

Anexa 1- Rezultate stiintifice ale membrilor echipei in anul 2008 (in domeniul temei grantului)

Carti Editura Springer Verlag --Advances in Numerical Methods, editors: Nikos Mastorakis and John Sakellaris, pag 425-439, *Springer Verlag 2008*, - N. Bîzdoacă, s.a., Chapter 19: *Fuzzy control for shape memory alloy tendon actuated robotic structure* – in curs de aparitie

Articole publicate in reviste ISI sau in volume indexate ISI

1. Nicu George Bîzdoacă, Dan Tarniță, Daniela Tarniță, *Application of smart materials: bionics modular adaptive implants*, Advances in Mobile Robotics, (*Proceedings of the Eleventh International Conference on Climbing and Walking Robots – CLAWAR 2008, cotatat ISI*) ISBN-13 978-981-283-576-5 ISBN-10 981-283-576-8 World Scientific Publishing Co.Pte.Ltd pag 190-198 – **lucrare premiata cu The Industrial Robot Innovation Award 2008 Highly Commended**
2. Tarnita D., Tarnita, Dan; Bizdoaca, N; Negru, M & Copilus, C., Modular orthopedic implants for forearm bones based on shape memory alloys, In *ISI Proceedings of The 19th International DAAAM Symposium, "Intelligent Manufacturing & Automation: Focus on Next Generation of Intelligent Systems and Solutions"*, Publisher: DAAAM International Vienna 2008 ISSN 1726-9679 ISBN 978-3-901509-68-1 oct. 2008.
3. Bîzdoacă Nicu George, Petrisor Anca, s.a, *Shape memory alloy tendons actuated tentacle robotic structure - models and control*, ISI Proceedings of the 4th International Conference on Informatics in Control, Automation and Robotics, ICINCO'08 11-15 May, 2008, Funchal, Madeira, Portugal, Vol RA 2, pp.77-80, ISBN 978-989-8111-31-9
<http://scientific.thomson.com/products/proceedings>
4. Degeratu S., Petre Rotaru, Manolea Gh, Petrisor Anca, **Bîzdoacă N - Visual basic applications for shape memory elements design used in intelligent systems**, ISI Proceedings of the 4th International Conference on Informatics in Control, Automation and Robotics, ICINCO'08,11-15 May, 2008, Funchal, Madeira, Portugal, Volume RA 2, pp.207-210, ISBN 978-989-8111-31-9
[\(http://scientific.thomson.com/products/proceedings/\)](http://scientific.thomson.com/products/proceedings/).
5. Tarnita, D., Popa D., Tarnita, D. N., Bizdoaca, N., **Properties and Medical Applications of Shape memory Alloys**; Romanian Journal of Morphology and embriology, Vol. 50. No.1, Ed. Academiei Romane. [*Jurnal ISI, indexata in baza de date Medline, Pubmed*] ISSN 1220-0522, 2009 (in curs de aparitie).
6. Bizdoaca, N., Tarnita, D., Tarnita, D. N., **Modular adaptive implant based on smart materials**, Romanian Journal of Morphology and embriology, Vol. 49. No.4, Ed. Academiei Romane. [*Jurnal ISI, indexata in baza de date Medline, Pubmed*] ISSN 1220-0522, 2008

Articole publicate in reviste indexate in baze de date internationale

7. Tarnita, D., Popa D., Tarnita, D. N., Bizdoaca, N., **Properties and Medical Applications of Shape memory Alloys**; Romanian Journal of Morphology and embriology, Vol. 50. No.1, Ed. Academiei Romane. [*Jurnal ISI, indexata in baza de date Medline, Pubmed*] ISSN 1220-0522, 2009.
8. Bizdoaca, N., Tarnita, D., Tarnita, D. N., **Modular adaptive implant based on smart materials**, Romanian Journal of Morphology and embriology, Vol. 49. No.4, Ed. Academiei Romane. [*Jurnal ISI, indexata in baza de date Medline, Pubmed*] ISSN 1220-0522, 2008
9. Bîzdoacă Nicu George, Dan Tarnita, Daniela Tarnita, Petrișor Anca, Bîzdoacă Elvira – *Modular Adaptive Bionics Structure - WSEAS Transactions on Biology and Biomedicine Journal*, 2008 (ID.31-464).
10. Bîzdoacă Nicu George, Dan Tarnita, Daniela Tarnita, D. Popa, Bîzdoacă Elvira – *Shape memory alloy based Modular Adaptive Orthopedic Implants – New Aspect of Biomedical Electronics and Biomedical Informatics*, pag. 188-196,ISSN:1790-5125, ISBN:978-960-6766-93-0
11. Bîzdoacă Nicu George, Petrișor Anca, Bîzdoacă Elvira, Diaconu Ilie - *Modular Robotic System - A Concurrent Engineering Approach* –In Proceedings of the 10th WSEAS Int. Conf. on AUTOMATIC CONTROL, MODELLING & SIMULATION (ACMOS'08), Istanbul, Turkey, May 27-30, 2008, pp.417-421, ISBN:960-6766-63-3, ISSN: 1790-5117, *baza de date Bibliography of publications of The World Scientific and Engineering Academy and Society (WSEAS)*
12. Bîzdoacă Nicu George, Anca Petrișor, Elvira Bîzdoacă, *Conventional Control and Fuzzy Control Algorithms for Memory Alloy based Tendons Robotic Structure*, WSEAS TRANSACTIONS on SYSTEMS and CONTROL, ISSN: 1991-8763, Issue 2, Vol 3, Feb. 2008, pag 115 – 124
13. Degeratu Sonia, Bîzdoacă N. G., Manolea Gh., s.a.,– *Practical Aspects Regarding the Design of Intelligent Systems Using the Shape Memory Alloy Spring* – In Proceedings of the 12th WSEAS International

Conference on EMESEG, 2008, Heraklion, Crete, Greece, July 22-24, ISSN 1790-2769, 978-960-6766-88-6, pp. 226-231 - *baza de date Bibliography of publications of The World Scientific and Engineering Academy and Society (WSEAS)*

Articole publicate in volumele unor conferinte internationale

1. Tarnita, D., Tarnita, Dan; Bizdoaca, N; Cismaru, Fl., Copilus, C., **Properties and orthopedic applications of shape memory alloys**, ICAMS 2008 - 2nd International Conference on Advanced Materials and Systems, oct. 2008, Bucuresti.
2. Tarnita, D, Tarnita, Dan; BIZDOACA N., Berceanu C., **Nitinol: Properties and applications**, Second International Congress automotive, safety and environment, 23 - 25 Oct, 2008, pp.209-214, ISBN 978-606-510-253-8, ISBN 978-606-510-246-0, Craiova, Romania
3. Bolcu, D., Tarnita, D, Stanescu, M., **Spectral decomposition of the elasticity matrix of Nitinol**: Second INTERNATIONAL CONGRESS AUTOMOTIVE, SAFETY AND ENVIRONMENT, 23-25 Oct, 2008, pp.143-148 ISBN 978-606-510-253-8, ISBN 978-606-510-246-0 – Craiova, Romania.
4. Tarnita, D., Popa, D., Tarnita, D. N., Popa, D., Adam, Dr., **About the kinematic and dynamic simulation of the 3D model of the human knee joint**, Central European Orthopedic Congress, 2008, Bratislava, Slovakia (CD_ROM)
5. Tarnita, D.N., Tarnita, D., Grecu, D., **Macroscopically, microscopically and radiological analysis of femoral head lesions in coxarthrosis**, Central European Orthopedic Congress, 2008, Bratislava, Slovakia (CD-ROM)
6. Tarnita, D.N., Popa, D., Tarnita, D., Grecu, D., **Stresses and displacements of the internal and external knee menisci using finite element method** Central European Orthopedic Congress, 2008, Bratislava (CD-ROM),
7. Tarnita, D., Negru, M., Tarnita, D. N., Cismaru, Fl., **Stresses of Ulna Bone Using Finite Element Method**, 10th International Symposium „Biomaterials and Biomechanics”, pp.210, 2008, Essen, Germania.
8. Tarnita, D.N., Tarnita, D., Grecu, D., **Tibial Field Fracture Treatment Using the Bioceramic Graft**, 10th International Symposium “Biomaterials and Biomechanics”, pp.211. 2008, Essen, Germania.
9. Tarnita, D.N., Tarnita, D., Grecu, D., **The Usage of a Structured Bioceramic Graft in a Clinical Case of a Calcaneus’s Fracture with Talus Clogging (Bohler III)**, 10th International Symposium “Biomaterials and Biomechanics”, 2008, pp.134. Essen, Germania
10. Tarnita, D., Popa D., Tarnita D.N., Bizdoaca, N., Adam, Dr., **Contributions on the dynamic simulation of the virtual model of the human knee joint**, 10th International Symposium “Biomaterials and Biomechanics”, pp.135. 2008, Essen, Germania
11. Tarnita, D., Tarnita D.N., Bizdoaca, N., Mogoanta, L., **Medical shape memory alloy applications**, Congres International de Histologie, pp.174. Craiova, mai, 2008.
12. Tarnita, D., Tarnita D.N., Bizdoaca, N., Mogoanta, L., **Simulation of fractures for forearm bones using Finite Element Method**, Congres International de Histologie, pp.186, Craiova, mai, 2008.
13. Bizdoaca, N., Tarnita, D., Tarnita, D. N., **Histological approach in design of a modular adaptive implant based on smart material**, Congres International de Histologie, pp.189.Craiova, mai, 2008.
14. Bîzdoacă N, Petrișor A, Bîzdoacă E, Diaconu Ilie, **A new aspect of the robot modularity concept** ,9th International Carpathian Control Conference, ICC’2008, Sinaia, Romania, mai, 2008, pp. 51-54, ISBN 978-973-746-897-0.
15. Bîzdoacă Nicu George, Tarnita D, Tarnita DN, Degeratu S., **Smart materials bionics modular adaptive implant**, 9th International Carpathian Control Conference, ICC’2008, Sinaia, Romania, mai, 2008, pp. 55-594, ISBN 978-973-746-897-0.

Alte lucrări publicate in volumele unor conferințe naționale cu participare internaționala

1. Tarnita, D., Tarnita D.N., Bizdoaca, N., Cismaru Fl., **Aplicații medicale bazate pe materiale inteligente**, Al III-lea Seminar National de Teoria Mecanismelor, Craiova, sept. 2008 Proceedings, pp.341-364, ISBN 978-973-746-910-6, Ed. SITECH, Craiova, 2008, 582 pag
2. Tarnita, D., Tarnita D.N., Bizdoaca, N., Cismaru Fl., **Medical applications based on intelligent materials**, Al III-lea Seminar National de Teoria Mecanismelor, Craiova, sept. 2008 ABSTRACTS, ISBN 978-606-530-004-0, Ed. SITECH, Craiova, 2008.
3. Tarnita, D., Tarnita D.N., Bizdoaca, N., **Medical applications of shape memory alloys**, International Workshop on Intelligent Materials, Craiova, 2008.