

1. Name: Deniz U. Erbulut

2. Education – degrees, discipline, institution, year:

Ph.D. in Mechanical Engineering, University of Melbourne, 2009

M.S. and Grad.D. in IT and Adv. Manufac.. Tech., Swinburne University of Tech., 2004-2005

B.S. in Mechanical Engineering, Kirikklae University, Kirikkale, Turkey, 2000

3. Academic Experience

04/2017-Current: Research Assistant Professor- Bioengineering Department, The University of Toledo, OH, USA

04/2015-04/2017: Assistant Professor at Department of Biomedical Engineering (Mechanical Engineering), Istanbul Medipol University, Istanbul, Turkey.

10/2014-2015: Research Assistant Professor at Department of Mechanical Engineering and Neurosurgery, Koc University, Istanbul, Turkey.

10/2012-2014: Senior Research Specialist at Department of Mechanical Engineering and Neurosurgery, Koc University, Istanbul, Turkey.

10/2011-10/2012: Research Fellow at Department of Biomedical Engineering, The University of Toledo, OH, USA.

04/2010-10/2011: Research Fellow at Department of Mechanical Engineering and Neurosurgery Koc University, Istanbul, Turkey.

04/2009-01/2010: Postdoctoral Research Fellow at Department of Mechanical Engineering Koc University, Istanbul, Turkey.

4. Current membership in professional organizations:

American Society of Biomechanics (ASB).

5. Honors and Awards:

10/2011-12: Visiting Research Fellow, The University of Toledo, OH, USA.

03/2007: Winner of the 2007 ANTEC Conference Competition, Ohio, USA, May 2007

10/2005: Australian Postgraduate Awards (Industry), APA(I), research scholarship for Ph.D.,

6. Recent Publications

Patents:

1. D.U. Erbulut, S. Keles, A. Fahir Ozer, 2014, “Pedicule Screw”, US Utility Patent Application No:14/773,714, 2016. European Union Patent Application, No: EP16190409.9-1501, 2016
2. D.U. Erbulut, A. Fahir Ozer “Koc University”, 2012, “Cervical Total Disc Prosthesis”, European Patent No: WO 2013/132028 A1. Spain Patent No: E13711363-2016. France Patent No: EP2822510-2015-01-14.A1. Italia Patent No: EP 2822510-2016
3. D.U. Erbulut, A. Fahir Ozer, Vijay K. Goel, Suleyman Keles " Double Headed Screw " USPTO No: US US10.188.431 B2 – Europe Patent Application No: 15383021 , 2016.

Recent Journal Articles:

1. Deniz U. Erbulut, Koji Matsumoto, Anand Agarwal, Joseph Zavatsky, Vijay Goel. “ Analysis of Undesirable Clinical Outcomes and Supportive Biomechanical Data for a Device are Essential for the Evolution of Disruptive Device Technology in Spine” **Hamadan Medical Journal**, 2018. 11(4): 159-165
2. Cengiz Gomleksiz, D.U. Erbulut, Vijay Goel et al. “A new lumbar fixation device alternative to pedicle-based stabilization for lumbar spine: In Vitro Cadaver Investigation” **Journal of Spinal Cord Medicine**. 2018. 16-1-8

3. Ali Fahir Ozer, Tunc Oktenoglu, Emrah Egemen, Mehdi Sasani, Atilla Yilmaz, Deniz Ufuk Erbulut, Onur Yaman, Tuncer Suzer., Lumbar Single-Level Dynamic Stabilization with Semi-Rigid and Full Dynamic Systems: A Retrospective Clinical and Radiological Analysis of 71 Patients, *JClinics in orthopedic surgery*.2017, 9(3):310-316
4. Mert Ciplak, Tuncer Suzer, Salim Senturk, Onur Yaman, Mehdi Sasani, Tunc Oktenoglu, Atilla Yilmaz, DU. Erbulut, Ali Fahir Özer Complications of 2-level dynamic stabilizationon, *Turkish Neurosurgery*, 2017 DOI: 10.5137/1019-5149.JTN.21036-17.1 (Published online)
5. D.U. Erbulut, I. Zafarparandah, A.F. Ozer, " Effect of Sagittal Plane Translation of a Cervical Artificial Disc Replacement", 2016 (Under preparation)
6. Zafarparandeh I, DU. Erbulut Ozer Ali F., Influence of three-dimensional reconstruction method for building a model of the cervical spine on its biomechanical responses: a finite element analysis study, *Advances in Mechanical Engineering*. 2016 8(3)
7. Zafarparandeh I, D.U. Erbulut, Ozer Ali F., Motion analysis study on sensitivity of finite element model of the cervical spine to geometry, *Journal of Engineering in Medicine*.2016 230(7):700-706
8. C. Yaldiz, B. Ozkan, Y. Guvenc, S. Senturk, D.U. Erbulut et.al, Comparison of the Rigid Rod System with Modlula Plate with the Finite Element Analysis in Short-Segment Posterior Stabilization in the Lower Lumbar Region, 2016 DOI: 10.5137/1019- 5149.JTN.16203-15.1 (Publishedonline)
9. D.U. Erbulut, C.R. Hassan, I. Zafarparandah, A.F. Ozer, " Biomechanical effect of an interspinous device on the implanted and adjacent lumbar spinal segments: a finite element study" *The Journal of Neurosurgery:Spine* , 2015 Aug;23(2):200-8
10. D.U. Erbulut, T. Oktenoglu, V. K. Goel, A. F. Ozer, Ismail Lazoglu " Pedicle screw-based posterior dynamic stabilization of the lumbar spine: in vitro cadaver investigation and a finite element study" *Computer Methods in Biomech and Biomedical Engineering*, 2015 Aug;18(11):1252-1261
11. A. Ozer, T. Suzer, M. Sasani, T. Oktenoglu, P. Cezayirli, H.Marandi, D.U. Erbulut, Simple facet joint repair with dynamic pedicular system: Technical note and case series, *J Craniovertebr Junction Spine* 2015 6(2) 65-68
12. D.U. Erbulut, I. Zafarparandah, I. Lazoglu, A.F. Ozer, " Application of an asymmetric finite element model of the C2-T1 cervical spine in evaluating the role of soft tissues in stability" *Medical Engineering and Physics*, 2014 36(7):915-21.
13. D.U. Erbulut, T. Oktenoglu, I. Lazoglu, V. K. Goel, A. F. Ozer, " Stabilization of the Lumbar Spine with a Posterior Dynamic Instrumentation with Low Stiff Rod and Hinged Screw: A Computational Study" *Journal of Biomechanical Engineering*, 2014 136(5):051007 (doi: 10.1115/1.4027060)
14. AF Ozer, T Suzer, P Cezayirli, D.U. Erbulut, "Evaluating Lumbar Disc Herniation and Other otion Segment Pathologies from the Window of Dynamic Stabilization Systems." *J Spine Neurosurg S2*. 2014: 6(2) doi:10.4172/2325-9701.S2-001
15. D.U. Erbulut," Biomechanics of neck injuries resulting from rear-end vehicle collisions" *Turkish Neurosurgery*,2014;24(4):466-70
16. I. Zafarparandah, D.U. Erbulut, I. Lazoglu, A.F Ozer, " Development of a finite element model of the human cervical spine" *Turkish Neurosurgery*, 2014;24(3):312-8
8. **Professional development activities in the last five years:** Have attended professional conferences on a regular basis