



LISTA DE LUCRĂRI

Asist. dr.ing. Ioan SZABO

A – Lista de articole

1- Publicații în Web of Science

- 1- Mariasiu, F.; Szabo, I.; Mariasiu, G.E. AI-Driven Thermal Management Optimization for Lithium-Ion Battery Packs: A Surrogate Model Approach to Cell Spacing Design. *Batteries* 2026, 12, 86. <https://doi.org/10.3390/batteries12030086>, WoS IF 4.8 / Q2
- 2- Szabo, I.; Mariasiu, F.; Buidin, T.I.C. Comparative Analysis of BTM Systems Made of a Fireproof Composite Material with Nano Boron Nitride. *Fire* 2025, 8, 63. <https://www.mdpi.com/2571-6255/8/2/63>, WoS IF 2.7/ Q1
- 3- Mariasiu, F.; Szabo, I.; Buidin, T.I.C. Numerical Simulation of a Thermal Management System Using Composite Flame-Retardant Resin and Its Effect on Battery Life Span. *Sustainability* 2024, 16, 3702. <https://doi.org/10.3390/su16093702> WoS IF 3.9/ Q2
- 4- Scurtu, L.I.; Szabo, I.; Gheres, M. Numerical Analysis of Crashworthiness on Electric Vehicle's Battery Case with Auxetic Structure. *Energies* 2023, 16, 5849. <https://doi.org/10.3390/en16155849> WoS IF 3.2/Q3
- 5- Ioan Szabo, Liviu I Scurtu, Horia Raboca, and Florin Mariașiu. "Topographical Optimization of a Battery Module Case That Equips an Electric Vehicle" *Batteries* 9, no. 2: 77. 2023. <https://doi.org/10.3390/batteries9020077>, WoS IF 5.938/ Q2
- 6- Bogdan Ovidiu Varga, Florin Mariasiu, Cristian Daniel Miclea, Ioan Szabo, Anamaria Andreea Sirca and Vlad Nicolae, Direct and Indirect Environmental Aspects of an Electric Bus Fleet Under Service, MDPI, ISSN 1996-1073, *Energies* 2020. <https://www.mdpi.com/1996-1073/13/2/336> WoS IF 3.252/Q3

2- Publicații în baze de date internaționale (BDI)

- 7- Szabo, I.; Bălcău, M.; Jurco, A.; Borzan, A.; Prodan, C.-V.; Rusan, C.-I.; Neagoș, V.; Scurtu, I.-L. Thermal Management Analysis of Second-Life Electric Vehicle Batteries Integrated into Photovoltaic Energy Storage Systems, ICEGD 2026, Iași - in curs de publicare.
- 8- Szabo, I., Scurtu, I.-L., Gheres, M.I., Gaspar, F., Balcau, M., Jurco, A., Borzan, A, I., Kocsis, L.,. APPLYING CIRCULAR ECONOMY PRINCIPLES BY REUSING ELECTRIC VEHICLE BATTERIES IN AGRICULTURE / APLICAREA PRINCIPILOR ECONOMIEI CIRCULARE PRIN REUTILIZAREA BATERIILOR DE LA VEhicULELE. ISB_INMA TEH, ISSN 2344 – 4118, pp. 904 – 909, Bucharest
<https://isbinmateh.inma.ro/wp-content/uploads/2025/11/Vol-ISB-INMA-TEH-2024.pdf>
- 9- Gheres, M.I., Nagy, M., Gheres, M., Ranta, O., Scurtu, I.-L., Szabo, I., SOFTWARE APPLICATION FOR DETERMINING THE QUALITY INDICES OF SPRAYING WORKS / APLICAȚIE SOFTWARE PENTRU DETERMINAREA INDICILOR DE CALITATE AI LUCRĂRIILOR DE STROPIT, ISB_INMA THE, ISSN 2344 – 4118, pp. 910 – 921, Bucharest
<https://isbinmateh.inma.ro/wp-content/uploads/2025/11/Vol-ISB-INMA-TEH-2024.pdf>
- 10- Ioan SZABO, Monica BĂLCĂU, Electric vehicle battery pack underbody shield design and optimization: A study on Dacia Spring . ICEGD 2024 Online ISSN 2344-4681
<http://sorging.ro/jideg/index.php/jideg/article/view/3523>
- 11- Marius-Ioan Gheres, Iacob-Liviu Scurtu, Ioan Szabo, Marinela Gheres, and Alexandru Ionescu, "NEW METHOD FOR TESTING DISPERSION DEVICES USED FOR PESTICIDEAPPLICATION," in ISB-INMA TEH', Bucharest, 2023, pp. 528–537.
<https://isbinmateh.inma.ro/wp-content/uploads/2025/11/Vol-ISB-INMA-TEH-2023-final.pdf>
- 12- Iacob-Liviu SCURTU, Monica BALCĂU, Anuța JURCO, Ioana CRĂCIUN, Andrei KIRALY, Ioan SZABO, EVALUATION AND IMPROVING THE AERODYNAMICS OF THE COMMERCIAL VAN Online ISSN 2344-4681 Print ISSN 1843-3766 <http://sorging.ro/jideg/index.php/jideg/article/view/296>
- 13- I Szabo, A A Sirca, L Scurtu, L Kocsis, I N Hanches, F Mariașiu. Comparative study of Li-ion 18650 cylindrical cell under pinch indentation, Annual Session of Scientific Papers - IMT Oradea 2022, *Materials Science and Engineering*, 2022
<https://iopscience.iop.org/article/10.1088/1757-899X/1256/1/012022>



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- 14- **I Szabo**, A A Sirca, L Scurtu, L Kocsis, I N Hanches and F Mariaşiu, Comparative study of Li-ion 21700 cylindrical cell under mechanical deformation, Annual Session of Scientific Papers - IMT Oradea 2022, Materials Science and Engineering, 2022
<https://iopscience.iop.org/article/10.1088/1757-899X/1256/1/012023/meta>
- 15- A.A. Sirca, **I.Szabo** , F. Mariaşiu, D.Moldovanu and H.Cărăuşan, Influence of drone's nacelle conicity on the airflow dynamics, Annual Session of Scientific Papers - IMT Oradea 2022, Materials Science and Engineering, 2022
<https://iopscience.iop.org/article/10.1088/1757-899X/1256/1/012015/meta>
- 16- **I Szabo**, L Kocsis and F Mariasiu, Research on the behaviour of a LiFePo4 pouch cell under mechanical stress, Annual Session of Scientific Papers - IMT Oradea 2020, ISSN: 2457-8347, Materials Science and Engineering, 2020
<https://iopscience.iop.org/article/10.1088/1757-899X/898/1/012020>
- 17- **I Szabo**, L Kocsis and F Mariasiu, Research on the behaviour of a LiFePo4 prismatic cell subjected to mechanical stress, Annual Session of Scientific Papers - IMT Oradea 2020, ISSN: 2457-8347, IOP Materials Science and Engineering, 2020
<https://iopscience.iop.org/article/10.1088/1757-899X/898/1/012021/meta>
- 18- L Scurtu , **I Szabo** , F Mariaşiu, D Moldovanu, L Mihali , Ancuta Jurco, Numerical analysis of the influence of mechanical stress on the battery pack's housing of an electric vehicle, Annual Session of Scientific Papers "IMT ORADEA 2019, ISSN: 1757-8981, IOP Materials Science and Engineering, 2019 <https://iopscience.iop.org/article/10.1088/1757-899X/568/1/012054/meta>
- 19- Florin MARIASIU, Adela BORZAN, Marius S. MOTOGNA, **Ioan SZABO**, Performance Analysis of Electric Vehicles Available in the Current Automotive Market, THE ANNALS OF "DUNAREA DE JOS" UNIVERSITY OF GALATI FASCICLE IX. METALLURGY AND MATERIALS SCIENCE No . 1 – 2019, ISSN 2668-4748; e-ISSN 2668-4756, 2019
<https://www.gup.ugal.ro/ugaljournals/index.php/mms/article/view/2767>

B - Teza de doctorat:

Cercetări privind influența solicitărilor structurale asupra surselor energetice ce echipează vehiculele electrice.

Conducător științific: Prof. Dr. Habil. Ing. Florin MARIAȘIU

C - Brevete de invenție

D - cărți și capitole în cărți;

- 1- **Szabo Ioan**, Grafică asistată de calculator și desen tehnic, Editura U.T.PRESS, ISBN: 978-606-737-843-6, Cluj Napoca, 2026,
<https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/843-6.pdf>
- 2- **Szabo Ioan**, Computer-aided graphics and technical drawing, Editura U.T.PRESS, ISBN: 978-606-737-844-3, Cluj Napoca, 2026,
<https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/844-3.pdf>
- 3- Scurtu Iacob-Liviu, **Szabo Ioan**, Rusan Claudiu, Infografică Tehnică- Îndrumător de laborator, Editura U.T.PRESS, ISBN: 978-606-737-695-1, Cluj Napoca, 2024,
<https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/695-1.pdf>



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- 4- **Szabo Ioan**, Cercetări privind influența solicitărilor structurale asupra surselor energetice ce echipează vehiculele electrice. Editura U.T.PRESS, ISBN: 978-606-737-652-4, Cluj-Napoca, 2023

<https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/652-4.pdf>

- 5- Prim autor la un capitol în cartea *Tendențe tehnologice în domeniul autovehiculelor*- Editor Burnete Nicolae Vlad: **SZABO Ioan**, SCURTU Iacob-Liviu, MARIAȘIU Florin, „Tendențe de dezvoltare a surselor energetice utilizate în construcția vehiculelor electrice”, pp. 55-71, UTPRESS Cluj - Napoca, 2023, ISBN 978-606-737-641-8,

<https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/641-8.pdf>

E - Articole/studii in extenso, publicate în reviste din fluxul științific internațional

F - Publicații in extenso, apărute în lucrări ale conferințelor internaționale de specialitate;

G - Alte lucrări și contribuții științifice

- 1- Recenzor la jurnale de specialitate din domeniu:

Jurnale științifice MDPI : World Electric Vehicle Journal, Applied Sciences, Batteries, Materials, Vehicles, Energies, Sustainability, Machines