465.
38. **Nita, S. L.**, Dumitru, L., & Beteringhe, A. (2016). *Machine Learning Techniques Used in Big Data*. Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 19(1), pp. 466-471.
39. **Nita, S.L.**, Mihailescu, M.I. (2016). *About Issues and Threats for Cloud Computing*. In Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 19(2), pp. 495-499.
40. Dumitru, L., **Nita, S.L.** (2016). *Automated FPGA Firmware Management in HPC Clusters*. In Scientific Bulletin "Mircea cel Batran" Naval Academy, Vol. 19(2), pp. 406-411.

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

- Reviste

N/A

- Selecție cu maximum 20 lucrări în volume de conferințe

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1. **Nita, S. L.**, & Mihailescu, M. I. (2021). *Blockchain Technology for Maritime Industry*. The 7th International Scientific Conference SEA-CONF May 2021.
2. Mihailescu, M. I., & **Nita, S. L.** (2021). *Cloud Architectures based on Searchable Encryption for Maritime Software Industry*. The 7th International Scientific Conference SEA-CONF May 2021.
3. Mihailescu, M. I., **Nita, S. L.**, Racuciu, C. (2021). *Searchable Symmetric Encryption for Cloud Software in Maritime Industry*. The 7th International Scientific Conference SEA-CONF May 2021.

E. Brevete obținute în întreaga activitate

- **Oficiul Român pentru Drepturile de Autor (ORDA)**

1. **S. L. Nita**, M.I. Mihailescu, S.D. Eftimie, C. Racuciu, S.C. Racuciu – *CEREBRIUS - Software for Human Error Recognition and Live Observation of Cognitive Knowledge* – Nr. înregistrare 3532/23.09.2024
2. **Nita, S. L.**, Mihailescu, M. I. – *INCANT – A Multi-Factor Authentication Protocol based on Biometric Characteristics* – Nr. înregistrare 261/22.01.2024
3. **Nita, S. L.**, Mihailescu, M. I. – *CAMINO - Blockchain Simulator developed in Python* – Nr. înregistrare 260/22.01.2024
4. **Nita, S. L.**, Mihailescu, M. I. – *ANCHORET - Searchable Encryption Scheme for IoT Raspberry PI's in Edge Computing* – Nr. înregistrare 259/22.01.2024
5. **Nita, S. L.**, Mihailescu, M. I. – *CHAPERONE – Searchable Encryption Protocol for Authentication in Information Systems* – Nr. înregistrare 258/22.01.2024
6. **Nita, S. L.**, Mihailescu, M. I. – *CLARION – Blockchain Simulator developed in C#* – Nr. înregistrare 257/22.01.2024
7. **Nita, S. L.**, Mihailescu, M. I. – *RESONANT – Homomorphic Encryption Scheme for Authentication in Information Systems* – Nr. înregistrare 256/22.01.2024
8. **Nita, S. L.**, Mihailescu, M. I. – *REOPEN - Homomorphic Encryption Scheme for IoT Raspberry PI's in Edge Computing* – Nr. înregistrare 255/22.01.2024

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Semnătura:

