

Universitatea Tehnică din Cluj-Napoca

Domeniul de master: Inginerie Civilă și Instalații

Facultatea de Inginerie a Instalațiilor

Programul de studii de master: Instalații pentru Orașe Regenerative (în engleză) (IOR)

Centralizator cercetare

CENTRALIZATORUL DATELOR PRIVIND CERCETAREA ȘTIINȚIFICĂ DESFĂȘURATĂ ÎN UNIVERSITATE

Nr. crt.	Teme de cercetare științifică de la obținerea autorizării provizorii, inclusiv anul care precede evaluarea externă în vederea acreditării (datele suport ale centralizatorului se prezintă în formatul electronic de raportare anuală la CNCSIS)	Modul de finanțare *	Rezultate și modalități de valorificare a cercetării		
			Valoare realizată		Lucrări, publicații, granturi, alte produse ale cercetării **
			An univ.	lei	
1	Educational campuses as drivers for Positive Energy Districts – eduPED, Director contract: Rus Tania; Membri: Beu Dorin, Octavian Pop; Mare Roxana , Perioada: 01.01.2025 - 31.12.2027; Valoare totală: 1,746,834 €	Proiect internațional, www.eduped.eu	2025 - 2027	849,950 lei	2 articole ISI 1 articol BDI
2	BIM enabled Digital Twin, Director contract: Rus Tania; Membri: Beu Dorin, Campian Cristina, Deac Anagabriela ; Perioada: 01.09.2024 - 31.08.2027; Valoare totală: 400,000 €	Proiect internațional, https://www.bim2in.eu/	2024 - 2027	67,500 € / 337,500 lei	1 articol conferință
3	Clădiri pOzitiv eNergetic în EduCaTie – CONECT, Director contract: Rus Tania ; Perioada: 01-07-2024 - 30-11-2025; Valoare totală: 50,000 RON	Proiect național Contract nr 22/01.07.2024	2024 - 2025	50,000 lei	3 articole ISI 3 articole BDI
4	Blueprint for Net-Zero Apartment-block Neighborhoods, EIT CLIMATE, nr. 23442 / 19.07.2023, Membri echipă: Rus Tania, Beu Dorin, Magurean Ancuta ; Perioada: 01-06-2023 - 30-06-2025; Valoare totală: 1.842.112 euro	Proiect internațional, https://netzerocities.eu	2023 - 2025	353,875 € / 1,769,375 lei	Ghid practic pentru primării
5	BIM digital competencies to evaluate and improve the energy efficiency of European buildings. A digital way towards positive energy districts (BIM4Energy), Membri echipă: Rus Tania, Beu Dorin, Campian Cristina ; Perioada: 01.09.2023 - 31.08.2025; Valoare totală: 160,000 €	Proiect internațional, https://www.bim4energy.eu/	2023 - 2025	50,000 € / 250,000 lei	1 webapp

6	An Innovative Circular Economy Training based on BIM and LCA technologies applied to the Construction Industry (BIM-LCA), Membru echipa: Rus Tania, Campian Cristina ; Perioada: 01.09.2022 - 31.08.2024; Valoare totala: 150,000 €	Proiect internațional,		41,000 € / 205,000 lei	
7	Support of higher education system in a context of climate change mitigation through regional-level of carbon footprint caused by a product, building and organization, Director contract: Beu Dorin, Membru echipa: Rus Tania ,; Perioada: 01.09.2021 - 31.08.2024; Valoare totala: 150,000 €	Proiect internațional, https://hieducarbon.tuke.sk/		26,000 € / 130,000 lei	2 articole ISI 2 cărți
8	NetZeRoCities – National Competence Centre and solutions for the development of Climate Neutral and Smart Cities, Membru echipa: Rus Tania, Beu Dorin, Ligia Moga ; Perioada: 01.01.2023 - 30.04.2026; Valoare totala: 27,182,052 lei	Proiect național, https://netzerocities.upb.ro/	2023 - 2026	2,467,100 lei	1 articol ISI
9	Luminator pentru cladiri cu racire integrata prin PCM si sistem BIPVT, Director: Pop Octavian, Membru echipa: Rus Tania ; Perioada: 08.01.2025 - 31.12.2026; Valoare totala: 748,921 lei	Proiect național, https://netzerocities.upb.ro/	2025 - 2026	659,350 lei	2 articole ISI
10	hOListic & Green Airports (OLGA), Director contract (din 19.03.2026): Măgurean Ancuța Maria; Membri: Beu Dorin Perioada: 01.10.2021 - 30.09.2026; Valoare totala: 34 mil. Euro, OLGA in a Nutshell OLGA project	Proiect internațional, nr. 101036871/2021, HORIZON 2020	2021 - 2026	454,843.75 EUR / 2,274,218.75 lei	2 articole ISI
11	Renewable COGeneration and storage techNologies IntegraTion for energy autONomous buildings - RE-COGNITION, Membru echipa: Măgurean Ancuța Maria ; Perioada: 01.04.2019 - 30.09.2022; Valoare totala: 4,990,000.00 EUR, Re-Cognition - Renewable Energy Integration Framework	Proiect internațional, nr. 815301/2019, Program cadru: HORIZON 2020	2019 - 2022	221,250.00 EUR / 1,284,621.75 lei	2 articole ISI
12	A holistic framework for Empowering SME - SMEmPower Efficiency, Membru echipa: Măgurean Ancuța Maria ; Perioada: 01.09.2019 - 31.08.2022; Valoare totala: 1,998,750.00 EUR, A holistic framework for Empowering SME's capacity to increase their energy efficiency SMEmPower Efficiency Project Fact Sheet H2020 CORDIS European Commission	Proiect internațional, nr. 847132/2019, Program cadru: HORIZON 2020	2019 - 2022	171,875.00 EUR / 818,107.81 lei	1 articol ISI
13	Expertiza de specialitate in cadrul proiectelor de cercetare nr. G-2018-62496 si nr. G-2111-62969, privind infiintarea Observatorului Roman al Saraciei Energetice, finantate de catre European Climate Foundation, Membru echipa: Măgurean Ancuța Maria ; Perioada: 07.07.2022 – 14.10.2022; Valoare totala: 9,790.13 lei, Observatorul Român al Sărăciei Energetice -	Proiect national 07.07.2022 – 14.10.2022	2022	9,790.13 lei	

14	GNaC ARUT 2023 - "Apa Meteorică – sursă sustenabilă de apă pentru clădiri ZEB" (AmZEB), Director contract: Deac Anagabriela; Membri: Muresan Dan, Iacob Cristina Perioada: 2024 - 2025; Valoare totala: 50 000 LEI	Proiect național, contract nr. 34/1.07.2024	2024-2025	50 000 LEI	1 articol ISI
15	GNaC ARUT 2023 - "Epurarea apelor uzate utilizând procedee sustenabile net Zero Carbon" (EnZeroC), Director proiect: Muresan Dan, Membru echipa: Deac Anagabriela, Iacob Cristina; Perioada: 2024 - 2025; Valoare totala: 50 000 LEI	Proiect național, contract nr. 33/1.07.2024	2024 - 2025	50 000 LEI	2 articol BDI
16	European University of Technology, Director contract: Campian Cristina Mihaela; Perioada: 2021 - 2024; Valoare totala: 3 000 000 EUR, https://www.univ-tech.eu/	Proiect international	2021 - 2024	80 000 EUR / 400,000 lei	4 articole ISI 1 articol BDI
17	Influenta anvelopei vitrate PV cu răcire prin PCM asupra sistemelor de climatizare ale clădirilor Director contract: Pop Octavian-Gabriel; Perioada: 2024 - 2025; Valoare totala: 50.000,00 RON	Proiect național	2024 - 2025	50.000,00 RON	1 articol ISI
18	Adaptive air solar collector with integrated nano-enhanced phase changing materials, Membru contract: Pop Octavian-Gabriel; Perioada:	Proiect național	2025-2026		1 articol ISI
19	Building integrated solar crop dryer for food preservation in urban farming applications, Membru contract: Pop Octavian-Gabriel; Perioada:	Proiect național	2025		1 articol ISI
20	Servicii de realizare a proiectului „Dezvoltare Algoritmi de Inteligența Artificială și Metode Numerice Avansate pentru Amprentarea Energetică în Timp Real a Receptoarelor din Clădirea/Sediul Social al SE Electrica SA” Director contract: Beu Dorin Lucian	Proiect național	2024-2025	321,011.66 lei	
Rezultate – sintetic				11,976,025.1 lei	23 articole ISI 7 articole BDI 1 articol conferință 1 Ghid practic 1 webapp 2 cărți

Nr. grant	Denumire rezultate: - brevet, carte, articol revistă ISI, articol revistă BDI, articol conferință BDI -
	Articole ISI 1. Rus T, Pop O, Fechet-Tutunaru LV. Life-Cycle Assessment of a CdTe BIPV Glazing Element with Integrated Phase Change Material. Clean Technologies. 2026; 8(4):105. https://doi.org/10.3390/cleantechnol8040105 IF 5.4 Q1

2. Nemeti, G., Rus, T., Mare, R., Goidescu, I., Moldovan, R., Moldovan, A. M., Ioana Rotar & Muresan, D. (2026). Thermal comfort and CO₂ concentration in maternity wards: a repeated cross-sectional study comparing two winter campaigns in a naturally ventilated heritage hospital. Results in Engineering, 111750. <https://doi.org/10.1016/J.RINENG.2026.111750> IF 9.4 Q1
3. Rus T, Moldovan R.P., Mârza C.M., Corsiuc G. and Iluțiu-Varvara D-A (2025) Data-driven environments: Evaluating IoT sensors and KNX protocol for monitoring indoor conditions in educational facilities. Front. Built Environ. 11:1688582. doi: 10.3389/fbuil.2025.1688582 IF 3 – Q2; <https://www.webofscience.com/wos/woscc/full-record/WOS:001625297600001>
4. Moldovan, R. P., Rus, T., Beu, D., Albu, H., Domnița, F., & Moldovan, A. M. (2025). From assessment to action: A strategic approach to carbon management for climate neutrality in higher education. Sustainable Futures, 10, 101354. IF 6.7 – Q1; <https://www.webofscience.com/wos/woscc/full-record/WOS:001581921500001>
5. Rus, T., Moldovan, R. P., Pop, M. I., & Moldovan, A. M. Assessing the Interplay of Indoor Environmental Quality, Energy Use, and Environmental Impacts in Educational Buildings. Applied Sciences, (2025), 15(7), 3591. IF 2.9 – Q2 [ISI] <https://www.webofscience.com/wos/woscc/full-record/WOS:001463703500001>
6. Rus, T., Moldovan, R. P., Beu, D., Pop, M., & Ceclan, A. Towards a Climate-Neutral Campus: Carbon Footprint Assessment in Higher Education Institutions. Applied Sciences, (2025), 15(7), 3695. IF 2.9 – Q2 [ISI] <https://www.webofscience.com/wos/woscc/full-record/WOS:001463670100001>
7. Rus T, Moldovan R.P., and Miguel Ángel Pardo Picazo. "LCA analysis of a roof mounted PV system: a Romanian case study." Frontiers in Environmental Science, 12, 1413629. (2024), IF 3.3 – Q2 [ISI]. <https://www.webofscience.com/wos/woscc/full-record/WOS:001247226000001>
8. Horațiu A., Dorin B., Tania R., Moldovan R., Florin Domnița, Silvia Vilčeková, "Life cycle assessment of LED luminaire and impact on lighting installation—A case study", Alexandria Engineering Journal 80 (2023) pp 282–293 IF 6.2 – Q1. <https://www.webofscience.com/wos/woscc/full-record/WOS:001069641000001>
9. Măgurean A. M. and D. D. Micu, "Calibrated Physics-Based Dynamic Energy Modelling of an Airport Terminal," Buildings, vol. 16, no. 6, 2026, doi: 10.3390/buildings16061195
10. Deac, A.; Mureșan, D.V.; Iacob, C.A.; Chira, T.V. Towards Sustainable Urban Water Management: A Case Study on Rainwater Harvesting in Romania, Water 2026, 18, 731. <https://doi.org/10.3390/w18060731>
11. Deac Anagabriela, Cristina Alexandra Iacob, Andrei Bolboacă, Mureșan Dan Vasile - Implementing circular economy principles through a modular tank design approach, Journal of Industrial Design and Engineering Graphics 19 (1), 139-142, 2024,
12. Livia Anastasiu, Cristina Câmpian, Nicoleta Roman, "Boosting construction project timeline: The case of critical chain project management (CCPM)", Buildings, MDPI, 2023, FI 3
13. Carmen T Florean, Horatiu Vermesan, Gyorgy Thalmaier, Bogdan V Neamtu, Timea Gabor, Cristina Campian, Andreea Hegyi, Alexandra Csapai, "The Influence of TiO₂ Nanoparticles on the Physico–Mechanical and Structural Characteristics of Cementitious Materials", Coatings, MDPI, 2024
14. Iulia Stefan, Nadia Barkoczi, Todor Todorov, Ivaylo Peev, Lia Pop, Claudia Marian, Cristina Campian, Sonia-Carmen Munteanu, Patrick Flynn, Lucía Morales: "Technology and education as drivers of the fourth industrial revolution through the lens of the new science of learning" International Conference on Human-Computer Interaction, pg 133-148,2023,
15. Aurelia Ciupe, Sonia Munteanu, Antigoni Parmaxi, Anna Nicolaou, Odette Gabaudan, Susanna Nocchi, Ana Schalk, Bogdan Orza, Cristina Campian, Claudia Maraciuc "From speaking skills to virtual mobilities: Challenges of VR technologies in communication from the European University of Technology", 2023 IEEE Global Engineering Education Conference (EDUCON)
16. Serban Meza, Aurelia Ciupe, Cristina Campian, Laura Grindei "Students and lecturers' perception of practices and policies applied to distance learning: a case study", PRATICA-Revista Multimédia de Investigação em Inovação Pedagógica e Práticas de e-Learning, 2022

17. Laura Grindei, Cristina Campian, Aurelia Ciupe, Luminita Todea, Sonia Munteanu, Ligia Moga: The European University of Technology-A perspective on building a pioneering higher education system based on a human-centred technology” 2022 31st Annual Conference of the European Association for Education in Electrical and Information Engineering (EAEEIE). 2022
18. Rapolti, L, R Holonec, L Grindei, M Purcar, R Copîndean, F Dragan, Reman R: Experimental Stand for Sorting Components Dismantled from Printed Circuit Boards, Minerals, Volume11, Issue11, Article Number1292 DOI10.3390/min11111292, Published NOV 2021, Indexed 2021-12-06, Document Type Article WOS:000724775500001
19. R Holonec, L Grindei, M Purcar, R Copîndean, F Dragan, Techniques for Sorting Components from Dismembered Medical PCBs, 6th International Conference on Advancements of Medicine and Health Care through Technology; 17–20 October 2018, Cluj-Napoca, Romania pp 59-64, Publisher: Springer Singapore 2019, https://link.springer.com/chapter/10.1007/978-981-13-6207-1_10 WOS:000493501100010
20. Răzvan Calotă, Octavian Pop, Cristiana Croitoru, Florin Bode, Charles Berville, si Emanuil Ovadiuc, Performance analysis of solar collectors with nano-enhanced phase change materials during transitional periods between cold and warm seasons in the continental temperate climates, Journal of Energy Storage, 114 (2025) 115659. doi:10.1016/j.est.2025.115659.
21. Florin Bode, si Octavian Pop, CFD Modeling of a Semi-transparent PV-PCM Façade Window with Embedded Water Cooling, E3S Web Conf., Volume 709, 2026, 2026 12th International Conference on Environment and Renewable Energy (ICERE 2026), <https://doi.org/10.1051/e3sconf/202670905004>.
22. Lucian Fechete Tutunaru, Tania Rus, Liviu Dodea si Octavian G. Pop, Design and Evaluation of an LED Solar Simulator Using Sunlike Spectrum Technology, IEEE International Conference on Automation, Quality and Testing, Robotics, MAY 21-23, 2026.
23. Octavian Pop, Preliminary experimental analysis of a CdTe BIPV skylight on a lab-scale test cell, E3S Web Conf., Volume 608, 2025, EU-CONEXUS EENVIRO Research Conference - The 9th Conference of the Sustainable Solutions for Energy and Environment (EENVIRO 2024), <https://doi.org/10.1051/e3sconf/202560801013>.

Articole BDI

1. Urda, A. Ceclan, D. Micu, R. A. Munteanu, A. M. Măgurean and T. Farkas - What is the Focus in Achieving NetZeroCities in Eastern Europe and Where To?, 2024 59th International Universities Power Engineering Conference (UPEC), Cardiff, United Kingdom, ISBN 61344 - UPEC, 2024 (PRT), DOI 10.1109/UPEC61344.2024.10892489. ??
2. Andrei Bolboacă, Dan Mureşan, Anagabriela Deac, Cristina Iacob, Teodor Chira Theoretical and Experimental Aspects of Sustainable Rainwater Management in a Residential Area, Revista Romană de Inginerie Civilă 14 (4), 1-8, 2023
3. Cristina Iacob, Anagabriela Deac, Dan Mureşan, Andrei Bolboacă, Teodor Chira - Strategies for Achieving a Net-Zero Carbon Footprint in Wastewater Systems - Revista Romană de Inginerie Civilă, 2024, DOI: 10.37789/rjce.2024.15.3.16;
4. Tania R., Moldovan R. P., Moldovan A. M., “Improving Educational Building Environments: a Focus on Comfort and Energy”, SGEM International Scientific Conferences on Earth & Planetary Sciences, Extended Scientific Sessions “Green Sciences for Green Life” Schönbrunn Palace, Vienna 27-30 November 2024, Proceedings, nr. 24, Issue 6.2, doi: 10.5593/sgem2024v/6.2/s26.40 [Scopus] <https://www.scopus.com/pages/publications/105003579364?origin=resultslist>
5. Moldovan R. P., Tania R., Moldovan A. M.,, “Environmental assessment of ventilation ducts in an educational building: a Romanian case study”, SGEM International Scientific Conferences on Earth & Planetary Sciences, Extended Scientific Sessions “Green Building Materials and Eco-Technologies” Schönbrunn Palace, Vienna 27-30 November 2024, Proceedings, nr. 24, Issue 6.2, doi: 10.5593/sgem2024v/6.2/s25.23 [Scopus] <https://www.scopus.com/pages/publications/105003569251?origin=resultslist>
6. Moldovan A. M., Tania R., Moldovan R. P., “Comparative analysis of a photovoltaic system for an educational building using PVsyst and Simulink”, , SGEM International Scientific Conferences on Earth & Planetary Sciences, Extended Scientific Sessions “Clean Energy Systems and Energy Storage

	Technologies” Schönbrunn Palace, Vienna 27-30 November 2024, Proceedings, nr. 24, Issue 4.2, doi: 10.5593/sgem2024v/4.2/s16.03 [Scopus] https://www.scopus.com/pages/publications/105003907387?origin=resultslist
	7. Timea Farkas, Tania Rus, Ana-Maria Moldovan, Raluca Moldovan, Andrei Ceclan; Energy flexibility assessment in educational campuses: insights from the Romanian eduPED living lab; NEXTBUILT2026 Conference; 4-5 June 2026, Italy.
	Cărți
	1. Carbon Footprint - Definition, regulations and methodology - volum 1, U.T.PRESS, Cluj - Napoca, 2025, ISBN 978-606-737-819-1; https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/819-1.pdf
	2. Carbon Footprint - GHG of building materials and services, structures and whole buildings; GHG of organizations and neighborhoods and cities - volume 2, U.T.PRESS, Cluj - Napoca, 2025, ISBN 978-606-737-820-7; https://biblioteca.utcluj.ro/files/carti-online-cu-coperta/820-7.pdf

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