

QUALITY ENGINEERING AND MANAGEMENT RESEARCH CENTER

Contact details

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Areas of expertise

Quality management and engineering - Interdisciplinary research area, with applicability in industry, in the service sector and in the public sector (education, health, administration) for improving products/services, processes and organizations

Quality and sustainability-oriented development - applying specific algorithms, techniques and methods for developing products/services, processes and organizations to meet current and future market needs and environmental challenges

Industrial metrology - high precision 3D measurement and scanning in industrial engineering; 3D surface scanning for reverse engineering, modeling and simulation of products and systems, as well as interdisciplinary applications

Team

Faculty members from the Design Engineering and Robotics Department, PhD students and Master students in Industrial Engineering and Engineering Management

Representative projects

Representative projects of the past 5 years:

1. SIPOCA Code 704, MySMIS 2014+ Code 129878, Strategic framework for the adoption and use of innovative technologies in public administration 2021 – 2027 – solutions to streamline the activity
2. 2021 - 2022 POCU, Priority axis 6, O.S.6.13, project code POCU/626/6/13/130354, Advanced practice for a successful engineering career - PAVING
3. 2020-2022 UEFISCDI, PN-III-P2-2.1-PED2019-5430, Smart hospital bed - HOpE

Significant results

Representative publications of the past 5 years:

Articles in journals and international conference proceedings:

1. Dragomir, M.; Tofană, S.; Dragomir, D.; Țițu, A.M.; Popescu, D. Assessing Circularity in the Wood Industry—Methodology, Tool and Results. *Forests* 2023, 14, 1935. <https://doi.org/10.3390/f14101935>
2. Szabo, D.; Dragomir, M.; Țițu, M.; Dragomir, D.; Popescu, S.; Tofană, S. Sustainable Low-Carbon Production: From Strategy to Reality. *Sustainability*, 2023, 15, 8516. <https://doi.org/10.3390/su15118516>
3. Dragomir, Mihai; Blagu, Diana Alina; Popescu, Sorin; Fulea, Mircea; Neamțu, Călin; How Well Are Manufacturing Companies in Transylvania, Romania Adapting to the Low-Carbon Economy in Order to Become Sustainable?. *Int. J. Environ. Res. Public Health*, 19(4):2118, 2022. <https://doi.org/10.3390/ijerph19042118>

4. Salem, Tareq; Dragomir, Mihai; Options for and Challenges of Employing Digital Twins in Construction Management, Applied Sciences, 12(6):2928, 2022. <https://doi.org/10.3390/app12062928>
5. Popescu D, Dragomir M, Popescu S, Dragomir D.; Building Better Digital Twins for Production Systems by Incorporating Environmental Related Functions—Literature Analysis and Determining Alternatives. Applied Sciences. 12(17):8657, 2022. <https://doi.org/10.3390/app12178657>
6. Blagu D., Szabo D., Dragomir D., Neamțu C., Popescu D. Offering Carbon Smart Options through Product Development to Meet Customer Expectations. Sustainability. 2022; 14(16):9913. <https://doi.org/10.3390/su14169913>
7. Popescu S., Rusu D., Dragomir M., Popescu D., Nedelcu Ș., Competitive Development Tools in Identifying Efficient Educational Interventions for Improving Pro-Environmental and Recycling Behavior, International Journal of Environmental Research and Public Health, 2020, 17(1):156. <https://doi.org/10.3390/ijerph17010156>
8. Teleabă, F., Popescu, S., Olaru, M., Pitic, D., Risks of Observable and Unobservable Biases in Artificial Intelligence Predicting Consumer Choice, Amfiteatru Economic, 2021, 23(56), pp. 102-119. <https://doi.org/10.24818/EA/2021/56/102>
9. Weckenmann A., Bodî Ș., Popescu S., Dragomir M., Hurgoiu D., Comes R., Hit or Miss? Evaluating the Potential of a Research Niche: A Case Study in the Field of Virtual Quality Management, Sustainability, vol. 11, issue 5, p. 1450, 2019. <https://doi.org/10.3390/su11051450>
10. Popescu, S., Santa, R., Teleabă, F., Ileşan, H., A structured framework for identifying risks sources related to human resources in a 4.0 working environment perspective, Human Management Systems, 2020, Volume 39, Issue 4, Pages: 511-527. <https://doi.org/10.3233/HSM-201034>
11. Diana Dragomir, Diana Pitic, Mihai Dragomir, Daniela Popescu, Overview of Technology Commercialization Options in Romania, In The International Symposium for Production Research (Lecture Notes in Mechanical Engineering), 24-26 September 2020, Antalya, Turkey (online), pp. 658-664. Springer, Cham, 2020. https://doi.org/10.1007/978-3-030-62784-3_56
12. Teleabă F., Popescu S., Santa R., Managing Quality Perception Along the Customer Journey: A Behavioral Economics Approach. In: Durakbasa N., Gençyılmaz M. (eds) Proceedings of the International Symposium for Production Research 2019. ISPR 2019, ISPR 2019. Lecture Notes in Mechanical Engineering. Springer, Cham, 2020. https://doi.org/10.1007/978-3-030-31343-2_43
13. Pop, G. M., Crișan, L. A., Tripa, M., Neamțu, C., Dragomir, M., On the Association of Datums and Measurements Using Conventional Measuring Devices-Topics Within the GPS Toolbox Project, Proceedings of the 12th International Conference on Measurement and Quality Control - Cyber Physical Issue, Belgrade, Serbia, June 4th-7th, 2019, pp. 209-216, Springer, Cham, ISBN 978-3-030-18176-5. https://doi.org/10.1007/978-3-030-18177-2_20

Books / chapters:

1. Dragomir Diana, Dragomir Mihai, Acs Daniel, Popescu Sorin, International Cooperation for Smart and Sustainable Agriculture, Chapter in “Sustainability assessment at the 21st Century”, IntechOpen, DOI: 10.5772/intechopen.86464. <https://www.intechopen.com/online-first/international-cooperation-for-smart-and-sustainable-agriculture>, 2019
2. Popescu Daniela, Dragomir Diana, Comes Radu, Popescu Sorin, Dragomir Mihai, Neamțu Călin; Enhancing Management and Marketing in Cultural Heritage by Using New Technologies, Trivent Publishing, <https://www.trivent-publishing.eu/books/romanianmanagementstudies/2.%20Daniela%20Popescu%20et%20al..pdf>, Chapter in “The best Romanian Management Studies”, 2017-2018, ISBN 978-615-81353-5-1, pp. 20-32, 2020

Significant solutions:

Design and development of standardized management systems
 Customer and sustainability-oriented product and process development
 Precision measurements using multiple sensor technologies
 3D scanning and interdisciplinary reverse engineering

The offer addressed to the economic environment

Research & development	Quality and sustainability-oriented product and process development Optimizing the implementation of standardized management systems High precision 3D measurement and complex 3D surface scanning
Consulting	Designing, implementing, and improving standardized management systems Consultancy on developing new products or improving existing ones
Training	Quality engineering and management (solutions and instruments) Industrial metrology and 3D scanning (techniques and operation)

Last update on January 2024