

MEMORIU ȘTIINȚIFIC
Drd. Dmitrii Nistor

Studii de doctorat

Perioada: 04.10.2021 – 20.07.2026

Conducător științific: CS1.dr. **Cătălin Mihai Ticoș**

Domeniu: **Fizică**

Titlul tezei de doctorat: **Characterization and mitigation of back-reflection in high-power laser systems**

Activitate științifică

A. Lista de lucrări științifice (articole în reviste sau volume)

1. D. Nistor, A. D. Dumitru, C. Derycke, O. Chalus, D. Ursescu, C. Ticos, "Assessing Optical Damage Risks by Simulating the Amplification of Back-Reflection in a Multi-Petawatt Laser system", High Power Laser Science and Engineering, pp. 1–10. (2025)
doi:10.1017/hpl.2025.10049.
2. D. Nistor, A. Magureanu, C. M. Ticos, "A Geometrical Model for Plasma Mirror Alignment in High-Power Laser Experiments", U.P.B. Sci. Bull., Series A, Vol. 87, Iss. 2, (2025).
3. D. Nistor, A. B. Nazîru, A. Măgureanu, D. Matei, C. Derycke, O. Chalus, V. Nastasa, I. Dancuș, M. Gugiu, D. Ursescu, T. Jitsuno, B. Diaconescu, Th. Asavei, S. Bălășcuță, M. Cernăianu, V. Gaciu, D. G. Ghiță, A.M. Lupu, M. Pătrășcoiu, M. Tătaru, L. Tudor, C. M. Ticoș, P. Ghenuche and D. Doria, "Commissioning of the Back-Reflection Monitoring System for Multi-Petawatt Irradiation of Solid Targets at ELI-NP", High Power Laser Science and Engineering, (2026),
doi:10.1017/hpl.2026.10143.
4. A. B. Nazîru, Ș. Popa, A. M. Lupu, D. Gh. Matei, A. D. Dumitru, D. Nistor, A. Toma, L. Vasescu, I. Dancuș, C. A. Stan, D. Ursescu, "Drift-free, 11 fs pulse delay stability in dual-arm PW-class laser systems," High Power Laser Science and Engineering, vol. 12, p. e64, (2024).
doi:10.1017/hpl.2024.54.
5. I. Dancuș, O. Chalus, C. Derycke, S. Ricaud, R. Banici, A. Baleanu, A. Alincutei, A. Gradinariu, M. Cernaianu, P. Ghenuche, B. Diaconescu, V. Nastasa, M. Gugiu, G. Cojocaru, A. Toma, D. Nistor, L. Vasescu, A. B. Naziru, V. Iancu, M. Talposi, A. D. Dumitru, S. Popa, D. G. Matei, D. Ursescu, O. Tesileanu, D. Doria, S. Gales, and C. A. Ur, "On Target optimization of the ELI-NP High Power Laser System", CLEO, Technical Digest Series, Optica Publishing Group, (2023).
6. I. Dancuș, G. V. Cojocaru, R. Schmelz, D. Matei, L. Vasescu, D. Nistor, A. M. Talposi, V. Iancu, G. P. Bleotu, A. Naziru, A. Lazar, A. D. Dumitru, A. Toma, M. Neagoe, S. Popa, S. Norbaev, C. Alexe, A. Calin, C. Ene¹, A. Toader, N. Stan, M. Caragea, S. Moldoveanu, O. Chalus, C. Derycke, C. Radier, S. Ricaud, V. Leroux, C. Richard, F. Lureau, A. Baleanu, R. Banici, A. Alincutei, I. Moroianu, A. Gradinariu, C. Caldararu, C. Capiteanu, D. Ursescu, D. Doria, O. Tesileanu, T. Jitsuno, R. Dabu, K. A. Tanaka, S. Gales and C. A. Ur, "10 PW Peak Power Laser at the Extreme Light Infrastructure Nuclear Physics – status updates", EPJ Web Conf., Volume 226, (2022).

B. Participări la conferințe/workshop-uri

1. Young Researchers & Young Engineers Days, ELI-NP Conference Center, Magurele, Romania, (2021), prezentare orală - "Aiding systems for the HPLS alignment in experimental area"
2. International Balkan Workshop on Applied Physics and Materials Science (IBWAP), Ovidius University, Constanta, Romania (2022), prezentare orală "10 PW Peak Power Laser at the Extreme Light Infrastructure Nuclear Physics – status updates".
3. International Conference on Laser, Plasma and Radiation - Science and Technology, Palace of the Parliament, Bucharest, Romania, (2022), poster - "Back-reflection monitoring system for high power laser system".
4. Young Researchers & Young Engineers Days, ELI-NP Conference Center, Magurele, Romania, (2022), prezentare orală - "Aiding systems for the HPLS alignment in experimental area".
5. "ELI-NP Autumn School 2022: Physics for the dual beam 10 PW laser at ELI-NP", ELI-NP Conference Center, Magurele, Romania, (2022).
6. International Balkan Workshop on Applied Physics and Materials Science (IBWAP), Ovidius University, Constanta, Romania (2023), prezentare orală - "Back-reflection analysis for solid target experiments at ELI-NP".
7. Young Researchers & Young Engineers Days, ELI-NP Conference Center, Magurele, Romania, (2023), prezentare orală - "Backreflection monitoring system for HPLS".
8. Conference Presentation, Young Researchers & Young Engineers Days, ELI-NP Conference Center, Magurele, Romania, (2024), prezentare orală - "Back reflection monitoring developments for 10 PW experiments".
9. "IRTG 2891 Nuclear Photonics - IRTG Lecture Week", ELI-NP Conference Center, Magurele, Romania, (2024).
10. "Intensive School Laser, Plasma & Fusion", Rethymnon, Greece, (2024).
11. Young Researchers & Young Engineers Days, ELI-NP Conference Center, Magurele, Romania, (2025), prezentare orală - "Simulating the behavior of HPLS".

Student-doctorand

.....