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## SCIENTIFIC PAPERS

### Ph.D. Thesis

*Contributions concerning the mathematical modeling and computer simulation of refrigeration cycles in non-stationary regime (in Romanian)*, Technical University of Cluj-Napoca, 1997.

Scientific advisor: Prof. Teodor MĂDĂRĂȘAN

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3. Damian, M., Revnic, I., **Bălan, M.C.**, s.a. - *Web site realization* (in Romanian), Ed. U.T. Pres, Cluj Napoca, 2005
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6. **Bălan, M.C.** - *Refrigeration plants technology* (in Romanian), Ed. Todesco, Cluj-Napoca 2003.
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9. **Bălan, M.C.**, Madarasan, T. - *Study concerning the monitoring of technological superior teaching* (in Romanian), Ed. Todesco, Cluj-Napoca 2000.
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## Book Chapters

1. Pop O.G., Magurean A.M., Pocola A.G., Ciocan M., Zaaoumi A., **Balan M.C.** – *Performances of Solar Thermal Collectors in Different Climatic Conditions* (2021), in: Moga L., Şoimoşan T.M. (eds) *Environmental and Human Impact of Buildings*. Springer Tracts in Civil Engineering. Springer, Cham.  
[https://doi.org/10.1007/978-3-030-57418-5\\_9](https://doi.org/10.1007/978-3-030-57418-5_9)
2. Magurean A.M., Pop O.G., Pocola A.G., Serban A., **Bălan M.C.** – “*Einstein’s Equation in Nuclear and Solar Energy*” (2019), in *Thermodynamics and Energy Engineering*, Vizureanu P., Editor, IntechOpen, ISBN: 978-1-83880-569-2, Print ISBN: 978-1-83880-568-5  
DOI: 10.5772/intechopen.90574

## Papers of international relevance published in WOS journals

1. Pop,O.G., **Balan,M.C.** - *A numerical analysis on the performance of DHW storage tanks with immersed PCM cylinders*, Applied Thermal Engineering, 197 (2021), 117386 ISSN: 1359-4311 (IF: 5.295 / 2020)  
<https://doi.org/10.1016/j.applthermaleng.2021.117386>
2. Zaaoumi,A., Bah,A., Ciocan,M., Sebastian,P., **Balan,M.C.**, Mechaqrane,A., Alaoui,A. - *Estimation of the energy production of a parabolic trough solar thermal power plant using analytical and artificial neural networks models*, Renewable Energies, 170 (2021), pp. 620-638, ISSN: 0960-1481 (IF: 8.001 / 2020)  
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3. Abrudan,A.C., Pop,O.G., Serban,A., **Balan,M.C.** - *New Perspective on Performances and Limits of Solar Fresh Air Cooling in Different Climatic Conditions*, Energies, 12(11) (2019), pp. 1-21, ISSN: 1996-1073 (IF: 2.707 / 2018)  
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10. Bolboacă,S.D., Jäntschi,L., **Balan,M.C.**, Diudea,M.V., Sestraş,R.E. - *State of Art in Genetic Algorithms for Agricultural Systems*, Notulae Botanicae Horti Agrobotanici Cluj-Napoca, Print ISSN 0255-965X; Electronic ISSN 1842-4309 (2010), 38(3): 51-63  
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3. Pop,O.G., Iuga, C.A., Fechete Tutunaru,L.V., **Bălan,M.C.** - *Experimental Investigation of the Solidification and Melting Processes of PCMs*, IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR) (2020)  
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4. Pop,O.G., Iuga, C.A., Fechete Tutunaru,L.V., Domnita,F, **Bălan,M.C.** - Numerical modelling of PCMs encapsulated in spherical shells using inverse enthalpy-temperature functions, IOP Conf. Series: Materials Science and Engineering 876 (2020) 012003  
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