

دانشکده مهندسی مکانیک تلفن : ۸۲۸۸۳۳۵۷-۹۸۲۱+

دانشگاه تربیت مدرس

صندوق پستی ۱۴۳-۱۴۱۵

تهران، ایران

majidmirzaei@hotmail.com

ایمیل :

mmirzaei@modares.ac.ir

<http://www.modares.ac.ir/?&fkeyid=&siteid=96&pageid=7395>



مجید میرزائی

تحصیلات

دکتری مهندسی مکانیک

دانشگاه مک گیل، مونترئال، کانادا

پایان نامه: تحلیل و اندازه گیری پدیده بسته شدن ترک خستگی

کارشناسی ارشد مهندسی متالورژی

دانشگاه تهران، تهران، ایران

پایان نامه: طراحی و ساخت مخازن تحت فشار بر اساس مکانیک شکست

کارشناسی مهندسی متالورژی

دانشگاه تهران، تهران، ایران

۱۳۷۳-۱۳۹۵ دانشگاه تربیت مدرس

تجربه علمی

دروس دوره تکمیلی، جزوات درسی آنلاین:

▪ مکانیک شکست

www.geotechlinks.com/Links/Mirzaei-FractureMechanicsLecture.pdf

▪ تئوری الاستیسیته

www.geotechlinks.com/Links/Mirzaei-ElasticityLecture.pdf

▪ روش های المان محدود ۱

▪ روش های المان محدود ۲

▪ مکانیک محیط پیوسته

- ۲ محقق فوق دکتری
- ۱۰ دانشجوی دکتری
- ۴۰ دانشجوی کارشناسی ارشد

لیست کامل در انتهای رزومه فراهم شده است.

انتشارات برگزیده:

فصل های کتاب:

- 1- Majid Mirzaei (2010). Finite Element Analysis of Deformation and Fracture of Cylindrical Tubes under Internal Moving Pressures , Finite Element Analysis, David Moratal (Ed.), ISBN: 978-953-307-123-7, InTech, Available from: www.intechopen.com/articles/show/title/finite-element-analysis-of-deformation-and-fracture-of-cylindrical-tubes-under-internal-moving-press
- 2- Fatemeh Alavi, Amir Hossein Behravesh, Majid Mirzaei (2014). Fracture Mechanism of Wood-Plastic Composites (WPCS): Observation and Analysis, Lignocellulosic Polymer Composites: Processing, Characterization, and Properties. Vijay Kumar Thakur (Ed.), Wiley Online Library, DOI: 10.1002/9781118773949.ch17

مقاله های برگزیده در مجلات علمی (انگلیسی):

(2016) Allaveisi F., Mirzaei M. Effects of high-dose gamma irradiation on tensile properties of human cortical bone: Comparison of different radioprotective treatment methods. ***Mechanical Behavior of Biomedical Materials***. **61**, pp 475-483.

(2016) Alavi F., Behravesh A.H., Mirzaei M. Effect of temperature on the fracture mechanism of wood-plastic composites in situ. ***Journal of Thermoplastic Composite Materials***. **29(1)**.

(2015) Mirzaei M., Torkaman Asadi M.J., Akbari R. On vibrational behavior of pulse detonation engines, ***Aerospace Science and Technology***. **47**, pp 177-190.

(2015) Mirzaei M., Keshavarzian M., Alavi F., Amiri P., Samiezadeh S. QCT-based failure analysis of proximal femurs under various loading orientations, ***Medical & Biological Engineering & Computing***. **53 (6)**, 477-486.

(2015) Mirzaei M., Najafi M., Niasari H. Experimental and numerical analysis of dynamic rupture of steel pipes under internal high-speed moving pressures, ***International Journal of Impact Engineering***. **85**, pp 27-36.

(2015) Alavi F., Behraves A.H., Mirzaei M. Mixed-mode cohesive zone modeling and damage prediction of irregular-shaped interfaces in wood-plastic composites. **Composite Interfaces**. 22(7), pp 651-662.

(2014) Mirzaei M., Keshavarzian M., Naeini V. Analysis of strength and failure pattern of human proximal femur using quantitative computed tomography (QCT)-based finite element method, **Bone**. 64C, pp108-114. <http://dx.doi.org/10.1016/j.bone.2014.04.007>

(2013) Mirzaei M., Malekan M., Sheibani E. Failure analysis and finite element simulation of deformation and fracture of an exploded CNG fuel tank, **Engineering Failure Analysis**. Volume 30, pp. 91-98. <http://dx.doi.org/10.1016/j.engfailanal.2013.01.015>

(2013) Alavi F., Behraves A.H., Mirzaei M. In-situ observation of fracture mechanism of wood-plastic composites in tension. **Composite Interfaces**, 20(3), pp. 211-220.

(2012) Mirzaei M. Vibrational response of thin tubes to sequential moving pressures. **International Journal of Mechanical Sciences**, 59, pp. 44-54. <http://dx.doi.org/10.1016/j.ijmecsci.2012.03.002>

(2012) Mirzaei M., Samiezadeh S., Khodadadi A., Ghazavi M. Finite element prediction and experimental verification of the failure pattern of proximal femur using Quantitative Computed Tomography Images. *Waset*.

(2009) Mirzaei M., Harandi A., Karimi R. Finite element simulation of deformation and fracture of an exploded gas cylinder. **Engineering Failure Analysis** 2009;16(5):1607-1615.

(2009) Mirzaei M., Zeinali A., Razmjoo A., Nazemi M. On prediction of the strength levels and failure patterns of human vertebrae using quantitative computed tomography (QCT)-based finite element method. **Journal of Biomechanics**. 2009; Doi:10.1016/j.jbiomech.2009.04.042.

(2008) Mirzaei M. On amplification of stress waves in cylindrical tubes under internal dynamic loading. **International Journal of Mechanical Sciences** 2008;50(8):1292-1303.

(2008) Mirzaei M. Failure analysis of an exploded gas cylinder, **Engineering Failure Analysis** 2008;15(7):820-834.

(2008) Salemi A., Abdollah-Zadeh A, Mirzaei M., Assadi H. A Study on fracture properties of multiphase microstructures of a CrMo steel. **Materials Science and Engineering:A** 2008;Volume 492, Issues 1-2, 45-48.

(2006) Mirzaei M., Biglari H., Salavatian M. Analytical and numerical modeling of the transient elasto-dynamic response of a cylindrical tube to internal gaseous detonation, **International Journal of Pressure Vessels and Piping**. 2006;83(7):531-539.

(2006) Mazaheri K., Mirzaei M., Biglari H. Transient dynamic response of tubes to internal detonation loading. *Journal of Sound and Vibration*, 2006;297, pp. 106-122.

(2005) Mirzaei M., Mazaheri K., Biglari H. Analytical modeling of the elastic response of tubes to internal detonation loading. *International Journal of Pressure Vessels and Piping*, 2005;82(12):883-895.

داوری مجلات

- Engineering Fracture Mechanics
- Journal of Biomechanics
- Engineering Failure Analysis
- Journal of Applied Mathematical Modeling
- Thin-Walled Structures
- Journal of Mechanical Engineering
- European Journal of Mechanics A/Solids
- European Radiology

علمی

موضوعات تحقیقاتی فعال:

- ۱- تجزیه و تحلیل شکست مواد مهندسی، قطعات و سازه ها.
- ۲- تجزیه و تحلیل تجربی و عددی تغییر شکل و شکست استخوان.
- ۳- بررسی تحلیلی، تجربی و عددی تغییر شکل و رفتار شکست لوله های استوانه ای تحت فشار دینامیکی داخلی.
- ۴- کاربرد روش های المان محدود در تجزیه و تحلیل مکانیک شکست.

فهرست انتشارات:

مجموعه مقالات در کنفرانس ها		مجموعه مقالات مجلات علمی
<p>Naeini V, Motlagh PA, Mirzaei M. Failure Load and Pattern Prediction for the Proximal Femur using Linear Finite Element Method. In: Proceedings of the 23rd Annual International Conference on Mechanical Engineering, ISME 2015. Iran.</p>		<p>Allaveisi F., Mirzaei M. Effects of high-dose gamma irradiation on tensile properties of human cortical bone: Comparison of different radioprotective treatment methods. <i>Mechanical Behavior of Biomedical Materials</i>. 2016, 61, pp 475-483.</p>
<p>Motlagh PA, Naeini V, Mirzaei M. Investigation of the stiffness of human femur under different loading orientation. In: Proceedings of the 23rd Annual International Conference on Mechanical Engineering, ISME 2015. Iran.</p>		<p>Alavi F., Behravesht A.H., Mirzaei M. Effect of temperature on the fracture mechanism of wood-plastic composites in situ. <i>Journal of Thermoplastic Composite Materials</i>. 2016, 29(1).</p>
<p>Hajian M., Mirzaei M. Fatigue life assessment for the composite spar of an unmanned airplane. In: Proceedings of the 15th International Conference on Mechanical Engineering, 15-17 May 2007, Tehran, Iran.</p>		<p>Mirzaei M., Torkaman Asadi M.J., Akbari R. On vibrational behavior of pulse detonation engines, <i>Aerospace Science and Technology</i>. 2015, 47, pp 177-190.</p>
<p>Kehsavarz A., Mirzaei M. Modeling of elastoplastic crack growth using the extended finite element method (XFEM). In: Proceedings of the 15th International Conference on Mechanical Engineering, 15-17 May 2007, Tehran, Iran.</p>		<p>Mirzaei M., Keshavarzian M., Alavi F., Amiri P., Samiezadeh S. QCT-based failure analysis of proximal femurs under various loading orientations, <i>Medical & biological engineering & computing</i>. 2015, 53 (6), 477-486</p>
<p>Tabkhi HR, Mirzaei M. Assessment of the remaining life of the girth gear of an industrial ball mill. In: Proceedings of the 15th International Conference on Mechanical Engineering, 15-17 May 2007, Tehran, Iran.</p>		<p>Mirzaei M., Najafi M., Niasari H. Experimental and numerical analysis of dynamic rupture of steel pipes under internal high-speed moving pressures, <i>International Journal of Impact Engineering</i>. 2015, 85, pp 27-36.</p>
<p>Mirzaei M., Karimi R. Crack Growth Analysis for a Cylindrical Shell under Dynamic Loading. In: Proceedings of the ASME PVP-2006 /11th International Conference on Pressure Vessel technology, ICPVT-11, 23-27 July 2006, Vancouver, Canada.</p>		<p>Alavi F., Behravesht A.H., Mirzaei M. Mixed-mode cohesive zone modeling and damage prediction of irregular-shaped interfaces in wood-plastic composites. <i>Composite Interfaces</i>. 2015, 22(7), pp 651-662.</p>
<p>Mirzaei M., Salavatian M., Biglari H., Simulation of Fatigue Crack Growth in a Detonation Tube. In: Proceedings of the ASME PVP-2006 /11th International Conference on Pressure</p>		<p>Mirzaei M., Keshavarzian M., Naeini V. Analysis of strength and failure pattern of human proximal femur using quantitative computed tomography (QCT)-based finite element method, <i>Bone</i>. 64C, 2014, pp108-114.</p>

Vessel technology, ICPVT-11, 23-27 July 2006, Vancouver, Canada.		http://dx.doi.org/10.1016/j.bone.2014.04.007
Mirzaei M., Mohammad Hosseini H., Azari SH. Finite element assessment of residual stress and distortion for T-Joint-Fillet and Butt-Weld joints using the element birth technique. In: Proceedings of the International Congress on Manufacturing Engineering, TICME2005, 12-15 December 2005, Tehran, Iran.		Mirzaei M., Malekan M., Sheibani E. Failure analysis and finite element simulation of deformation and fracture of an exploded CNG fuel tank, <i>Engineering Failure Analysis</i> . Volume 30, 2013, pp. 91-98. http://dx.doi.org/10.1016/j.engfailanal.2013.01.015
Barani A., Rahimi GH, Mirzaei M. Limit load analysis for cracked pips under internal pressure using the finite element method. In: Proceedings of the 13th International Conference on Mechanical Engineering, May 2005, Tehran, Iran.		Alavi F., Behravesht A.H., Mirzaei M. In-situ observation of fracture mechanism of wood-plastic composites in tension. <i>Composite Interfaces</i> , 2013, 20(3), pp. 211-220.
Biglari H., Mazaheri K., Mirzaei M. Investigation of the structural response of a detonation tube using LSDYNA. In: Proceedings of the 13th International Conference on Mechanical Engineering, May 2005, Tehran, Iran.		Mirzaei M. Vibrational response of thin tubes to sequential moving pressures. <i>International Journal of Mechanical Sciences</i> , 59, 2012, pp. 44-54. http://dx.doi.org/10.1016/j.ijmecsci.2012.03.002
Mirzaei M., Seifi R. Computation of residual stresses due to Multi-Pass welding of steel tubes. In: Proceedings of the 12th International Conference on Mechanical Engineering, 18-20 May 2004, Tehran, Iran.		Mirzaei M., Samiezadeh S., Khodadadi A., Ghazavi M. Finite element prediction and experimental verification of the failure pattern of proximal femur using Quantitative Computed Tomography Images. 2012, http://www.waset.org/journals/waset/v66/v66-22.pdf
Mirzaei M., Seifi R., Evaluation of the J-Integral in the residual stress fields due to welding. In: Proceedings of the 12th International Conference on Mechanical Engineering, 18-20 May 2004, Tehran, Iran.		Mirzaei M., Harandi A., Karimi R. Finite element simulation of deformation and fracture of an exploded gas cylinder. <i>Engineering Failure Analysis</i> 2009;16(5):1607-1615.
Mirzaei M., Seifi R. Finite element evaluation of the J-Integral in residual stress fields. In: Proceedings of the 10th International Conference on Pressure Vessel Technology, ICPVT-10, July 7-10, 2003, Vienna, Austria.		Mirzaei M., Zeinali A., Razmjoo A., Nazemi M. On prediction of the strength levels and failure patterns of human vertebrae using quantitative computed tomography (QCT)-based finite element method. <i>Journal of Biomechanics</i> .2009; Doi:10.1016/j.jbiomech.2009.04.042
Mirzaei M., Karimi R. Stress analysis and life assessment of a gas turbine blade. In: Proceedings of the 10th International Congress of Fracture, (ICF10) USA.		Naraghian E., Mirzaei M. Stress analysis and life assessment of spot weld joints. <i>Modares Thechnical and Engineering Journal</i> 2008, No 32:33-45
Mirzaei M., Razmjoo A., Pourkamali A. Failure analysis of the girth gear of		Mirzaei M. On amplification of stress waves in cylindrical tubes under internal dynamic loading.

an industrial Ball Mill. In: Proceedings of the 10th International Congress of Fracture, (ICF10) USA.		<i>International Journal of Mechanical Sciences</i> 2008;50(8):1292-1303.
Peersamadi T., Mirzaei M. Residual stress assessment in weldments using the finite element method. In: Proceedings of the Fourth International Mechanical Engineering Conference, May 2000, Tehran, Iran.		Mirzaei M., Failure analysis of an exploded gas cylinder, <i>Engineering Failure Analysis</i> 2008;15(7):820-834.
Mirzaei M., Sabooni M. Nonlinear elasto-plastic analysis of a reverse-buckling rupture disk. In: Proceedings of the Ninth International Conference on Pressure Vessel Technology, ICPVT-9, Sydney, Australia, 9-14 April 2000.		Salemi A., Abdollah-Zadeh A, Mirzaei M., Assadi H. A Study on fracture properties of multiphase microstructures of a CrMo steel. <i>Materials Science and Engineering:A</i> 2008;Volume 492, Issues 1-2, 45-48.
Mirzaei M., Janbozorgi A., Hoseini S.A. Computation of fracture mechanics parameters for an industrial gas turbine blade. In: Proceedings of the International Conference on Fracture and Damage Mechanics, 27-29 July 1999, Queen Mary and Westfield College, London, UK.		Zeinali A., Hashemi B., Akhlaghpur SH., Mirzaei M., Nazemi M. Prediction of the compressive strength of human vertebrae using nonlinear finite element method and quantitative computed tomography data. <i>Iranian Journal of Medical Physics</i> 2007;4(16,17) 19-34
Mirzaei M., Shariati M. Some considerations on Rigid Insert crack closure model and measurement technique. In: Proceedings of the International Conference on Fracture and Damage Mechanics, 27-29 July 1999, Queen Mary and Westfield College, London, UK.		Mirzaei M., Biglari H., Salavatian M. Analytical and numerical modeling of the transient elasto-dynamic response of a cylindrical tube to internal gaseous detonation. <i>International Journal of Pressure Vessels and Piping</i> . 2006; 83/7 pp. 531-539.
Janbozorgi A., Mirzaei M. Stress analysis of a gas turbine blade based on fracture mechanics. In: Proceedings of the Third International Mechanical Engineering Conference, 18-20 May 1998, Tehran, Iran.		Mazaheri K., Mirzaei M., Biglari H. Transient dynamic response of tubes to internal detonation loading. <i>Journal of Sound and Vibration</i> , 2006;297, pp. 106-122.
Poursaeedi E., Mirzaei M. Creep life assessment of an industrial gas turbine blade. In: Proceedings of the Third International Mechanical Engineering Conference, 18-20 May 1998, Tehran, Iran.		Mirzaei M., Pourkamali A. A combined Node-Enrichment scheme for modeling 2D cracks in extended finite element method. <i>Amirkabir Journal of Science & Technology</i> , 2005;Vol. 15, No.60-1, 47-67.
Hoseini S.A., Mirzaei M. Thermal stress analysis of a gas turbine blade. In: Proceedings of the Third International Mechanical Engineering Conference, 18-20 May 1998, Tehran, Iran.		Mirzaei M., Mazaheri K., Biglari H. Analytical modeling of the elastic response of tubes to internal detonation loading. <i>International Journal of Pressure Vessels and Piping</i> , 2005;Vol. 82, No. 12, pp. 883-895.

<p>Hoseini S.A., Mirzaei M. Mechanical stress analysis of an industrial gas turbine blade. In: Proceedings of the Third International Mechanical Engineering Conference, 18-20 May 1998, Tehran, Iran.</p>		<p>Mirzaei M., Seifi R. 3D path-independent J-Integral for cracks in residual stress fields. <i>International Journal of Engineering Sciences</i>. Iranian university of science and technology, Special issue, June 2005.</p>
<p>Seraj M., Mirzaei M. Stress analysis of casing and components of a reinforced pressure vessel. In: Proceedings of the Third International Mechanical Engineering Conference, 18-20 May 1998, Tehran, Iran.</p>		<p>Mirzaei M., Pourkamali A. Application of local coordinates systems in modeling 2D cracks in the extended finite element method. <i>International Journal of Engineering Sciences</i>. Iranian university of science and technology, Special issue, June 2005.</p>
<p>Mirzaei M., Shariati M., Taheri M. Local fracture toughness assessment of weldments. In: Proceedings of the Eighth International Conference on Pressure Vessels Technology, ICPVT-8, 21-26 July 1996, Montreal, Canada.</p>		<p>Mirzaei M., Seifi R., Malek F. Computation of crack parameters in residual stress fields. <i>Modares Technical and Engineering Journal</i>. 2003;No. 12, 1-16.</p>
<p>Mirzaei M., Provan J.W. Analysis and assessment of fatigue crack closure. In: Proceedings of the International Conference on Engineering Application of Mechanics, June 9-12, 1992, Tehran, Iran.</p>		<p>Mirzaei M., Karimi R. Computation of crack growth rate for a gas turbine blade. <i>Modares Technical and Engineering Journal</i>, 2002;No. 6, 51-56.</p>
		<p>Shariati M., Mirzaei M. A new formulation for the Rigid-Insert crack closure model. <i>Iranian Journal of Technical Faculty</i>, Tehran University, 2000;Vol 33, No.3. 15-23</p>
		<p>Shariati M., Mirzaei M. Enhancement of the formulation method of a fatigue crack closure model. <i>Iranian Journal of Mechanical Engineering</i>. 1999;No.4. 17-24.</p>
		<p>Mirzaei M. Analytic compliance and stress intensity factor expressions for C(T) specimen. <i>Modares Technical and Engineering Journal</i>, 1996;No. 2, 44-49.</p>
		<p>Mirzaei M., Provan J.W. The effect of crack wake characteristics on fatigue crack closure: Part II-A non-uniform wake study. <i>Journal of Theoretical</i></p>

		<i>and Applied Fracture Mechanics</i> , 1993;18, 185-191.
		Mirzaei M., Provan J.W. The effect of crack wake characteristics on fatigue crack closure: Part I--A crack wake removal study. <i>Journal of Theoretical and Applied Fracture Mechanics</i> , 1993;18, 179-183.
		Mirzaei M., Provan J.W. A new method for the analysis and assessment of fatigue crack closure. II: Experimental study. <i>Journal of Theoretical and Applied Fracture Mechanics</i> , 1992;18, 59-63.
		Mirzaei M., Provan J.W. A new method for the analysis and assessment of fatigue crack closure. I: Modeling. <i>Journal of Theoretical and Applied Fracture Mechanics</i> , 1992;18, 47-58.
		Mirzaei M., Provan J.W. A Fatigue crack closure model and measurement technique. <i>International Journal of Fracture</i> , 1991;47: R3-R10.