

MEMORIU ȘTIINȚIFIC

Subsemnatul(a) Radu-Ștefan RICMAN, declar următoarele activități realizate în cadrul activității de cercetare științifică (se vor păstra doar activitățile realizate):

A. Lista de lucrări științifice

Lucrări științifice publicate în reviste indexate Web of Science-WoS (ISI)

1. Bularka, S., Vajda, M., Ilieș, E., **Ricman, R.**, Marinca, M., Miclau, M., ... & Ursu, D. (2024). Photovoltaic tiles for the wavelength-selective greenhouse: exploring yellow and green dye-sensitized solar cells in outdoor conditions. *Applied Sciences* (Q1), 14(5), 1957. <https://doi.org/10.3390/app14051957>
2. D. Ursu, M. Vajda, E. Ilieș, **R. Ricman**, M. Marinca, S. Bularka et al., "Towards the thermal stability of dye-sensitized solar cells for wavelength-selective greenhouses using the polymorphism of light-scattering layers", *Sustainable Energy & Fuels* (Q2), vol. 8, no. 1, p. 54-63, **2024**. <https://doi.org/10.1039/d3se01084h>
3. R. Szabó and **R. Ricman**, "A genetic algorithm-controlled solar tracker robot with increased precision due to evolution", *Machines* (Q2), vol. 11, no. 4, p. 430, **2023**. <https://doi.org/10.3390/machines11040430>
4. R. Szabó and **R. Ricman**, "Robotic arm position computing method in the 2d and 3d spaces", *Actuators* (Q2), vol. 12, no. 3, p. 112, **2023**. <https://doi.org/10.3390/act12030112>

Lucrări științifice publicate în volumele unor manifestări științifice (Proceedings) indexate Web of Science-WoS (ISI) Proceedings

5. R. Szabó and **R. Ricman**, "The creation method of a solar tracker using the zybo soc", 2023 33rd International Conference Radioelektronika (RADIOELEKTRONIKA), p. 1-4, **2023**. <https://doi.org/10.1109/radioelektronika57919.2023.10109071>
6. E. Ilieș, M. Marinca, S. Bularka, **R. Ricman**, M. Vajda, & D. Albulescu, "An automated data acquisition system for the characterization of photovoltaic cells", 2022 IEEE 28th International Symposium for Design and Technology in Electronic Packaging (SIITME), **2022**. <https://doi.org/10.1109/siitme56728.2022.9987874>
7. S. Bularka, E. Ilieș, M. Marinca, **R. Ricman**, M. Vajda, & D. Albulescu, "Study of dye-sensitized solar roof tile under partial shading conditions", 2022 IEEE 28th International Symposium for Design and Technology in Electronic Packaging (SIITME), p. 205-208, **2022**. <https://doi.org/10.1109/siitme56728.2022.9988633>
8. **R. -S. Ricman**, R. Szabo and A. Burta, "Temperature Acquisition and Logging in an Online SQL Database Used in a Photovoltaic System," 2020 43rd International Conference on Telecommunications and Signal Processing (TSP), Milan, Italy, **2020**, pp. 57-60, doi: <https://doi.org/10.1109/TSP49548.2020.9163504>
9. **R. -S. Ricman**, R. Szabo and A. Burta, "Vacuum Pressure Online Logging Software Creation for a Solar Collector," 2020 43rd International Conference on Telecommunications and Signal

- Processing (TSP), Milan, Italy, **2020**, pp. 61-64, doi: <https://doi.org/10.1109/TSP49548.2020.9163472>
10. **R. -Ș. Ricman**, R. Szabo and A. Gontean, "The Creation of a Free Vocal SMS and Email Sender and Reader App with Chat Style Interface," 2019 10th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS), Metz, France, **2019**, pp. 761-764, doi: <https://doi.org/10.1109/IDAACS.2019.8924305>
 11. **R. -S. Ricman**, R. Szabo and A. Gontean, "A Comparative Analysis of Implementation Performances for Image Processing Applications Used to Control Robotic Arms," 2018 IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Palermo, Italy, **2018**, pp. 1-6, doi: <https://doi.org/10.1109/EEEIC.2018.8494374>
 12. **R. -S. Ricman**, R. Szabo and A. Gontean, "3D Image Reconstruction of a Robotic Arm in MATLAB from Images Acquired with FPGA," 2018 IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Palermo, Italy, **2018**, pp. 1-6, doi: <https://doi.org/10.1109/EEEIC.2018.8493768>

Lucrări științifice publicate în volumele unor manifestări științifice (Proceedings) indexate BDI (cu specificarea BDI)

13. **R. Ș. Ricman**, M. Marinca, E. Ilies, S. Bularka, A. Gontean and D. Ursu, "Design and Implementation of a Greenhouse Monitoring and Control System," 2023 46th International Spring Seminar on Electronics Technology (ISSE), Timisoara, Romania, **2023**, pp. 1-5, doi: <https://doi.org/10.1109/ISSE57496.2023.10168422> **IEEEExplore**
14. R. Szabo and **R. -S. Ricman**, "Building a Solar Tracker Robot Controlled by the ZedBoard FPGA Board," 2023 46th International Conference on Telecommunications and Signal Processing (TSP), Prague, Czech Republic, **2023**, pp. 11-14, doi: <https://doi.org/10.1109/TSP59544.2023.10197776> **IEEEExplore**
15. R. Szabo and **R. -S. Ricman**, "Using a Radio Remote Controller to Operate a Rover and Robotic Arm Combo," 2022 International Symposium on Electronics and Telecommunications (ISETC), Timisoara, Romania, **2022**, pp. 1-4, doi: <https://doi.org/10.1109/ISETC56213.2022.10009937> **IEEEExplore**
16. R. Szabo and **R. -S. Ricman**, "Building a Tic-tac-toe Playing Robotic Arm," 2022 30th Telecommunications Forum (TELFOR), Belgrade, Serbia, **2022**, pp. 1-4, doi: <https://doi.org/10.1109/TELFOR56187.2022.9983737> **IEEEExplore**
17. **Ricman, RS.**, Szabo, R., Gontean, A. (2021). The Development Process of a Tooth Brushing App on Android Using Movement Direction Detection with OpenCV. In: Arai, K., Kapoor, S., Bhatia, R. (eds) Proceedings of the Future Technologies Conference (FTC) 2020, Volume 3. FTC **2020**. Advances in Intelligent Systems and Computing, vol 1290. Springer, Cham. https://doi.org/10.1007/978-3-030-63092-8_67 **SpringerLink**

B. Cărți și manuale

1. Autor / autori, anul „*titlu lucrare*”, Editura, ISBN;
2.

C. Participări la conferințe/workshop-uri

1. Conferința, locația, data;
2.

D. Brevete

1. Ursu Daniel Horațiu, Miclau Marinela, Vajda Melinda, Gontean Aurel, Ilies Elisei Ștefan, **Ricman Radu Ștefan**, Bularka Szilard, "Seră Inteligentă Cu Absorbție Selectivă A Radiației Solare Utilizând Celule Solare Sensibilizate Cu Colorant (Dsscs), Independentă Și Automatizată" , Institutul Național De Cercetare-Dezvoltare Pentru Electrochimie Și Materie Condensată - Incemc Timișoara, ; Universitatea "Politehnica" Din Timișoara, ; Symph Electronics S.R.L., Brevet Nr. : **RO138605 (A2)**

E. Proiecte

1. 479 PED din 05/11/2020, Sera inteligenta cu absorbtie selectiva a radiatiei solare utilizand celule solare sensibilizate cu colorant (DSSCs), independenta si automatizata, 2020 – 2022, 599.888 lei, din care cota UPT este 185.078 lei.
2. Szabó R., Ricman R. S., Precise Positioning Device for Energy Harvesting Equipment Using Artificial Intelligence with Genetic Algorithms, membru, 11000 Euro, 75/14.04.2022.

F. Stagii de cercetare/perfecționare

1.

G. Cursuri de perfecționare

1.

H. Alte activități

1.