

رزومه

## صادق ناصر خاکی

ایمیل: [snkhaki@gmail.com](mailto:snkhaki@gmail.com)

ایمیل: [snkhaki@srbiau.ac.ir](mailto:snkhaki@srbiau.ac.ir)

استادیار، دانشکده علوم و فن آوری های پزشکی (گروه بیومکانیک)، دانشگاه آزاد اسلامی واحد علوم و تحقیقات، تهران

### سوابق تدریس

1395 - 1396 دانشکده مهندسی مکانیک، دانشگاه صنعتی شریف

1391 - 1394 دانشکده مهندسی عمران، دانشگاه آلبرتا، کانادا

### تحصیلات

1396 پسا دکتري، بیومکانیک، دانشکده مهندسی مکانیک، دانشگاه صنعتی شریف

1395 پسا دکتري، بیومکانیک، دانشکده مهندسی عمران، دانشگاه آلبرتا و دانشگاه کلگری، کانادا

1394 دکتري، مهندسی سازه (بیومکانیک)، دانشکده مهندسی عمران، دانشگاه آلبرتا، کانادا

1390 کارشناسی ارشد، مهندسی سازه، دانشگاه پوترا مالزی

1384 کارشناسی ارشد، مکانیک خاک و پی، دانشگاه صنعتی اصفهان

1382 کارشناسی، مهندسی عمران، دانشگاه آزاد اسلامی واحد کرج

### جوایز علمی و پژوهشی

1395 - 1396 پسا دکتري، بنیاد ملی نخبگان

2016 Best Graduate Student Project (Oral Presentation) Award, Radiology Research day, University of Alberta, Edmonton, Canada.

2016(Jan-Jun) Post-Doctoral Fellowship, University of Alberta and University of Calgary Collaborative Project, Alberta, Canada.

2012 - 2015 Teacher/Research Assistant, University of Alberta, Edmonton, Canada.

2014 Nominated by the University of Alberta for Vanier Canada Graduate Scholarship (National Rank 143), Canada.

2015 FGSR Travel Award, University of Alberta, Edmonton, Canada.

2014, 2015 Professional Development Award, GSA, University of Alberta, Edmonton, Canada.

2013 Alex Hemstock Bursary, APEGA, Alberta, Canada.

### مقالات

#### مقالات ژورنالی

- J14- F. Fallahi, S. Naserkhaki, S. Adeeb, M. El-Rich (2018) "Effects of Nucleus Size and Position on Response of the Lumbar Functional Spinal Unit L4-L5 to complex loading: Finite Element Analysis", *Journal of Biomechanics*, Under Review.
- J13- H. Shirzadi, H. Zohoor, S. Naserkhaki (2018) "Biomechanical simulation of eye-airbag impacts during vehicle accidents", *Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, Under Review.
- J12- S. Naserkhaki, A. Taneja, J. Powell, K. Johnston, S. Adeeb and M. El-Rich (2018) "Finite Element Modelling of Hip Resurfacing Arthroplasty with Varying Femoral Neck Version", *The Bone and Joint Journal (Br)*, Under Review.
- J11- T. Liu, K. Khalaf, S. Naserkhaki and M. El-Rich (2018) "Load-Sharing in the Lumbosacral Spine in Neutral Standing & Flexed Postures-A Combined Finite Element and Inverse

- Static Study” *Journal of Biomechanics*, 70, 43-50.
- J10- S. Naserkhaki, N. Arjmand, A. Shirazi-Adl, F. Farahmand, and M. El-Rich (2018) “Effects of eight different ligament property datasets on biomechanics of a lumbar L4-L5 finite element model”, *Journal of Biomechanics*, 70, 33-42.
- J9- S. Naserkhaki, and M. El-Rich (2017) “Sensitivity of Lumbar Spine Response to Follower Load and Flexion Moment: Finite Element Study”, *Journal Computer Methods in Biomechanics and Biomechanical Engineering*, 20(5), 550-557.
- J8- S. Naserkhaki, J. L. Jaremko, and M. El-Rich (2016) “Effects of Inter-Individual Lumbar Spine Geometry Variation on Load-Sharing: Geometrically Personalized Finite Element Study”, *Journal of Biomechanics*, 49(13), 2909-2917.
- J7- S. Naserkhaki, J. L. Jaremko, S. Adeeb and M. El-Rich (2016) “On the Load-Sharing Along the Ligamentous Lumbosacral Spine in Flexed and Extended Postures: Finite Element Study”, *Journal of Biomechanics*, 49(6), 974-982.
- J6- S. Naserkhaki, M. El-Rich, F. N. A. Aziz and H. Pourmohammad, (2014) “Pounding between Adjacent Buildings of Varying Heights Coupled through the Soil” *Journal of Structural Engineering and Mechanics*, 52(3), 573-593.
- J5- S. Naserkhaki, M. El-Rich, F. N. A. Aziz and H. Pourmohammad, (2013) “Separation Gap, a Critical Factor in Building Pounding” *Asian Journal of Civil Engineering (BHRC)*, 14(6), 881-898.
- J4- S. Naserkhaki, S. Ghorbani and D. Tayyebi, (2013) “Heavier Adjacent Building Pounding Due to Earthquake Excitation”, *Asian Journal of Civil Engineering (BHRC)*, 14(2), 349-367.
- J3- S. Naserkhaki, F. N. A. Aziz and H. Pourmohammad, (2012) “Parametric Study on Earthquake Induced Pounding between Adjacent Buildings”, *Journal of Structural Engineering and Mechanics*, 43(4), 503-526.
- J2- S. Naserkhaki, F. N. A. Aziz and H. Pourmohammad, (2012) “Earthquake Induced Pounding between Adjacent Buildings Considering Soil Structure Interaction”, *Journal of Earthquake Engineering and Engineering Vibration*, 11(3), 343-358. Most Downloaded Paper in One and Three month.
- J1- S. Naserkhaki, and H. Pourmohammad, (2012) “SSI and SSSI Effects in Seismic Analysis of Twin Buildings: Discrete Model Concept”, *Journal of Civil Engineering and Management*, 18(6), 890-898.

#### مقالات کنفرانسی

#### مقالات کامل

- S. Naserkhaki, J. L. Jaremko, G. Kawchuk, S. Adeeb and M. El-Rich, (2014) “Investigation of Lumbosacral Spine Anatomical Variation Effect on Load-Partitioning Under Follower Load Using Geometrically Personalized Finite Element Model”, *ASME 2014 International Mechanical Engineering Congress and Exposition*, Montreal, Canada (Nominated for the Best Student Paper).
- S. Naserkhaki, F. N. A. Aziz and H. Pourmohammad, (2012) “Structural Pounding Via Contact Force Model” *15<sup>th</sup> World Conference on earthquake Engineering*, No. 4356, 10 Pages, Lisbon, Portugal (Conference CD).
- H. Pourmohammad and S. Naserkhaki, (2011) “Dynamic Interaction between Adjacent Buildings Coupled Through the Soil” *6<sup>th</sup> International Conference of Seismology and Earthquake Engineering*, No. 11454, 7 Pages, Tehran, Iran (Conference CD).

#### مقالات چکیده

- S. Naserkhaki, M.J. Kheyrkhah, A. Maboudmanesh, F. Youkhanva, J.J. Jaremko (2018) “2D and 3D measurements of the sagittal alignment parameters of the spine”, *8<sup>th</sup> World Congress of Biomechanics*, Dublin, Ireland.
- S. Naserkhaki, M.J. Kheyrkhah, A. Maboudmanesh, F. Youkhanva, M. El-Rich (2018) “Finite element (FE) calculation of the spinal load-sharing via sequential dissection of the spinal parts”, *15<sup>th</sup> International Symposium on Computer Methods in Biomechanics and Biomedical Engineering*, Lisbon, Portugal.
- F. Fallahi Arezodar, S. Naserkhaki and M. El-Rich (2017) “Effects of Inter-Individual Disc

- Geometry Variation on Response of Lumbar Spinal Unit to Mechanical Load” 23<sup>rd</sup> *Conference of the European Society of Biomechanics*, Seville, Spain (Oral).
- S. Naserkhaki, J. L. Jaremko and M. El-Rich, (2016) “Finite Element Investigation of Lumbar Spine Curvature Variation and Its Load-Sharing”, *Radiology Research day*, University of Alberta, Edmonton, Canada (Oral). Winner of the Best Graduate Student Project Award.
- S. Naserkhaki, and M. El-Rich, (2016) “On Inter-Individual Lumbar Spine Curvature Variation and Kinematics Using Personalized Finite Element Modelling”, 22<sup>nd</sup> *Conference of the European Society of Biomechanics*, Lyon, France (Oral).
- S. Naserkhaki, and M. El-Rich, (2016) “Effect of Ligament Pretensioning in L4-5 Segment Biomechanics”, 22<sup>nd</sup> *Conference of the European Society of Biomechanics*, Lyon, France (Oral).
- S. Naserkhaki, J. L. Jaremko, S. Adeeb and M. El-Rich, (2015) “How the Variation in Lumbar Spine Geometry Affects Its Load Sharing”, 21<sup>st</sup> *Conference of the European Society of Biomechanics*, Prague, Czech Republic (Oral).
- S. Naserkhaki, J. L. Jaremko, S. Adeeb and M. El-Rich, (2015) “Influence of the Lumbar Spine Sagittal Curvature on Its Internal Loads and Load-Sharing”, 1<sup>st</sup> *Annual Structures Graduate Students Conference*, Edmonton, Canada (Oral).
- S. Naserkhaki, J. L. Jaremko, S. Adeeb and M. El-Rich, (2014) “Using Personalized Lumbar Spine Stress Profiles to Enhance Low Back Pain Assessment and Rehabilitation”, 10<sup>th</sup> *Annual Spotlight on Research Breakfast at Glenrose Hospital*, Edmonton, Canada (Poster).

#### دعوت به سخنرانی

- S. Naserkhaki, N. Arjmand, A. Shirazi-Adl, F. Farahmand, and M. El-Rich (2017) “Effects of eight different ligament property datasets on biomechanics of a lumbar L4-L5 finite element model”, 2<sup>nd</sup> *International Workshop in Spine Loading and Deformation from Loading to Recovery*, Berlin, Germany.
- F. Fallahi Arezodar, S. Naserkhaki and M. El-Rich (2017) “Effects of Inter-Individual Disc Geometry Variation on Load-Bearing of the Lumbar Unit L4-L5”, 2<sup>nd</sup> *International Workshop in Spine Loading and Deformation from Loading to Recovery*, Berlin, Germany.
- T. Liu, S. Naserkhaki and M. El-Rich (2017) Load-Sharing in the Lumbosacral Spine in Neutral Standing & Flexed Postures-A combined Finite Element and Inverse Dynamic Study”, 2<sup>nd</sup> *International Workshop in Spine Loading and Deformation from Loading to Recovery*, Berlin, Germany.
- S. Naserkhaki, J. L. Jaremko, S. Adeeb and M. El-Rich (2015) “On the Load-Sharing Along the Ligamentous Lumbosacral Spine in Flexed and Extended Postures: Finite Element Study”, *International Workshop in Spine Loading and Deformation from Loading to Recovery*, Berlin, Germany.
- S. Naserkhaki, M. El-Rich, G. Kawchuk and J. L. Jaremko, (2014) “How Does Lumbosacral Spine Geometry Affect Spinal Load-Sharing? Finite Element Analysis Using Personalized Geometries”, 7<sup>th</sup> *World Congress of Biomechanics*, Boston, USA.

#### داور مجلات

- \* Journal of Biomechanics
- \* International Journal for Numerical Methods in Biomedical Engineering
- \* Engineering Structures
- \* Structural Engineering and Mechanics
- \* Earthquake Engineering and Engineering Vibration
- \* Civil Engineering and Management
- \* Structural Design of Tall and Special Buildings

### سوابق کاری

- 1387 - 1388 شرکت صنعتی دریایی ایران (صدرا)
  - × پروژه پل میانگذر ارومیه
  - × پروژه آبگیر بندرعباس
- 1386 - 1385 ناظر پروژه های عمرانی ارتش در پادگان 33 توپخانه

### عضویتها

- \* 1395 - بنیاد ملی نخبگان
- American Society of Mechanical Engineers (ASME) 2014 - 2015
- Canadian Society of Biomechanics 2013 - 2015
- \* 1388 - سازمان نظام مهندسی ساختمان، استان البرز، پایه 1
- 1382 - 1380 انجمن علمی عمران، دانشگاه آزاد اسلامی واحد کرج، عضو هیات موسس و هیات مدیره

### علاقتمندیهای پژوهشی

- روشهای عددی - تحلیل اجزای محدود مسائل بیومکانیکی در مهندسی پزشکی
- بیومکانیک ستون فقرات
- بیومکانیک مفاصل و جراحیهای ارتوپدی
- ارتعاشات و دینامیک سازه