

Model F17 - Memoriul științific al studentului doctorand

MEMORIU ȘTIINȚIFIC Drd. Ioan-Sorin SORLEI

Studii de doctorat

Perioada: 2020 – 2025

Conducător științific: Prof.dr.ing. Nicu BIZON

Domeniu: Inginerie Electronică, Telecomunicații și Tehnologii Informaționale

Titlul tezei de doctorat: CONTROL, OPTIMIZARE, DIAGNOZĂ ȘI ÎNTREȚINERE PREDICTIVĂ A SISTEMULUI ELECTRIC HIBRID DE ENERGIE DIN VEHICULE ELECTRICE CU PILE DE COMBUSTIBIL

Activitate științifică

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

1. Oproescu, M., Bizon, N., Carcadea, E., Culcer, M., Iliescu, M., Raceanu, M., & Sorlei, S. *Performance of the load-following control switched to the air and hydrogen regulators of the fuel cell system*. In 2020 12th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE, 2020;
2. Bizon, N., Sorlei, S., Carcadea, E., Culcer, M., Iliescu, M., & Raceanu, M. *Sensitivity Analysis Based on the Defined Load Threshold for a new Fuel Economy Strategy used in Fuel Cell Vehicles*. In 2020 12th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE, 2020.
3. Bizon, N., Oproescu, M., Thounthong, P., Varlam, M., Carcadea, E., Culcer, M., ... & Sorlei, I. S. *Improving the fuel economy and battery lifespan in fuel cell/renewable hybrid power systems using the power-following control of the fueling regulators*. Applied Sciences, 10(22), 8310, 2020;
4. Bizon, N., Oproescu, M., Carcadea, E., Raceanu, M., Raboaca, M. S., & Sorlei, S. *Performance of the Fuel Economy Strategies for Fuel Cell Systems under Power Tracking Control*. In 2021 13th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-5). IEEE, 2021;
5. Bizon, N., Carcadea, E., Iliescu, M., Raboaca, M. S., Manta, I., & Sorlei, S. I. *Estimation of hydrogen consumption for proton-exchange membrane fuel cells systems*. In 2021 13th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-7). IEEE, 2021;
6. Sorlei, I. S., Bizon, N., Thounthong, P., Varlam, M., Carcadea, E., Culcer, M., ... & Raceanu, M. *Fuel cell electric vehicles—A brief review of current topologies and energy management strategies*. Energies, 14(1), 252, 2021;
7. Appasani, B., Mishra, S. K., Jha, A. V., Mishra, S. K., Enescu, F. M., Sorlei, I. S., ... & Bizon, N. *Blockchain-enabled smart grid applications: Architecture, challenges, and solutions*. Sustainability, 14(14), 8801, 2022;
8. Bizon, N., Takorabet, N., Thounthong, P., Carcadea, E., Raboaca, M. S., & Sorlei, S. I. *Power-following strategy for microgrids based on multiple renewable/fuel cells systems*. In 2022 14th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-6). IEEE, 2022;
9. Iordache, M., Oubraham, A., Sorlei, I. S., Lungu, F. A., Capris, C., Popescu, T., & Marinoiu, A. *Noble metals functionalized on graphene oxide obtained by different methods—new catalytic materials*. Nanomaterials, 13(4), 783, 2023;

10. Oubraham, A., Ion-Ebrasu, D., Vasut, F., Soare, A., Sorlei, I. S., & Marinoiu, A. *Platinum-functionalized graphene oxide: One-pot synthesis and application as an electrocatalyst*. *Materials*, 16(5), 1897, 2023;
11. Hoarcă, I. C., Bizon, N., Șorlei, I. S., & Thounthong, P. *Sizing design for a hybrid renewable power system using HOMER and iHOGA simulators*. *Energies*, 16(4), 1926, 2023;
12. Sorlei, I. S. *Fuel economy and overall efficiency optimization of a Fuel Cell Electric Vehicle in a European Extra-Urban Drive Cycle (EUDC)*. In 2024 16th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-7). IEEE; 2024;
13. Sorlei, I. S., Bizon, N., Varlam, M., Raceanu, M., Carcadea, E., & Raboaca, M. S. *Performance Evaluation of a New Efficient Energy Management Strategy for Fuel Cell Hybrid Electric Vehicles*. In 2025 17th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. xx). IEEE.xxxx, 2025;

B. Participări la conferințe/workshop-uri

1. 12th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) 2020, București, 25 Iunie – 27 Iunie, 2020;
2. 13th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) 2021, Pitești, 1 Iulie – 3 Iulie, 2021;
3. 14th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) 2022, Ploiești, 30 Iunie – 1 Iulie, 2022;
4. 16th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) 2024, Iași, 27 Iunie – 28 Iunie, 2024;
5. 17th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) 2025, Târgoviște, 26 Iunie – 27 Iunie, 2025

C. Membru în comitete de organizare sau comitete științifice ale conferințelor/colective de redacție ale unor reviste

1. Technical Chair la ECAI (INTERNATIONAL CONFERENCE on Electronics, Computers and Artificial Intelligence)
2. Associate editor la JEECCS (Journal of Electrical Engineering, Electronics, Control and Computer Science)

Student-doctorand

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