

Autorul tezei de abilitare: Silviu Luis Butnariu
Titlul tezei de abilitare: Utilizarea tehnologiilor de RV și AR în aplicații din inginerie, medicină și patrimoniu
Domeniul: Inginerie mecanică, mecatronică și robotică

LISTA DE LUCRĂRI

LUCRĂRI RELEVANTE

1. **Butnariu, S.,** Talaba, D.: *Advanced Approaches Using VR Simulations for Teaching Mechanisms*, Eucomes 2010, chapter in *New Trends in Mechanism Science*, Vol. 5 of the series *Mechanisms and Machine Science*, pp 519-526.
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2. **Butnariu, S.,** Gîrbacia, F., Orman, A.: *Methodology for 3D reconstruction of objects for teaching virtual restoration*, *International Journal of Computer Science Research and Application*, ISSN/EISSN: 20129564, 20129572 Year: 2013 Volume: 03 Issue: 01 Pages: 16-21, Publisher: INREWI Publications, <http://www.ijcsra.org/current-issue/v3i1>, Ebsco, DOAJ, Google Scholar.
3. Gîrbacia, F., **Butnariu, S.,** Orman, A. P., Postelnicu, C.: *Virtual restoration of deteriorated religious heritage objects using augmented reality technologies*, *European Journal of Science and Theology* Volume: 9 Issue: 2 Pages: 223-231
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4. **Butnariu, S.,** Gîrbacia, F.: *Methodology for the identification of needles trajectories in robotic brachytherapy procedure using VR technology*, *Applied Mechanics and Materials* Vol. 332 (2013) pp 503-508, © (2013) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.332.503.
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Robot: an evaluation study, Applied Mechanics and Materials (Volume 762); DOI: 10.4028/www.scientific.net/AMM.762.155; <http://www.scientific.net/AMM.762.155>

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TEZA DE DOCTORAT

Butnariu S., *Cercetări teoretice și experimentale asupra curelelor sincrone*, coordonator prof.dr.ing. Aurel JULA, susținută în iulie 2004 la Universitatea Transilvania din Brașov.

BREVETE

1. **Butnariu S.**, Butila E., Talaba D., Sistem haptic pentru simularea funcționării mecanismelor articulate și modul de utilizare a acestuia, RO129033 (A0) — 2013-11-29

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2. **Butnariu, S.**, Transmisii prin curele sincrone, Ed. Universității Transilvania, ISBN 978-973-598-495-3, 2009.
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6. Mogan, Gh., **Butnariu, S.**, *Modelarea și Analiza cu Metoda Elementelor Finite în Inginerie. Teorie și Aplicații practice (sistem integrat)*, Ediția I, editura:Editura Universitatii Transilvania din Brasov isbn:978-606-19-0311-5, 2014, www.simef.rrv.ro
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9. **Butnariu, S.**, VR technologies for scanning, 3D reconstruction and tracking -lecture notes-, CD, ISBN: 978-973-131-340-5, Ed. Lux Libris, 2016
10. B. Gherman, T. Gîrbacia, D. Cocorean, C. Vaida, **S. Butnariu**, N. Plitea, D. Talaba, D. Pîslă, Virtual Planning of Needle Guidance for a Parallel Robot Used in Brachytherapy,

- Chapter in: New Trends in Medical and Service Robots, Volume 38 of the series Mechanisms and Machine Science, Springer International Publishing, pp 109-120, DOI: 10.1007/978-3-319-23832-6_9, http://link.springer.com/chapter/10.1007%2F978-3-319-23832-6_9
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ARTICOLE ÎN REVISTE

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9. D. Voinea, **S. Butnariu**, *Design of a Scoliosis Monitoring System using Inertial Sensors*, Applied Mechanics and Materials Vol 772 (2015) pp 597-602, © (2015) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.772.597, <http://www.ttp.net/978-3-03835-502-1/11.html>
10. F. Gîrbacia, **S. Butnariu**, D. Voinea, Tzolea B., Gîrbacia T., Pîslă D.: *A Virtual Reality System for Pre-Planning of Robotic-Assisted Prostate Biopsy*, Applied Mechanics and Materials Vol 772 (2015) pp 585-590, © (2015) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.772.585; <http://www.ttp.net/978-3-03835-502-1/11.html>
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1. **Butnariu, S.**, Jula, A. *About failure modes of synchronous belts*. În : Annals of the Oradea University, Fascicle of Management and Technological Engineering, vol. II (XII), Oradea, 2003.
2. **Butnariu, S.**, Jula, A. *Aspects of finite element analysis of the belts tooth deformation*. În: "The 3rd International Conference <<Research and Development in Mechanical Industry>>" RaDMI'03, Herceg Novi, Serbia and Montenegro, 19-23 septembrie 2003, p.1208-1211.
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 7. **Butnariu, S.**, Hudita, A. *Precizia de transmitere a mişcării în transmisiile prin curele late dinţate*, Conferinţa Ştiinţifică Internaţională TMCR 2007 Chisinau, 31 mai-3 iunie 2007, vol.2, pp.45...48
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 12. Bărbuceanu, F., Antonya, C., **Butnariu, S.**: *Gaze orientation during obstacle detection in virtual environment*, Proceeding of the 9th International Conference on Accomplishments in Electrica land Mechanical Engineering and Inormation Technology, DEMI, Banjaluka, 28-29.05.2009.
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 15. **Butnariu, S.**, Gîrbacia, F., *Development of a natural user interface for intuitive presentations in educational process*, The 8th International Scientific Conference eLearning and software for Education, Bucharest, April 26-27, indexed Web of

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16. M. Urdea, **S. Butnariu**, *Consideration About Elastic Couplings Modeled in CATIA*, Innovative Manufacturing Engineering Conference, May 29-30, 2014, Chişinău-Republic of MOLDOVA, Web of science, Scopus, Ttp.net,
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ALTE LUCRĂRI / REALIZARI RELEVANTE

Proiecte cercetare

1. SPINE - Sistem de diagnosticare și terapie a afecțiunilor coloanei vertebrale perioada: 2014-2017 Parteneriate 2013, finantator: UEFISCDI Cod proiect: PN-II-PT-PCCA-2013-4-1596 – Nr contractului: 227/2014 (coordonator UTBv, Director proiect)
2. Brahiterapia asistată robotic, o abordare inovativă în terapia cancerelor inoperabile perioada:2012-2016 finantator: PCCA Tip 2, UEFISCDI, Nr. Contract:173/2012 (coordonator UT Cluj, Responsabil partener)
3. Nou sistem haptic de tip exoschelet pentru robotică și automată spațială – EXORAS 13/2012 (coordonator UT Cluj) Cercetare - Agentia Spatiale Romana (ROSA) 2012, perioada 2012 – 2015, Responsabil partener
4. Virtual Reality in Product Design and Robotics (VEGA) perioada:2005-2008 finantator: Comisia Europeana, activitate 1 an / 3 ani, buget 1/3 Nr Contract: FP6 - SSA Project AC, 16565, Membru
5. VIRPE - realitate virtuala pentru ingineria produsului perioada: 2006-2009 finantator: CEEEX M2, Nr Contract:II-5920/2006 , Membru
6. A network for rapid and sustainable ICT regional adoption INTERREG IVC, DigitalCities, <http://www.digital-cities.eu/> , perioada: 2009-2012, finantator:Comisia Europeana, INTERREG IVC, Nr. Contract:0299R, Membru
7. ROBOCORE - Biopsia prostatei asistata robotic, o metoda inovativa de mare precizie, perioada: 2014-2017 finantator: UEFISCDI, Parteneriate 2013, Membru <http://cester.utcluj.ro/robocore/index.html>, Contract 247 / 2014
8. NaviEyes - Intelligent Driver Assistant for Smartphones perioada: 2014-2017 finantator: UEFISCDI Nr. Contract:240 din 01/07/2014 (PN-II-PT-PCCA-2013-4-2023) Parteneriate 2013, Membru
9. eHeritage - Expanding the Research and Innovation Capacity in Cultural Heritage Virtual Reality Applications, Horizon 2020 – Twinning, perioada 2015-2018, Membru

Data

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Conf.dr.ing. Silviu Luis Butnariu

semnatura