

Lista de lucrări
Şef lucr.dr.ing. HANCU Olimpiu

a) Lista lucrărilor cele mai relevante pentru realizările profesionale proprii care sunt incluse în format electronic în dosar

1. C.-R., Rad, **O., Hancu**, An improved nonlinear modelling and identification methodology of a servo-pneumatic actuating system with complex internal design for high-accuracy motion control applications, *Simulation Modelling Practice and Theory*, Volume 75, June 2017, Pages 29–47, <https://doi.org/10.1016/j.simpat.2017.03.008> (Jurnal cotat ISI).

2. **Hancu, O.**, Maties, V., Balan, R. (2008) - Optimal control design approach based on a multipoint approximation method, *IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2008*, 22-25 May 2008, Volume: 2, pp. 285-290, Cluj-Napoca, ISBN: 978-1-4244-2576-1, Digital Object Identifier: 10.1109/AQTR.2008.4588839.

3. **Hancu, O.**, Maties, V., Balan, R., Lapusan, C., (2009) - Model-based velocity control of electrohydraulic servo systems, *Proceedings of the 8th WSEAS International Conference on Signal Processing, Robotics and Automation "Recent Advances in Signal Processing, Robotics and Automation"*, pp. 53-56, Cambridge, UK, February 21-23, 2009, ISBN: 978-960-474-054-3, ISSN:1790-5117.

4. **Hancu, O.**, Maties, V., Balan, R., Teutan, E. (2008) - Model-Based Impedance Control for Serial Robots Teleoperation, *The 19th International Daaam Symposium " Intelligent Manufacturing & Automation: Focus On Next Generation Of Intelligent Systems And Solutions"*, 22-25th October 2008, Trnava, Slovakia, ISSN 1726-9679, ISBN 978-3-901509-68-1.

5. **Hancu O.**, Mătieş V., Bălan, R., (2006) - Modeling, simulation and control a hydraulic servo system, *PAMM • Proc. Appl. Math. Mech.* 6, 811–812 (2006) / DOI 10.1002/pamm.200610385, Copyright © 2006 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.(ISI Proceeding), 2006

6. C.-R., Rad, **O., Hancu**, I.-A., Takacs and G., Olteanu, (2015). Smart Monitoring of Potato Crop: A Cyber-Physical System Architecture Model in the Field of Precision Agriculture, *Agriculture and Agricultural Science Procedia*, Volume 6, 2015, Pages 73-79, ISSN 2210-7843, <http://dx.doi.org/10.1016/j.aaspro.2015.08.041>.

7. **O. Hancu**, M. Simion and C. Lăpuşan – Hybrid Analytical Analysis in the Design of Mechatronic Systems, *Mechatronics and Robotics, Applied Mechanics and Materials Vol. 762*, pag.243, ISBN-13: 978-3-03835-444-4, ISSN: 1660-9336, 2015.

8. Balan R., Maties, V., **Hancu O.**, Stan S., Lapusan C., Modeling and control of an electric arc furnace, *Proceedings of the 2007 Mediterranean Conference on Control and Automation*, Vols 1-4 Pages: 938-943, DOI:10.1109/MED.2007.4433737, Print ISBN:978-1-4244-1282-2.

9. R. Balan, V. Maties, V. Hodor, **O. Hancu**, S. Stan, Applications of a model based predictive control to heat-exchangers, *Control & Automation, 2007. MED'07. Mediterranean Conference on Control & Automation*, IEEE INSPEC Accession Number: 9826103, DOI: 10.1109/MED.2007.4433679, Publisher:IEEE.

b) Teza de doctorat

Autor: Ing. Hancu Olimpiu

Titlul tezei: Contribuții privind proiectarea optimală a sistemelor mecatronice

Conducător: Prof.dr.ing. Vistrian Mătieș

Universitatea Tehnică Cluj-Napoca, Facultatea Mecanică,

Domeniul: Inginerie Mecanică, Anul susținerii: 2007

c) Brevet de invenție

Brevet de invenție nr. 103548 din 28.01.2009,

Titlul: Laborator portabil pentru educație mecatronică,

Titulari ai brevetului: Mătieș, V., Bălan, R., Rusu, C., Hancu, O., Lăpușan, C., Besoiu, S.

d) Cărți și capitole în cărți

1. **Hancu O.**, Rad C-R., Controlere logice programabile: Programarea și dezvoltarea aplicațiilor industriale, Suport de curs pentru disciplina ""Controlere logice programabile"", Editura UT Press, Cluj-Napoca, 2017, ISBN 978-606-737-232-8.

(Contribuție O.Hancu: Cap.1-Cap.6 și Cap.7 aplicația A1, 206 pagini)

2. Mătieș, V., Bălan, R., **Hancu, O.**, Gliga, A.,(2003) Hidronica. Aplicații, Editura Todesco, Cluj-Napoca, ISBN 973-8198-60-7.

(Contribuție O. Hancu: Cap1-Cap.4, 58 pagini, respectiv Cap.6 aplicațiile A1-A7, 35 pagini).

Capitole în cărți:

1. **Hancu, O.**, Maties, V., Balan, R., Stan, S., Lapusan, C. (2007) Chapter 46: Mechatronic approach for design and control of a hydraulic 3-DOF parallel robot, Vol. 6, ISSN 1726-9687, ISBN 3-901509-60-7, Editor: B. Katalinic, hard cover, Publisher DAAAM International Vienna, Vienna, 2007

2. Lapusan C., Maties V., Balan R, Stan S., **Hancu O.** - Chapter 8, An integrated approach for modeling mechatronic systems, Vol. 6, ISSN 1726-9687, ISBN 3-901509-60-7, Editor: B. Katalinic, hard cover, Publisher DAAAM International Vienna, Vienna, 2007

3. Mătieș, V., **Hancu, O.**, Rad, C.-R., (2013). Mechatronic Platforms for Transdisciplinarity Learning, Transdisciplinarity Theory & Practice by Basarab Nicolescu & Atila Ertas (Editors), pp. 103-118, theATLAS Publishing, ISBN: 0-9778129-6-0.

4. **O. Hancu**, V. Maties, Platforme mecatronice pentru educație și cercetare, Capitol 5 - Standarde europene privind ocupația de mecatronist, Editura Todesco, ISBN 978-973-7695-79-6, 2009.

5. Platforme mecatronice pentru educație și cercetare, Capitol 9 - Educație și cercetare mecatronică la Universitatea Tehnică din Cluj-Napoca, Contribuție **Hancu O.** la subcapitolele 9.3, 9.4, 9.6, 9.9, 9.10, Editura Todesco, ISBN 978-973-7695-79-6, 2009.

6. C. Lapusan, R. Balan, **O. Hancu**, V. Maties, Cap 4 - Proiectarea Integrată și Interfațarea Sistemelor Mecatronice; în Platforma Națională de Mecatronică, Ed. UT Press, 2016.

e) Articole/studii în extenso, publicate în reviste din fluxul internațional principal

1. Ciprian Lapusan, Radu Balan, Olimpiu Hancu, Ciprian Rad, Rapid Control Prototyping in the Development of Home Energy Management Systems, Applied Mechanics and Materials, Vol. 659, pp. 395-400, 2014.

2. C.-R., Rad, **O.**, **Hancu**, V., Mătieș, C., Lăpușan, (2014), Parameter Identification and Modeling of a Pneumatic Proportional Valve with Applicability in Control Design of Servo-Pneumatic Systems, Advanced Concepts in Mechanical Engineering – ACME 2014, June 12-13, Iași, Romania, Applied Mechanics and Materials, Vol. 658, pp. 700-705.

3. C.-R., Rad, **O.**, **Hancu**, C., Lăpușan, (2014), Gray-Box Modeling and Closed-Loop Temperature Control of a Thermotronic System, The 11th IFToMM International Symposium on Science of Mechanisms and Machines, Mechanisms and Machine Science Series, Vol. 18, pp. 197-207, DOI: 10.1007/978-3-319-01845-4_20, Springer International Publishing Switzerland, ISBN: 978-3-319-01844-7.

4. V., Mătieș, **O.**, **Hancu**, C.-R., Rad, L., Dache, (2014), Considerations Regarding the Process of Integration the Mechanisms in the Structure of the Mechatronic Systems, The 11th IFToMM International Symposium on Science of Mechanisms and Machines, Mechanisms and Machine Science Series, Vol. 18, pp. 503-513, DOI: 10.1007/978-3-319-01845-4_50, Springer International Publishing, ISBN: 978-3-319-01844-7.

5. C.-R., Rad, V., Mătieș, **O.**, **Hancu**, C., Lăpușan, (2012), Hardware-In-The-Loop (HIL) Simulation Used for Testing Actuation System of a 2-DOF Parallel Robot, MTM and Robotics 2012 - Joint International Conference of the 11th International Conference on Mechanisms and Mechanical Transmissions/International Conference on Robotics, June 6-8, Clermont Ferrand, France, Applied Mechanics and Materials, Vol. 162, pp. 334-343.

6. Radu Balan, Vistrian Maties, **Olimpiu Hancu**, Sergiu Stan - A Model Predictive Control Algorithm Applied To Non-Linear Processes, PAMM, Special Issue: GAMM Annual Meeting 2006 – Berlin, Volume 6, Issue 1, pages 797–798, December 2006, DOI: 10.1002/pamm.200610378

7. C.-R., Rad, **O.**, **Hancu**, V., Mătieș, (2014). Experimental Identification of Dead Volume in Pneumatic Linear Drives, Romanian Review Precision Mechanics, Optics & Mechatronics, No. 45, pp. 49-53, ISSN: 2247-7063.

8. Ciprian Lapusan, Radu Balan, **Olimpiu Hancu**, Alin Plesa, Development of a Multi-Room Building Thermodynamic Model Using Simscape Library, Energy Procedia, Volume 85, Pages 320-328, Publisher Elsevier

9. Lapusan C., Maties V., Balan R., **Hancu O.**, Modeling and simulation methods for designing mechatronic systems, Journal of Engineering Studies and Research, Volume 16 (2010) No. 4

10. Lapusan C., Maties V., Balan R., **Hancu O.**, Rapid Control Prototyping in design process of mechatronic systems, Proceedings of the 5th International Conference on Robotics and Automation Systems 2010, Vol. 166, Pag. 247-252, Trans Tech Publications, 2010.

f) Publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. C., Lăpușan, V., Mătieș, **O.**, **Hancu**, C.-R., Rad, (2012), Mechatronic Concepts in Design and Control of a Teleoperated Robot, MTM and Robotics 2012 - Joint International Conference of the 11th International Conference on Mechanisms and Mechanical Transmissions/International Conference on Robotics, June 6-8, Clermont Ferrand, France, Applied Mechanics and Materials, Vol. 162, pp. 575-582.

2. Maties, V; Balan, R; **Hancu, O**; et al., Mechatronic philosophy a challenge for new

horizons opening in the study of mechanisms, Eleventh World Congress in Mechanism and Machine Science, Vols 1-5, Proceedings Pages: 1363-1367. Published: 2004.

3. Maties, V; Balan, R; **Hancu, O**; et al., Mechatronic technology and education-world experience, 3rd Balkan Region Conference on Engineering Education, Conference Proceedings, Pages: 157-160. Published: 2005.

4. Balan, R; Maties, V; **Hancu, O**; et al. , The measure of humidity and temperature using smart sensors Source: Actual Tasks on Agricultural Engineering, Proceedings, Volume: 34, Pages: 329-336. Published: 2006

5. R Bălan, V Mătieș, **O Hancu**, A control algorithm for non-linear processes using on-line simulation and rule based control, Balan R., Mătieș V., Hancu O., 2004, in Proceedings of International Conference of Intelligent Engineering Systems, INES 2004, 19-21 Sept 2004, Cluj-Napoca, Romania, pp. 497-502.

6. Lapusan C, Maties V., **Hancu O**, Workspace Analysis and Design of a 6 DOF Parallel Robot, Proceedings of the 8th WSEAS International Conference on Signal Processing, Robotics and Automation 2009.

7. R. Bălan, V. Mătieș, **O Hancu** - Model predictive control of nonlinear processes using on-line simulation, Proceedings of International Conference on Automation, Quality and Testing, Robotics, AQTR 2004.

8. Balan R., Maties V., **Hancu O.**, Stan S., Lapusan C., Nonlinear control using a model based predictive control algorithm, Proceedings of the 2007 International Symposium on Computational Intelligence in Robotics and Automation, Pages: 203-208, 2007.

9. R Balan, Vistriian Maties, **Olimpiu Hancu**, Sergiu Stan - A predictive control approach for the inverse pendulum on a cart problem, Published in: Mechatronics and Automation, 2005 IEEE International Conference (Volume:4, Pages: 2026-2031) , Print ISBN:0-7803-9044-X INSPEC, Accession Number:8939358, DOI:10.1109/ICMA.2005.1626874 Publisher:IEEE

10. C., Lăpușan, V., Mătieș,, R., Bălan, **O., Hancu, C.-R.**, Rad, (2010), Integrated approach for designing a 6-UPS parallel robot, IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR), vol. 1, May 28-30, 2010, Cluj-Napoca, Romania, pp.1-4.

11. Lapusan C., Balan R., **Hancu O.**, Online system identification in thermal response of real buildings, Annals of DAAAM for 2010 & Proceedings of the 21st International DAAAM Symposium, Volume 21, No. 1, ISSN 1726-9679 ISBN 978-3-901509-73-5.

12. R. Balan, **O. Hancu**, C. Lapusan, S.-D. Stan, R.C. Donca, V.Muresan, MODELLING, IDENTIFICATION AND TEMPERATURE CONTROL OF A HOUSE, Annals of DAAAM for 2010 & Proceedings of the 21st International DAAAM Symposium, Volume 21, No. 1, ISSN 1726-9679, ISBN 978-3-901509-73-5.

13. Balan R., **Hancu O.**, Stan S., Lapusan C., Donca R., Application of a Model Based Predictive Control Algorithm for Building Temperature Control, Proceedings of the 3rd WSEAS International Conference on Energy Planning, Energy Saving, Environmental Education (Source: Energy Problems and Environmental Engineering, Pages: 97-101. Published: 2009).

14. Lapusan C, Maties V., Balan R., **Hancu O.**, Stan S., Lates R., Rapid control prototyping using Matlab and dSpace. Application for a planar parallel robot, Proceedings of IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR 2008).

15. R. Balan, V. Maties, **O. Hancu**, S Stan - Applications for nonlinear processes using a predictive control algorithm, Communications, Control and Signal Processing, Vol. 1-3 Pages: 709-714, 2008. ISCCSP 2008, 10.1109/ISCCSP.2008.4537315

16. R Bălan, V Mătieş, **O. Hancu**, SD Stan, Integration of Microcontroller System Design In Mechatronic Education–Low Cost Solutions, 12th IFToMM World Congress, Besançon (France), 2007.
17. R. Balan, V. Maties, **OI. Hancu**, S.Stan, L. Ciprian - A predictive control algorithm-some applications for nonlinear processes, Control & Automation, Mediterranean Conference on Control & Automation, Vols 1-4 Pages: 1326-1331, 2007. MED'07, DOI:10.1109/MED.2007.4433747, Print ISBN:978-1-4244-1282-2.
18. R.C., Mîndru, **O. Hancu**, V. Mătieş, I.A. Cosma, Aspects regarding integrated design of pneumatic actuators based systems, The 3rd International Conference on "Computational Mechanics and Virtual Engineering", COMEC 2009, 29 – 30 OCTOBER 2009, Brasov, Romania.
19. R.C. Donca, R. Bălan, V. Mătieş, **O.Hancu**, Control method for the improvement of the efficiency of a fuel cell, RE&PQJ, Vol. 1, No.6, March 2008.
20. V. Maties, R. Balan, S. Stan, O.Hancu, Design of Control Mechanisms in Mechatronics, Prasic 02, Vol. III – Design de Produs, 7-8 Noiembrie Braşov, România, ISBN 973-635-076-2.
21. C. Lapusan, **O. Hancu**, C. Rad, L. Dache, V.Maties, Integrated learning platform based on lego NXT and Matlab for teaching mechatronics, 2016 8th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), INSPEC Accession Number: 16692474, DOI: 10.1109/ECAI.2016.7861145, Publisher: IEEE.

03.06.2017

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Publication list
Lecturer HANCU Olimpiu, PhD

a) List of representative papers published in journals and conference proceedings included in the electronic format of the application file

1. C.-R., Rad, **O., Hancu**, An improved nonlinear modelling and identification methodology of a servo-pneumatic actuating system with complex internal design for high-accuracy motion control applications, *Simulation Modelling Practice and Theory*, Volume 75, June 2017, Pages 29–47, <https://doi.org/10.1016/j.simpat.2017.03.008> (Jurnal cotat ISI).
2. **Hancu, O.**, Maties, V., Balan, R. (2008) - Optimal control design approach based on a multipoint approximation method, *IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2008*, 22-25 May 2008, Volume: 2, pp. 285-290, Cluj-Napoca, ISBN: 978-1-4244-2576-1, Digital Object Identifier: 10.1109/AQTR.2008.4588839.
3. **Hancu, O.**, Maties, V., Balan, R., Lapusan, C., (2009) - Model-based velocity control of electrohydraulic servo systems, *Proceedings of the 8th WSEAS International Conference on Signal Processing, Robotics and Automation "Recent Advances in Signal Processing, Robotics and Automation"*, pp. 53-56, Cambridge, UK, February 21-23, 2009, ISBN: 978-960-474-054-3, ISSN:1790-5117.
4. **Hancu, O.**, Maties, V., Balan, R., Teutan, E. (2008) - Model-Based Impedance Control for Serial Robots Teleoperation, *The 19th International Daaam Symposium " Intelligent Manufacturing & Automation: Focus On Next Generation Of Intelligent Systems And Solutions"*, 22-25th October 2008, Trnava, Slovakia, ISSN 1726-9679, ISBN 978-3-901509-68-1.
5. **Hancu O.**, Mătieș V., Bălan, R., (2006) - Modeling, simulation and control a hydraulic servo system, *PAMM • Proc. Appl. Math. Mech.* 6, 811–812 (2006) / DOI 10.1002/pamm.200610385, Copyright © 2006 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.(ISI Proceeding), 2006
6. C.-R., Rad, **O., Hancu**, I.-A., Takacs and G., Olteanu, (2015). Smart Monitoring of Potato Crop: A Cyber-Physical System Architecture Model in the Field of Precision Agriculture, *Agriculture and Agricultural Science Procedia*, Volume 6, 2015, Pages 73-79, ISSN 2210-7843, <http://dx.doi.org/10.1016/j.aaspro.2015.08.041>.
7. **O. Hancu**, M. Simion and C. Lăpușan – Hybrid Analytical Analysis in the Design of Mechatronic Systems, *Mechatronics and Robotics, Applied Mechanics and Materials Vol. 762*, pag.243, ISBN-13: 978-3-03835-444-4, ISSN: 1660-9336, 2015.
8. Balan R., Maties, V., **Hancu O.**, Stan S., Lapusan C., Modeling and control of an electric arc furnace, *Proceedings of the 2007 Mediterranean Conference on Control and Automation*, Vols 1-4 Pages: 938-943, DOI:10.1109/MED.2007.4433737, Print ISBN:978-1-4244-1282-2
9. R. Balan, V. Maties, V. Hodor, **O. Hancu**, S. Stan, Applications of a model based predictive control to heat-exchangers, *Control & Automation, 2007. MED'07. Mediterranean Conference on Control & Automation*, IEEE INSPEC Accession Number: 9826103, DOI: 10.1109/MED.2007.4433679, Publisher:IEEE.

b) Doctoral Thesis

Author: Ing. Hancu Olimpiu

Title: Contributions regarding the optimal design of mechatronic systems

Coordinator: Prof.dr.ing. Vistrian Mătieș

Technical University of Cluj-Napoca, Faculty of Mechanical Engineering

Domain: Mechanical Engineering, Year of public presentation: 2007

c) Patents

Patent nr. 103548 /28.01.2009,

Title: Portable Laboratory for Mechatronic Education,

Owners: Mătieș, V., Bălan, R., Rusu, C., Hancu, O., Lăpușan, C., Besoiu, S.

d) Books and book chapters

1. **Hancu O.**, Rad C-R., Programmable Logic Controllers: Programming and design of industrial applications, Cluj-Napoca, 2017, ISBN 978-606-737-232-8.

(Contribution O.Hancu: Cap.1-Cap.6 si Cap.7 application A1, 206 pag.)

2. Mătieș, V., Bălan, R., **Hancu, O.**, Gliga, A.,(2003) Hidronics. Applications, Ed. Toderesco, Cluj-Napoca, ISBN 973-8198-60-7.

(Contribution O. Hancu: Cap1-Cap.4, 58 pag., Cap.6 applications A1-A7, 35 pag.).

Book chapters:

1. **Hancu, O.**, Maties, V., Balan, R., Stan, S., Lapusan, C. (2007) Chapter 46: Mechatronic approach for design and control of a hydraulic 3-DOF parallel robot, Vol. 6, ISSN 1726-9687, ISBN 3-901509-60-7, Editor: B. Katalinic, Publisher DAAAM International Vienna, Vienna, 2007

2. Lapusan C., Maties V., Balan R, Stan S., **Hancu O.** - Chapter 8, An integrated approach for modeling mechatronic systems, Vol. 6, ISSN 1726-9687, ISBN 3-901509-60-7, Editor: B. Katalinic, hard cover, Publisher DAAAM International Vienna, Vienna, 2007

3. Mătieș, V., **Hancu, O.**, Rad, C.-R., (2013). Mechatronic Platforms for Transdisciplinarity Learning, Transdisciplinarity Theory & Practice by Basarab Nicolescu & Atila Ertas (Editors), pp. 103-118, theATLAS Publishing, ISBN: 0-9778129-6-0.

4. **O. Hancu**, V. Maties, Mechatronics platforms for education and research, Chapter 5 - European standards for mecatronist occupation, Editura Toderesco, ISBN 978-973-7695-79-6, 2009.

5. Mechatronics platforms for education and research, , Chapter 9 – Education and Research at Technical University of Cluj-Napoca, Contribution **Hancu O.**: Chapters 9.3, 9.4, 9.6, 9.9, 9.10, Ed. Toderesco, ISBN 978-973-7695-79-6, 2009.

6. C. Lapusan, R. Balan, **O. Hancu**, V. Maties, Chapter 4 - Integrated Design and Interfacing of Mechatronic Systems, in National Mechatronic Platform, Ed. UT Press, 2016.

e) Papers/studies in extenso, published in journals of the main international flow

1. Ciprian Lapusan, Radu Balan, Olimpiu Hancu, Ciprian Rad, Rapid Control Prototyping in the Development of Home Energy Management Systems, Applied Mechanics and Materials, Vol. 659, pp. 395-400, 2014.

2. C.-R., Rad, **O.**, **Hancu**, V., Mătieș, C., Lăpușan, (2014), Parameter Identification and Modeling of a Pneumatic Proportional Valve with Applicability in Control Design of Servo-Pneumatic Systems, Advanced Concepts in Mechanical Engineering – ACME 2014, June 12-13, Iași, Romania, Applied Mechanics and Materials, Vol. 658, pp. 700-705.

3. C.-R., Rad, **O.**, **Hancu**, C., Lăpușan, (2014), Gray-Box Modeling and Closed-Loop Temperature Control of a Thermotronic System, The 11th IFToMM International Symposium on Science of Mechanisms and Machines, Mechanisms and Machine Science Series, Vol. 18, pp. 197-207, DOI: 10.1007/978-3-319-01845-4_20, Springer International Publishing Switzerland, ISBN: 978-3-319-01844-7.

4. V., Mătieș, **O.**, **Hancu**, C.-R., Rad, L., Dache, (2014), Considerations Regarding the Process of Integration the Mechanisms in the Structure of the Mechatronic Systems, The 11th IFToMM International Symposium on Science of Mechanisms and Machines, Mechanisms and Machine Science Series, Vol. 18, pp. 503-513, DOI: 10.1007/978-3-319-01845-4_50, Springer International Publishing, ISBN: 978-3-319-01844-7.

5. C.-R., Rad, V., Mătieș, **O.**, **Hancu**, C., Lăpușan, (2012), Hardware-In-The-Loop (HIL) Simulation Used for Testing Actuation System of a 2-DOF Parallel Robot, MTM and Robotics 2012 - Joint International Conference of the 11th International Conference on Mechanisms and Mechanical Transmissions/International Conference on Robotics, June 6-8, Clermont Ferrand, France, Applied Mechanics and Materials, Vol. 162, pp. 334-343.

6. Radu Balan, Vistrian Maties, **Olimpiu Hancu**, Sergiu Stan - A Model Predictive Control Algorithm Applied To Non-Linear Processes, PAMM, Special Issue: GAMM Annual Meeting 2006 – Berlin, Volume 6, Issue 1, pages 797–798, December 2006, DOI: 10.1002/pamm.200610378

7. C.-R., Rad, **O.**, **Hancu**, V., Mătieș, (2014). Experimental Identification of Dead Volume in Pneumatic Linear Drives, Romanian Review Precision Mechanics, Optics & Mechatronics, No. 45, pp. 49-53, ISSN: 2247-7063.

8. Ciprian Lapusan, Radu Balan, **Olimpiu Hancu**, Alin Plesa, Development of a Multi-Room Building Thermodynamic Model Using Simscape Library, Energy Procedia, Volume 85, Pages 320-328, Publisher Elsevier

9. Lapusan C., Maties V., Balan R., **Hancu O.**, Modeling and simulation methods for designing mechatronic systems, Journal of Engineering Studies and Research, Volume 16 (2010) No. 4

10. Lapusan C., Maties V., Balan R., **Hancu O.**, Rapid Control Prototyping in design process of mechatronic systems, Proceedings of the 5th International Conference on Robotics and Automation Systems 2010, Vol. 166, Pag. 247-252, Trans Tech Publications, 2010.

f) Publications in extenso, appearing in the proceedings of the main international conferences

1. C., Lăpușan, V., Mătieș, **O.**, **Hancu**, C.-R., Rad, (2012), Mechatronic Concepts in Design and Control of a Teleoperated Robot, MTM and Robotics 2012 - Joint International Conference of the 11th International Conference on Mechanisms and Mechanical Transmissions/International Conference on Robotics, June 6-8, Clermont Ferrand, France, Applied Mechanics and Materials, Vol. 162, pp. 575-582.

2. Maties, V; Balan, R; **Hancu, O**; et al., Mechatronic philosophy a challenge for new

horizons opening in the study of mechanisms, Eleventh World Congress in Mechanism and Machine Science, Vols 1-5, Proceedings Pages: 1363-1367. Published: 2004.

3. Maties, V; Balan, R; **Hancu, O**; et al., Mechatronic technology and education-world experience, 3rd Balkan Region Conference on Engineering Education, Conference Proceedings, Pages: 157-160. Published: 2005.

4. Balan, R; Maties, V; **Hancu, O**; et al. , The measure of humidity and temperature using smart sensors Source: Actual Tasks on Agricultural Engineering, Proceedings, Volume: 34, Pages: 329-336. Published: 2006

5. R Bălan, V Mătieș, **O Hancu**, A control algorithm for non-linear processes using on-line simulation and rule based control, Balan R., Mătieș V., Hancu O., 2004, in Proceedings of International Conference of Intelligent Engineering Systems, INES 2004, 19-21 Sept 2004, Cluj-Napoca, Romania, pp. 497-502.

6. Lapusan C, Maties V., **Hancu O**, Workspace Analysis and Design of a 6 DOF Parallel Robot, Proceedings of the 8th WSEAS International Conference on Signal Processing, Robotics and Automation 2009.

7. R. Bălan, V. Mătieș, **O Hancu** - Model predictive control of nonlinear processes using on-line simulation, Proceedings of International Conference on Automation, Quality and Testing, Robotics, AQTR 2004.

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