

Autorul tezei de abilitare: Assoc. Prof. Dr. Eng. Marius Cristian LUCULESCU
Habilitation thesis title: Implementations of Advanced Mechatronic Systems in
Agriculture, Industry and Medicine
Domain: Mechanical Engineering

PUBLICATIONS LIST

RELEVANT PAPERS

1. **Luculescu, M.C.**, Lache, S., *Computer-Aided Diagnosis System for Retinal Diseases in Medical Imaging*, Wseas Transactions on Systems Journal, Issue 3, Volume 7, March 2008, pp.264-276, ISSN 1109-2777 – **IDB indexed – SCOPUS**
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2. **Luculescu, M.C.**, Enache, I.C., Lache, S., Zamfira S.C., *LifeMOTE - Decision-Parametric System for Health Telematics. General and Hardware Aspects*, Revista Mecatronica – Ed. Societatea Română de Mecatronică, nr. 2/2011, pag. 22-26, ISSN 1583-7653.
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9. CRISTEA, L., **Luculescu, M.C.**, ZAMFIRA C.S., BOER, A.L., POP, S., *Multiple criteria analysis of remotely piloted aircraft systems for monitoring the crops vegetation status*, IOP Conf. Series: Materials Science and Engineering 147 (2016) 012059 doi:10.1088/1757-899X/147/1/012059, **ISI indexed - Scopus**

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PhD THESIS

Title: *Researches on Biological Human Visual Structures Concerning the Diagnosis of Macular Diseases*

Fundamental domain: Engineering Sciences

Domain: Industrial Engineering

Scientific advisors:

Prof. univ. dr. eng. **Gheorghe Leonte MOGAN**, Transilvania University of Braşov

Prof. univ. dr. **Mihail D. NICU**, Politehnica University of Bucharest

Date and place of PhD thesis presentation: 21.09.2007, Transilvania University of Braşov

Date of awarding the PhD title: 15.10.2007

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1. **Patent application**, A 2011 00327, Patent no. RO127002-A0

Barbu, D.M., Lache, S., **Luculescu, M.C.**, Barbu, I, *Mechatronic System for Locomotor Recovery of the Lower Limb*, application published in Official Bulletin of Industrial Property No.1 / 2012, p.16, **ISI Web of Knowledge indexed**

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2. **Patent application**, A 2015 00737, Patent no. 130906-A0

Hancu O., Mătieș V., Rad C.R., Simion M., Lăpușan P.C., **Luculescu M. C.**, Cristea L., Zamfira C.S., Barbu I., Rîmbu D., Olteanu Gh., Ghinea A., Pricope T.I., *Mechatronic Driving and Positioning System for Applications in Precision Agriculture*, application published in Official Bulletin of Industrial Property No..2/2016, p.19.

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OTHER PAPERS / RELEVANT ACHIEVEMENTS

A. OTHER PAPERS AND SCIENTIFIC ACHIEVEMENTS

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 4. Poparad, H., Tofan, M., **Luculescu, M.C.**, *Răspunsul dinamic al sistemului elastic de cuplare cu arcuri lamelare curbate*, Al 6-lea Simpozion Național de Utilaje pentru Construcții, București, mai 1997, vol.II, 4 pp.
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 9. **Luculescu, M.C.**, Enache C., *Patients' Management Software For Ophthalmologic Office*, First National Conference of Optometry and Medical Engineering – COPTOMIM 2006, Brașov, 9-11 June 2006, pp.159-162, **ISBN (10) 973-635-726-0, ISBN (13) 978-973-635-726-8**
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B. EDUCATIONAL PROJECTS awarded by competition under contract / grant, national/international

- **INTERNATIONAL EDUCATIONAL PROJECTS awarded by competition under grant:**
 1. RO/2006/PL97023/S LEONARDO DA VINCI, *Training the Students for Working in IT Intensive Technical Engineering Applications*, Project funded by the European Commission under the Leonardo da Vinci Programme – **Professional training program coordinator**.

- **NATIONAL EDUCATIONAL PROJECTS under contract:**

2. Contract no. POSDRU/2/1.2/S/1, 2008-2011, *Quality assurance in the Romanian higher education in European context. Development of academic quality management at system and institutional level - ACADEMIS*, Project of The Romanian Agency for Quality Assurance in Higher Education financed from structural funds - Scientific Secretary of assessment missions to the following institutions of higher education: Al.I. Cuza University of Iasi, University of Arts from Târgu-Mureş, „Petru Maior” University of Târgu Mureş, National School of Political Science and Public Administration from Bucharest, “Mihai Viteazul” National Intelligence Academy from Bucharest, National University of Music Bucharest, University of Medicine and Pharmacy "Carol Davila" Bucharest, „Danubius” University of Galaţi.

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3. Contract no. POSDRU/8/71.3/S/64069, 2010-2013, *Flexform - Professional training program on flexible mechatronic platforms*, **long term expert (LT)**, beneficiary Technical University of Cluj Napoca, partner Transilvania University of Brasov
4. Contract no POSDRU/90/2.1/S/62144, 2010-2013, *Development of education for the labor market by innovative vectors - Mechatronics – Integronics (M&I)*, **long term expert (TL)**, beneficiary The National Institute of Research and Development in Mechatronics and Measurement Technique (INCDMTM) Bucharest, partner Transilvania University of Brasov
5. Contract no POSDRU/155/1.2/S/141884, 2014-2015, *Virtual community for quality assurance and innovative and strategic management improvement in technical and composites universities, in order to increase the relevance of higher education to the labor market - ACAD-INOV*, **partner P3 coordinator**, beneficiary The Romanian Agency for Quality Assurance in Higher Education, partner Transilvania University of Brasov

C. R & D and INNOVATION PROJECTS awarded by competition under contract / grant, national/ international

1. **Contract 5005/1993, topic 21**, *Rehabilitation of muscles through electrical stimulation and appropriate technology*, beneficiary Ministry of National Education, **member in the research team**
2. **Contract 3005/1994, topic 19**, *Study of the effect of the coupling elements on power transmission couplings, optimization (using electronic computer) of structural and functional parameters*, beneficiary Ministry of Research, **member in the research team.**
3. **GRANT CNFIS no.6615/1.11.1998 U.T.B. – 44111 din 16.11.1998 UCP** “*Development of information processing laboratory*” in *Precision Mechanics and Mechatronics Department*, budget 5000 USD, **member in the research team.**

4. **Contract CNCSIS 38/1998, topic 14, 33630/1999, topic 3, *Improving the structure of the automatic control conical rings for bearings*, member in the research team, director Luciana CRISTEA**
5. **Contract CNCSIS 4133/2001, topic 18, code 106, 33459/2002, topic 20, code 525, *Improving the Structure of automated dimensional inspection systems for retechnologisation and quality assurance for industrial production of bearings and fastener* , budget 8.590 lei, member in the research team, director Luciana CRISTEA**
6. **Contract CNCSIS 33459/2002, topic 14, code 635, topic 17/2003, code 614, *Analysis of movement dynamics of rehabilitation and recovery biomechanical systems components for disabled people in order to improve and optimize them*, budget 21.400 lei, member in the research team, director Ileana ROȘCA.**
7. **Contract CNCSIS 33253/2003, topic 3, code 424, CNCSIS 33369/2004, topic 6, code 424, *Research on dynamic identifying in process of improving the performance of industrial materials structures*, budget 9.600 lei, member in the research team, director Simona LACHE.**
8. **Contract CNCSIS 40533/2003, topic 8, code 974, 33369/2004, topic 9, code 974, *The modular concept of dimensional automatic control systems in order to update the control equipment and product quality assurance*, budget 23.100 lei, member in the research team, director Luciana CRISTEA**
9. **Contract CNCSIS 33253/2003, topic 1, code 423, 33369/2004, topic 4, code 423, *Contributions to analysis and modeling of the visual system for its prosthetics and orthotics*, valoare 11.000 lei, member in the research team, budget Daniela BARBU**
10. **Contract CNCSIS 27684/2005, topic, code 1109, A1/GR.106/2006, code 1109, GR.89/2007, cod 1109, *Improving the Structural and functional aspects of automated inspection systems of micro bearings micro inspection*, budget 75.000 lei, member in the research team, director Luciana CRISTEA**
11. **Contract CNCSIS 27684/2005-2006, Code 133, *Analysis, modeling and simulation of human body behavior in an environment polluted by shock and vibration with implications for ocular prosthesis and orthotics*, budget 28.000 lei, member in the research team, director Daniela BARBU**
12. **Contract CNCSIS 393/2006-2008, topic 7, *Advanced models and systems for human body vibration protection and occupational diseases prevention*, budget 200.000 lei, member in the research team, director Simona LACHE**
13. **Contract CEEEX no.91/31.07.2006 – Module 1, *Miniature robotic system with reconfiguration skills and self-multiplication - ROMAR*, partner UTBv, coordinator Politehnica University of Bucharest, budget UTBv 120.000 lei, member in the research team, director Luciana CRISTEA**

14. **Contract CEEEX no.259/11.09.2006 – Module 1**, *Technological control and integration of Smart Materials and Structures - CITMSI*, UTBv partner, coordinator Mechatronics and Robotics Research Center, University of Craiova, budget UTBv 120.000 lei, **member in the research team**, director Sorin ZAMFIRA
15. **Contract CEEEX no.916/15.09.2006 – Module 1**, *Advanced structural kinematical and dynamical research for open flying simulation system tailored to special demands - ASKOT*, partner UTBv, coordinator Technical University of Cluj Napoca, budget UTBv 120.000 lei, **member in the research team**, director Adrian DUMITRIU
16. **Research and Training Platform 2006-2008, SAVAT - Advanced Systems for Vehicles and Road Transport, Division CATEPAC - Concept Analysis, Products Testing and Quality Assurance**, budget 862.338 lei, **member in the research team**.
17. **Contract CEEEX no.71-129/18.09.2007 – Module 1**, *Mechatronic systems for driving with new types of actuators for application in robotics and other fields – SMANAR*, coordinator Technical University of Cluj Napoca, partner UTBv, budget UTBv 112.586 lei, **member in the research team**, director Sorin ZAMFIRA
18. **Grant PNII – Capacities - no.114/2007 – Multidisciplinary research base for the management of mechatronic systems design, modeling and manufacture with applications in industry and medicine – SyMECAD**, budget 1.920.000 lei, **member in the research team**, director Luciana CRISTEA
19. **Project proposal project IDEI 2008, PNII-ID-PCD-2008-2, Research on imaging and computer-aided diagnosis of diseases of the human visual system**, budget 920.000 lei, **director de proiect**.
20. **Project POS-CCE, Contract no.11/2009, ID 123, SMIS 2637 – Research, Development and Innovation Institute: High-Tech Products for Sustainable Development - PRO-DD**, Total budget 106.241.478,82 lei, **member in the research team**, responsible for research infrastructure procurement for research center C04 - Advanced Mechatronic Systems, director Ion VIȘA .
21. **Partnerships Programme in priority domains-PN-II PCCA 2013, PN-II-PT-PCCA-2013-4-1629, contract 225/2014, Design, Implementation and Testing of a Mechatronic System for Multispectral Monitoring of Crops Vegetation Status – MoniCult**, Total budget of the project 1.437.500 lei (of which 1.250.000 lei from the state budget and 187,500 lei from other sources), 500.000 lei budget of Transilvania University of Brasov, **project director**.
22. **Knowledge Transfer to the companies „Bridge Grant”, PN-III-P2-2.1-BG-2016-0132, Contract no. 65BG/2016, Improving the technology of mechatronic multispectral system to increase capture performance of vegetative parameters in the context of climate changes - MultiCanSPEC**, Total budget of the project 460.000 lei, 322.000 lei budget of Transilvania University of Brasov, **project director**.

D. Projects R & D and innovation with third parties on contract:

1. **Contract 14/2005/S.C. Semănătoarea S.A. București**, *Study for implementing the group technology in manufacturing processes*, budget 702.10 lei, **member in the research team**, director Simona LACHE
2. **Contract 13/2005/S.C. Dunărea S.A. București**, *Research on implementing a computerized system for the management of material flows*, budget 702.10 lei, **member in the research team**, director Simona LACHE
3. **Contract 4848/2009/S.C. VELFINA S.A. Câmpulung Muscel**, *Advanced mechatronic methods applied in the manufacture of medical devices*, budget 50.000 lei, **project director**.
4. **Contract 15808/2013/S.C. GENERAL NUMERIC S.R.L. Brașov**, *Optimizing control of brushless DC motors (brushless) to reduce torque variations*, budget 25.000 lei, **project director**.

Date

06.03.2017

Assoc. Prof. Dr. Eng. Marius Cristian LUCULESCU