

LISTA DE LUCRARI

Teza de doctorat

Instituția: **Universitatea Tehnică „Gheorghe Asachi” din Iași**

Perioada: **2019-2023**

Coordonator: **Prof. univ. abil. dr.ing. Nicanor CIMPOEȘU**

Titlul tezei: **„CERCETĂRI ASUPRA COMPORTAMENTULUI SISTEMELOR METALO-CERAMICE LA PRELUCRĂRI MECANICE”**

PUBLICAȚII, PREZENTĂRI, CONFERINTE

Lucrări ISI cu/fără factor de impact, ISI proceedings, Lucrări publicate în B.I.P.I.,

1. M. Luțcanu, M. Coteață, M.A. Bernevig, C.D. Nechifor, M.M. Cazacu, P. Paraschiv, B. Istrate, G. Bădărău, I.G. Sandu, N. Cimpoeșu, Obtaining and Analyzing the Al₂O₃-ZrO₂ Ceramic Layers on Metallic Substrate, Arch. Metall. Mater. 67 (2022), 2, 479-485, DOI: <https://doi.org/10.24425/amm.2022.137780>, **F.I. 0.586**;

2. M. Lutcanu, R. Cimpoesu, M. Abrudeanu, C. Munteanu, S.G. Moga, M. Coteata, G. Zegan, M. Benchea, N. Cimpoesu and A.M. Murariu, Mechanical Properties and Thermal Shock Behavior of Al₂O₃-YSZ Ceramic Layers Obtained by Atmospheric Plasma Spraying, Crystals 2023, 13(4), 614; <https://doi.org/10.3390/cryst13040614>, **F.I. 2.670**.

3. M. Lutcanu, B. Istrate, M. Coteata, I. Stirbu, I.T. Birnoveanu, M. Popa, V. Manole and N. Cimpoesu, Analysis of Electrical Discharge Machining (EDM) cut of ceramic layers obtain through Atmospheric Plasma Spraying (APS) on steel substrate, ACTA TECHNICA NAPOCENSIS, 2022, Vol. 65, Issue Special IV, pg 1209-1214; **F.I. 0.3**

4. E.S. Bacaita, C.A. Peptu, C.-L. Savin (Logigan), **M. Lutcanu** and M. Agop, Manifest/Non-Manifest Drug Release Patterns from Polysaccharide Based Hydrogels—Case Study on Cyclodextrin—Carrageenan Crosslinked Hydrogels, POLYMERS 2021, <https://doi.org/10.3390/polym13234147>, **F.I. 4.96**;

5. C.A. Peptu, E.S. Bacaita, C.-L. Savin (Logigan), **M. Lutcanu** and M. Agop, Hydrogels Based on Alginates and Carboxymethyl Cellulose with Modulated Drug Release—An Experimental and Theoretical Study, POLYMERS 2021, <https://doi.org/10.3390/polym13244461>, **F.I. 4.96**.

6. R. Cimpoesu, **M. Lutcanu**, A.M. Cazac., I. Adomnitei, C. Bejinariu, L. Andrusca, M. Prelipceanu, L.I. Cioca, D.L. Chicet, A.M. Radu, N. Cimpoesu, Electrochemical Corrosion Resistance of Al₂O₃-YSZ Coatings on Steel Substrates, APPLIED SCIENCES-BASEL, 2024, Volume 14, Issue 23, DOI: 10.3390/app142310877, **F.I. 2,5**

7. **M. Luțcanu**, N. Cimpoeșu, B. Istrate, M. Coteață, V. Manole, I. Știrbu, F. Dimitriu, Analyze of Cutting Effect on Ceramic Coated Steels, 23rd International Conference on Material Forming, Procedia Manufacturing 47 (2020) 808–811, <https://doi.org/10.1016/j.promfg.2020.04.249>;

8. **M. Lutcanu**, B. Istrate, M. Coteata, D.L. Chicet, I. Ionita, C. Paraschiv, I. Stirbu, G. Badarau and N. Cimpoesu, Structural aspects and chemical analyses on cutting process of metallic-ceramic materials, IOP Conf. Series: Materials Science and Engineering, 1037 (2021) 012033, doi:10.1088/1757-899X/1037/1/012033;

9. **M. Luțcanu**, C. Munteanu, G. Kicsi, A.-M. Roman, C. Croitoru, B.A. Prisecariu, M.M. Cazacu, I. Știrbu, D.L. Chicet, N. Cimpoeșu, Analysis of water jet cutting of metal-ceramic elements made through atmospheric plasma spraying technique, Materials Today: Proceedings, Vol. 72, Part 2, 2023, Pg. 550-553, <https://doi.org/10.1016/j.matpr.2022.10.037>;

10. **Marian Luțcanu**, Cristian Croitoru, Iulian Ionița and Nicanor Cimpoeșu, Ceramic Coatings As Thermal Barrier For Metallic Substrate, Buletinul Institutului Politehnic din Iași, Universitatea Tehnică „Gheorghe Asachi” din Iași, Volumul 69 (73), Numărul 1-4, 2023.

11. S. Mistreanu, F. Tudose-Sandu-Ville, C. Munteanu, R. Cimpoesu, **M. Lutcanu**, I. Știrbu, V. Manole, N. Cimpoeșu, Influence of Corrosion on Thermo-Mechanical Contact Fatigue in Rolling Conditions With Low Amplitude Sliding, https://www.euroinvent.org/cat/ICIR_2022.pdf. **F.I. 0.7**

12. Adomniței I., Axinte M., Bernevig M.*, **Luțcanu M.**, Știrbu I., Manole V., Cimpoeșu N., ANALYZING THE USE OF CERAMIC COATINGS FOR THERMAL BARRIERS, BIPI, Nr. 3, Vol. 67 (75),

13. Nechifor C.D., **Lutcanu M.**, Brifrigence and 7CB Liquid Crystal Alignment in PVA Films from UV-Irradiated Solutions, University Politehnica of Bucharest Scientific Bulletin-Series A-Applied Mathenatics and Physics, Seria A, (2025), ISSN 1223-7027 **F.I. 0.6**.

Lucrări prezentate la conferințe

1. **M. Luțcanu**, N. Cimpoeșu, B. Istrate, M. Coteață, V. Manole, I. Știrbu, F. Dimitriu, Analyze of Cutting Effect on Ceramic Coated Steels, ESAFORM 2020 (Cottbus, Germany);

2. **M. Lutcanu**, B. Istrate, M. Coteata, D.L. Chicet, I. Ionita, C. Paraschiv, I. Stirbu, G. Badarau and N. Cimpoesu, Structural aspects and chemical analyses on cutting process of metallic-ceramic materials, IMANNE 2020 (Grecia, Atena);

3. M. Luțcanu, M. Coteață, M.A. Bernevig, C.D. Nechifor, M.M. Cazacu, P. Paraschiv, B. Istrate, G. Bădăraș, I.G. Sandu, N. Cimpoeșu, Obtaining and Analyzing the Al₂O₃-ZrO₂ Ceramic Layers on Metallic Substrate, ICIR 2021;

4. M. Lutcanu, B. Istrate, M. Coteata, I. Stirbu, I.T. Birnoveanu, M. Popa, V. Manole and N. Cimpoesu, Analysis of Electrical Discharge Machining (EDM) cut of ceramic layers obtain through Atmospheric Plasma Spraying (APS) on steel substrate, IMANNE 2022 (Slava, Ucraina);

5. M. Luțcanu, N. Cimpoeșu, Analyze Of Cutting Effect On Ceramic Coated Steels, CSD 2021 (Iasi, Romania)

6. M. Luțcanu, I. Ioniță, N. Cimpoesu, Experimental results from the obtaining of ceramic layers by APS and their post-deposition processing, CSD 2022 (Iasi, Romania).

7. Cristina-Delia Nechifor, Marian Luțcanu, Alexandra Tamara Sutic, Strategies to obtain PVA alignment layers for nematic liquid crystals used in biosensing, NanoBioMat 2024, May 19, 2024.

8. Cimpoeșu Nicanor, Adomniței Ionuț, Munteanu Corneliu, Axinte Mihai, Luțcanu Marian, Pop Alin, Telișcă Marius, Roman Ana Maria, CHARACTERIZATION OF CERAMIC COATINGS WITH THERMAL BARRIER ROLE OBTAINED BY ATMOSPHERIC PLASMA JET SPRAYING, Proceedings of IOC 2025 International Conference, 22-25 OCTOMBRIE 2025.

9. Cimpoesu N., Munteanu C., Gurlui S.O., Lutcanu M., Dascalu G., Moga SG., Tamasag I., Badarau G., Laser drilling of Al₂O₃-ZrO₂ Ceramic Coatings, The 23rd Edition of International Conference TEHNOMUS, November 14th - 16th, 2025, „Ștefan cel Mare” University of Suceava – ROMANIA.

PROIECTE

1. Grand intern – Publicații, nr. GI/P13/2021, Membru

2. Dezvoltarea culturii antreprenoriale a studenților de la inginerie și arhitectură prin crearea unei rețele de centre de pregătire în antreprenoriat – AntreprenorIng, POCU/379/6/21/123975, Secretar grup tinta

3. Perfectionarea teoretica si practica a cadrelor didactice din invatamantul preuniversitar pentru folosirea tehnologiilor educationale moderne in predarea fizicii si disciplinelor tehnice, POSDRU 157/1.3/S/132731, Secretar administrativ

4. Biosenzori cu cristale ancorate pe substrat de alcool polivinilic modificat fizic (PVA-BIOSENZ) - proiectului de cercetare nr. GNaC2023_264/2024, Asistent cercetare

5. Controlul vitezei de degradare a aliajelor biodegradabile de Zn prin modificarea (MAO) suprafețelor, contractului de Grand nr. GNaC_285/2025, Cercetător științific.

6. TRAINING SCHOOL INTERNAȚIONAL, “Exploring Confined Environments with Polymers, Ionic Liquids, and Deep Eutectic Solvents: Predicting Emerging Applications through Modeling and Advanced Experiments”, 2025, **Membru al comitetului de organizare.**