A N E X A 4 . 1

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L I S T A
lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

Algoritmi pentru studiul remodelării osoase cu aplicabilitate la proiectarea, analiza mecanică şi optimizarea implanturilor protetice, Univ. Politehnica din București, 2012.

B. Cărţi si capitole în cărţi publicate în ultimii 10 ani

1. Sandu M., Sandu A. **Nuțu E**., *Rezistența* materialelor, 307 pagini, Editura Printech, București, 2019;
2. **Nuțu E**., *Structuri biomecanice*, 183 pag., Editura Printech, București, 2019 – format electronic.
3. **Nuțu E**., *Modelare și simulare în biomecanica remodelării osoase*, 142 pag., Editura Matrixrom, București, 2019.
4. **Nuțu E**., *Îndrumar de laborator în modelarea computerizată a structurilor biomecanice,* 100 pag. , Editura Matrixrom, București 2019;

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani
C1. Lucrari indexate ISI (cu precizare WOS) in ordine descrescatoare a datei publicarii

1. Dragos Mihai, Radu Mihalache, Gheorghe Megherelu, **Emil Nutu**, Ionut Florian Popa, Mihail Sima, Alexandra Adiaconitei, Elena Cristina Paul, Design and testing of a closing and sealing system for a Phobos sample return mission, Advances in Space Research, vol 69(2), 2022, 10.1016/j.asr.2021.10.041, WOS: 000736947600006.
2. **Emil Nutu**, Daniel Vlasceanu, Dan-Mihai Constantinescu, Lucian Gruionu, Stefan-Dan Pastrama, Finite element simulation of the catheter movement in transbronchial biopsy, Materials Today: Proceedings, 2022, doi: 10.1016/j.matpr.2022.04.045, WOS: 000830020400011.
3. Yash Gupta, Rohit Iyer, Vamsi Krishna Dommeti, **Emil Nutu**, Masud Rana, Ali Merdji, Jayanta Kumar Biswas, Sandipan Roy, Design of dental implant using design of experiment and topology optimization: A finite element analysis study, Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2021, doi: 10.1177/0954411920967146, WOS: 000612424400004.
4. Vinamra Jain, Vamsi Krishna Dommeti, Emil Nutu, Ali Merdji, Jayanta Kumar Biswas, Sandipan Roy, Mechanical response of taper dental implants using finite element analysis, 3RD INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, 2020, doi: 10.1088/1757-899x/912/2/022052, WOS: 000626936000052.
5. **E. Nuțu**, Role of initial density distribution in simulations of bone remodeling around dental implants, Acta of Bioengineering and Biomechanics, vol. 20 (4), p. 23-31, 2018, DOI: 10.5277/ABB-01195-2018-02; WOS:000463238000004 (FI = 0,964, mai 2019)
6. **E. Nuțu,** Multiple load case topology optimization based on bone mechanical adaptation theory, U.P.B. Sci.

Bull., vol. 77(4), pg 131-140, 2015, DOI: 10.1016/j.matpr.2016.03.054 (SCOPUS)

7. **E. Nuțu,** *Interpretation of parameters in strain energy density bone adaptation equation when applied to topology optimization of inert structures*, Mechanics, Vol. 21 (6), p. 443-449, 2015, DOI: 10.5755/j01.mech.21.6.12106, WOS:000369210700003. (FI = 0,529, mai 2019)
8. R.C. Picu, Z. Li, M.A. Soare, S. Sorohan, D.M. Constantinescu, **E. Nutu**, Composites with fractal microstructure: The effect of long range correlations on elastic-plastic and damping behavior, MECHANICS OF MATERIALS, Vol. 69 (1), pp 251-261. DOI: 0.1016/j.mechmat.2013.11.002, 2014, WOS: 000331352000020, ISSN: 0167-6636. (**FI=2.225, mai 2019)**

D. Lucrări publicate în ultimii 5 ani (max.10 ani) în reviste şi volume de conferinţe cu referenţi

1. A. Sandu, Ș. Sorohan, M. Sandu, D.M. Constantinescu, **E. Nuțu,** *Experimental and numerical study on the bending strength of a T-core sandwich panel*, 35th Danubia Adria Symposium on Advances in Experimental Mechanics, p. 9-10, 2018, ISBN: 978-606230874-2.
2. **E. Nuțu**, S. Ahmad, Ș.D. Pastramă, *Influence of bone elastic properties on the predicted stress distribution in the dental implant vicinity*, 33rd Danubia-Adria Symposium on Advances in Experimental Mechanics, Portorož, Slovenia, 2016.
3. C. Ciobirca, G. Gruionu, T. Lango, H. O.Leira, L.G. Gruionu, T Amundsen, **E. Nuțu,** SD Pastrama, An algorithm to obtain a theoretical model of the bronchial tree, Materials Today: Proceedings, Vol 5 (4), pg. 5761-5766, 2017, DOI: 10.1016/j.matpr.2017.06.042, WOS:000416470400004.
4. **E. Nuțu**, H. A. Petrescu, D.Vlăsceanu, L. Gruionu, Ș.D. Pastramă, *Development of a Finite Element Model for Lung Tumor Displacements During Breathing*, Materials Today: Proceedings, Vol. 3 (4), pg. 1091-1096, 2016.
5. **E. Nuțu**, Mihai Târcolea, *Simulation of Bone Mechanical Adaptation in a 3D Model of the Proximal Femur Using the Stanford Strain Energy Density Approach*, in Key Engineering Materials (ISSN 1662-9795), Vol. 638, pg. 171-176, 2015.
6. **E. Nuțu**, Horia Miron Gheorghiu, *Simulation of Bone Mechanical Adaptation Using Different Mathematical Models: A Comparative Numerical Study*, in Key Engineering Materials (ISSN 1662-9795), Vol. 638, pg. 183-188, 2015.
7. **E. Nuțu**, Ștefan Pastramă, Role of initial conditions in simulations of bone remodeling around dental implants, 22nd Congress of European Society of Biomechanics (ESB 2016), Lyon, France, 2016.

E. Brevete obţinute în întreaga activitate

1. Sandu M., Sandu A., Constantinescu D. M., Sorohan S., **Nutu E.**, *Light sandwich structures with rib-reinforced faces, consist of two faces made of two identical boards, strip for reinforcing outline, with holes for air circulation, made only of straight or zigzag strips or of strips*, Patent Number RO130117, 2016, UNIV POLITEHNICA DIN BUCURESTI.
2. Sandu M., Sandu A., Constantinescu D. M., Sorohan S., **Nutu E.**, *Multifunctional sandwich structures with orthotropic geometric core, consist of some cores made of same material as faces or material differing, have some perforated and corrugated components*, Patent Number RO130118, 2016, UNIV POLITEHNICA DIN BUCURESTI.

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