RESUME

Full Name

- Ahmad Ghasemi-Ghalebahman

Academic Position

- Associate Professor of Faculty of Mechanical Engineering, Semnan University, Semnan, Iran, September 2008 to present

Office Address

- Faculty of Mechanical Engineering, Semnan University, Semnan, 35131-19111 Iran

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Education and Technical Biography: Ahmad Ghasemi-Ghalebahman received his M.S. and Ph.D. degrees, both in Mechanical Engineering, from Iran University of Science and Technology, Tehran, Iran, in 2001 and 2008, respectively. He is currently an Associate Professor in the Faculty of Mechanical Engineering at Semnan University, Semnan, Iran. His research interests include fatigue and fracture evaluation in metallic and polymer-based composites, structural analysis and mechanical behavior of composite and nanocomposite materials, nondestructive damage detection, inverse finite element formulations for time-dependent field problems, and simulation of finite deformations.

Work Experience

Worked on aviation industry projects involving finite element modeling of turbine rotor blades, as well as estimation of diffusion properties and heat-shock boundary conditions using inverse methods.

Professional Service

- Director-in-Charge, journal of Mechanics of Advanced Composite Structures (MACS), Website: http://macs.journals.semnan.ac.ir/
- Head of Creep, Fatigue, and Failure Laboratory at Semnan University
- Head of the Solid Mechanics Group, 2023–2025

Courses Taught

- *Undergraduate:* Machine Design-1, Machine Design-2, Strength of Materials-1, Strength of Materials-2, Statics, Dynamics, Composite Materials, Mechanism Design
- *Graduate:* Advanced Composite Materials, Fatigue and Fracture Mechanics, Finite Element Method, Continuum Mechanics

Computer Skills
Mathemitica, Matlab, Fortran, Ansys, Abaqus

Research Experience
- Inverse finite element formulation of the time dependent field problems
- Simulation of finite plastic deformation
- Vibration and buckling analysis of thick composite laminates using high order plate theories
- Mixed mode fracture analysis in composite materials
- The effect of non-proportional loading on fatigue life prediction
- Damage evaluation in composite materials using nondestructive approaches

Research Interests
- Time step criteria and sub-region analysis in numerical modeling of time-dependent field problems
- Modification of finite element formulation via the inverse approaches
- Application of Layerwise and high order shear deformation theories for vibration and structural analysis of the laminated composite materials
- Crack growth modeling using XFEM
- Differential quadrature method (DQM) and Meshless Local Petrov-Galerkin method (MLPG) in time-dependent field problems
- Geometry and material nonlinearity in finite deformations
- Damage detection in composite laminates
- Identification of parametric structural vibration models

Publications

Research articles
- E. Kargar, S.A. Hosseini-Taklimi, A. Ghasemi-Ghalebahman, "Fracture behavior of sustainable wood and PLA composites fabricated by fused deposition modeling using essential work of fracture", Scientific Reports, Vol. 15, No. 1, pp. 34929, 2025

- M. Aghamirzaie, A. Ghasemi-Ghalebahman, A. Najibi, Optimization of the octagonal origami tube energy absorption using the artificial neural network and heuristic method, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, Vol. 239, No. 5, pp. 2805-2817, 2025

- M. Nejati, M.M. Shokrieh, A. Ghasemi Ghalebahman, "Elastic-plastic fracture analysis of notched aluminum sheets repaired with prestressed SMA-reinforced composite patches", Theoretical and Applied Fracture Mechanics, Vol. 139, pp. 105090, 2025
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- S. Jabarzadeh, A. Najibi, A. Ghasemi-Ghalebahman, "A crystal plasticity finite element framework for multiscale structure-property-performance analysis in functionally graded porous 316L stainless steel", Materials & Design, Vol. 254, pp. 114036, 2025

- M.H. Safari-Naderi, A. Ghasemi-Ghalebahman, M. Shakouri, "Investigating strain rate effects on elastoplastic fracture using a variable material properties-based peridynamic model", Results in Engineering, Vol. 25, pp. 103739, 2025

- S. Jabarzadeh, A. Ghasemi-Ghalebahman, A. Najibi, “Investigation of the Effect of Texture on the Deformation Behavior of Additively Manufactured 316L Stainless Steel Using the Crystal Plasticity Finite Element Method”, Mechanic of Advanced and Smart Materials, Vol. 4, No. 3, pp. 387-403, 2024

- M. Saberian, A. Ghoddosian, A. Ghasemi-Ghalebahman, “Optimization of cutout characteristics in AISI 1045 steel plates for high-cycle fatigue life extension”, Mechanics Based Design of Structures and Machines, Vol. 52, No. 12, pp. 10343-10362, 2024

- M. Khademi-Kouhi, A. Ghasemi-Ghalebahman, A. Farrokhabadi, M.R.M. Aliha, “Vibration Characteristics of FML Cylindrical Shell Bonded by Thin Piezoelectric Actuator and Sensor Layer with and without Fluid–Structure Interaction Resting on Pasternak Elastic Foundation”, International Journal of Structural Stability and Dynamics, Vol. 24, No. 21, pp. 2450238, 2024

- S. Jabarzadeh, A. Ghasemi-Ghalebahman, A. Najibi, “Investigation into microstructure, mechanical properties, and compressive failure of functionally graded porous cylinders fabricated by SLM”, Engineering Failure Analysis, Vol. 165, pp. 108794, 2024

- A. Bakhshizade, A. Ghasemi-Ghalebahman, M.A. Hajimousa, “Development of novel models for fatigue life assessment of natural rubber/styrene-butadiene rubber/nanoclay nanocomposite”, Polymer Composites, Vol. 45, No. 2, pp. 1851-1871, 2024

- E. Kargar, A. Ghasemi-Ghalebahman, “Experimental investigation on fatigue life and tensile strength of carbon fiber-reinforced PLA composites based on fused deposition modeling”, Scientific Reports, Vol. 13, pp. 18194, 2023

- M. Nejati, M.M. Shokrieh, A Ghasemi-Ghalebahman, “A new semi-numerical method for calculation of the critical J-integral”, Journal of the Brazilian Society of Mechanical Sciences and Engineering, Vol. 45, pp. 499, 2023

- M.H. Safari-Naderi, A. Ghasemi-Ghalebahman, M. Shakouri, "A New Bond-Based Peridynamic Model with the Ability to Model Elastoplastic Behavior", Journal of Computational Methods in Engineering, Vol. 42, No. 1, pp. 125-139, 2023

- M. Nejati, M.M. Shokrieh, A Ghasemi Ghalebahman, “Reinforcement of cracked aluminum plates using polymeric composite patches embedded with prestressed SMA wires”, Journal of Composite Materials, Vol. 57, No. 20, pp. 3243–3256, 2023

- M.H. Safari-Naderi, M. Shakouri, A. Ghasemi-Ghalebahman, “A bond-based peridynamics model based on variable material properties for modeling elastoplastic behavior”, Materials Today Communications, Vol. 35, pp. 105890, 2023

- M. Saberian, A. Ghoddosian, A. Ghasemi-Ghalebahman, “Computational intelligent optimization approach based on Particle Swarm Optimization and Extended Finite Element Method for high-cycle fatigue life extension”, Journal of the Brazilian Society of Mechanical Sciences and Engineering, Vol. 45, No. 2, pp. 93, 2023

- S.M. Hosseini, M. Azadi, A. Ghasemi-Ghalebahman, S.M Jafari, “Fatigue crack initiation detection in ductile cast iron crankshaft under rotating bending fatigue test using the

acoustic emission entropy method", Engineering Failure Analysis , Vol. 144, pp. 106981, 2023

- A. Bakhshizade, A. Ghasemi-Ghalebahman, M.A. Hajimousa, "Evaluation of fatigue performance of filled and unfilled natural rubber/styrene-butadiene rubber composites", Polymer Engineering & Science, Vol. 63, No. 1, pp. 189-205, 2023

- H. Taghipoor, A. Fereidoon, A. Ghasemi-Ghalebahman, J. Mirzaei, "Experimental assessment of mechanical behavior of basalt/graphene/PP-g-MA-reinforced polymer nanocomposites by response surface methodology", Polymer Bulletin, Vol. 80, pp. 7663–7685, 2023

- F. Abdolkarimzadeh, M.R. Ashory, A. Ghasemi-Ghalebahman, A. Karimi, "A position-and time-dependent pressure profile to model viscoelastic mechanical behavior of the brain tissue due to tumor growth", Computer Methods in Biomechanics and Biomedical Engineering, Vol. 26, No. 6, 2023

- S.M. Hosseini, M. Azadi, A. Ghasemi-Ghalebahman, S.M Jafari, "Data analysis of striation spacing, lifetime, and crack length in crankshaft ductile cast iron under cyclic bending loading through high-cycle fatigue regime", Data in Brief, Vol. 45, pp. 108666, 2022

- J. Mirzaei, A. Fereidoon, A. Ghasemi-Ghalebahman, "An investigation into the tensile and impact strength of hybrid nanocomposites reinforced with graphene, kenaf fiber, and basalt fiber", Journal of Natural Fibers, Vol. 19, No. 16, pp. 12896-12910, 2022

- A. Basiri, M. Azadi, A. Ghasemi-Ghalebahman, "Ratcheting crystal plasticity modeling in microstructure of magnesium alloy under stress-controlled cyclic tensile loading with non-zero mean stress", The Journal of Engine Research, Vol. 68, No. 68, pp. 39-48, 2022

- M. Aghamirzaie, A. Najibi, A. Ghasemi-Ghalebahman, "Energy absorption investigation of octagonal multi-layered origami thin-walled tubes under quasi-static axial loading", International Journal of Crashworthiness, Vol. 28, No. 4, 2023

- A. Kamyab, A. Ghasemi-Ghalebahman, A. Fereidoon, H.A. Khonakdar, "Investigation into the shape memory behavior of peanut-pattern auxetic structures", Express Polymer Letters, Vol. 16, No.7, pp. 679-693, 2022

- A. Bakhshizade, A. Ghasemi-Ghalebahman, M.A. Hajimousa, "Effect of Nanoclay Filler on Fatigue Life of Natural Rubber/Styrene-Butadiene Blend", Advances in Polymer Technology, Vol. 2022, pp. 1-17, 2022

- A. Basiri, F. Zaïri, M. Azadi, A. Ghasemi-Ghalebahman, "Micromechanical constitutive modeling of tensile and cyclic behaviors of nano-clay reinforced metal matrix nanocomposites", Mechanics of Materials , Vol. 168, pp. 104280, 2022

- M. Khanahmadi, M. Gholhaki, A. Ghasemi-Ghalebahman, M. Khademi-Kouhi, "Damage detection in laminated composite plates using wavelet analysis analytical method", Journal of Vibration and Sound (in Persian), Vol. 10, No. 20, pp. 144-156, 2022

- A. Ghasemi-Ghalebahman, A. Abdi Aghdam, S. Pirmohammad, M. Hassani Niaki, “Experimental investigation of fracture toughness of nanoclay reinforced polymer concrete composite: Effect of specimen size and crack angle”, Theoretical and Applied Fracture Mechanics, Vol. 117, pp. 103210, 2022

- F. Abdolkarimzadeh, M.R. Ashory, A. Ghasemi-Ghalebahman, A. Karimi, “Inverse dynamic finite element-optimization modeling of the brain tumor mass-effect using a variable pressure boundary”, Computer Methods and Programs in Biomedicine, Vol. 212, pp. 106476, 2021

- S.M. Hosseini, A. Ghasemi-Ghalebahman, M. Azadi, S.M. Jafari, “Crack initiation detection in crankshaft ductile cast iron based on information entropy of acoustic emission signals under tensile loading”, Engineering Failure Analysis, Vol. 127, No. 19, pp. 105547, 2021

- A. Ghasemi Ghalebahman, S.M Hosseini, M. Azadi, S.M. Jafari, “Condition monitoring of ductile cast iron with acoustic emission entropy during tensile loading: Energy parameter reporting”, Journal of Vibration and Sound (in Persian) , Vol. 10, No. 19, pp. 80-95, 2021

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- R. Amini-Nejad, A. Ghasemi-Ghalebahman, A. Fereidoon, N. Golshan-Ebrahimi, “In situ encapsulation technique for fabrication of self-healing thermosetting polyurethane with tungsten (VI) chloride”, Polymers for Advanced Technologies, Vol. 32, No. 2, pp. 789-802, 2021

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- A. Kamyab, A. Ghasemi-Ghalebahman, A. Fereidoon, H.A. Khonakdar, “Shape memory and mechanical properties of polycaprolactone/polypropylene carbonate nanocomposite blends in the presence of G-POSS nanoparticles”, eXPRESS Polymer Letters, Vol. 15, No. 5, pp. 473-489, 2021

- A. Ghasemi-Ghalebahman, M. Bigdeli-Yeganeh, E. Cheloeian, M. Khademi-Kouhi, “Free vibration of piezoelectric boron nitride nanotube-based composite cylindrical micropanel embedded in an elastic medium subjected to electric potential via modified strain gradient theory”, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, Vol. 234, No. 12, pp. 2309-2328, 2020

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- M.H. Safari Naderi, H. Ekhteraei Toussi, A. Ghasemi Ghalebahman, "Delamination analysis in composite root of a carbon-layer reinforced wind turbine blade", Mechanics of Advanced Composite Structures, Vol. 6, No. 1, pp. 9-18, 2019

- M. Nejati, A. Ghasemi-Ghalebahman, A. Soltanimaleki, R. Dimitri, F. Tornabene, Thermal vibration analysis of SMA hybrid composite double curved sandwich panels, Composite Structures, Vol. 224, No. 15, pp. 111035, 2019

- H. Sayar, M. Azadi, A. Ghasemi-Ghalebahman, S.M. Jafari, "Clustering effect on damage mechanisms in open-hole laminated carbon/epoxy composite under constant tensile loading rate, using acoustic emission", Composite Structures, Vol. 204, pp. 1-11, 2018

- A. Ghasemi-Ghalebahman, E. Cheloeian, "Vibration analysis of boron nitride reinforced nanocomposites embedded in elastic medium considering surface and electric field effects by using higher order modified strain gradient theory", Journal of Science and Technology of Composites (in Persian), Vol. 6, pp. 31-42, 2019

- F. Masoumi, A. Ghasemi-Ghalebahman, M.J. Kokabi, "Identification of mechanical and damage parameters of composite laminates based on a CPAM method", Journal of Reinforced Plastics and Composites, Vol. 37, No. 17, pp. 1114-1128, 2018

- M. Azadi, H. Sayar, A. Ghasemi-Ghalebahman, S.M. Jafari, "Tensile loading rate effect on mechanical properties and failure mechanisms in open-hole carbon fiber reinforced polymer composites by acoustic emission approach", Composites Part B: Engineering, Vol. 158, pp. 448-458, 2019

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- A. Ghasemi G., H. Sayyar, M. Azadi, and S. M. Jafari, "Failure mechanisms in open-hole laminated composites using acoustic emission", Journal of Science and Technology of Composites (in Persian), Vol. 5, No. 1, pp. 143-152, 2018

- A. Ghasemi G and A. Khakbaz, "Vibration of graphene sheets with axial force effect in elastic medium based on nonlocal elasticity and third-order shear deformation theory", Modares Mechanical Engineering (in Persian), Vol. 18, No. 4, pp. 232-240, 2018

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- A. Ghasemi G., J. Akbardoost and Y. Ghaffari, "Evaluation of size effect on mixed-mode fracture behavior of epoxy/silica nanocomposites", Journal of Strain Analysis, Vol. 52, No. 4, pp. 1-10, 2017

- A. Ghasemi G., M.R. Ashory, and M.J. Kokabi, "A proper lifting scheme wavelet transform for vibration-based damage identification in composite laminates", Journal of Thermoplastic Composite Materials, Vol. 31, No. 5, pp. 668-688, 2018

- F. Masoumi and A. Ghasemi G., “Sensitivity Analysis of a CPAM Inverse Algorithm for Composite Laminates Characterization”, Shock and Vibration, Vol. 2017, Article ID 2821873, pp. 1-14, 2017

- M.R. Ashory, A. Ghasemi G., and M.J. Kokabi, “Increasing robustness of solution to noise for identifying delamination damage in composite plates using a hybrid method”, Journal of Science and Technology of Composites (in Persian), Vol. 4, No. 2, pp. 125-134, 2017

- R. Madoliat, A. Ghasemi G., G. Mohammad-Hanifeh, “Effect of damping on nonlinear forced vibration response of graphene-based nanocomposites”, Journal of Science and Technology of Composites (in Persian), Vol. 4, No. 2, pp. 141-150, 2017

- H. Mansoori, S. Babaei, and A. Ghasemi G., “A novel numerical method for fatigue life prediction under non-proportional loadings”, Modares Mechanical Engineering (in Persian), Vol. 17, No. 5, pp. 232-242, 2017

- H. Sayar, M. Alizadeh, M. Azadi, A. Ghasemi G., S. M. Jafari, and A. Mafi, “Investigation of crack growth behavior in aluminum alloy used in engine components, by acoustic emission method”, The Journal of Engine Research (in Persian), Vol. 48, pp. 3-12, 2017

- M.R. Ashory, A. Ghasemi G., and M.J. Kokabi, “Damage detection in laminated composite plates via an optimal wavelet selection criterion”, Journal of Reinforced Plastics and Composites, Vol. 35, No. 24, pp. 1-15, 2016

- A. Ghasemi G., M. Moradi G., “A novel vibration-based optimization technique for identifying elastic constant distribution and volume fraction index in functionally graded rectangular plates”, Modares Mechanical Engineering (in Persian), Vol. 16, No. 6 , pp. 245-254, 2016

- S. Babaei, A. Ghasemi G., R. Hajighorbani, "A fatigue model for sensitive materials to non-proportional loadings", International Journal of Fatigue, Vol. 80, pp. 266-277, 2015

- S. Babaei, A. Ghasemi G., "Damage-based modification for fatigue life prediction under non-proportional loadings", International Journal of Fatigue, Vol. 77, pp. 86-94, 2015

- Y. Rostamiyan, A. Fereidoon, A. Ghasemi G., A.H. Mashhadzadeh, A. Salmankhani, "Experimental study and optimization of damping properties of epoxy-based nanocomposite: Effect of using nanosilica and high-impact polystyrene by mixture design approach", Materials & Design, Vol. 65, pp. 1236-1244, 2015

- A. Ghasemi G., S. Salavati, “Utilizing the extended finite element method for determining crack stress intensity factors and higher order terms coefficients”, journal of Modares Mechanical Engineering (in Persian), Vol. 15, No. 2, pp. 135-146, 2015

- M.M. Shokrieh, R. Madoliat, B. Bostani, A. Ghasemi, V. Mohmoodian, “A new inverse method for determination of unidirectional ply mechanical properties of a laminated composite”, journal of Modares Mechanical Engineering (in Persian), Vol. 15, No. 1 , pp. 352-360, 2015

- M. Rezvani, A. Ghasemi G., "Interlaminar stresses in symmetric cross-ply composite laminates using Layerwise theory", journal of Modares Mechanical Engineering (in Persian), Vol. 14, No. 1, pp. 59-66, 2014

- A. Ghasemi G. and M. Akbarzadeh, "Calibration Coefficients for Residual Stress Measurement in Composite Materials Using Finite Element Method", American J. of Engineering and Applied Sciences, Vol. 5, No. 1, pp. 25-28, 2012

- R. Madoliat, S. Hayati, and A. Ghasemi G., "Modeling and analysis of frictional damper effect on chatter suppression in a slender endmill tool", Journal of Advanced Mechanical Design, Systems, and Manufacturing, Vol. 5, No. 2, pp. 115-128, 2011

- R. Madoliat, S. Hayati, and A. Ghasemi G., "Investigation of chatter suppression in slender endmill via a frictional damper", Scientia Iranica, Vol. 18, No. 5, pp. 1069-1077, 2011

- R. Madoliat, and A. Ghasemi, "Bilinear rectangular element matrices for diffusion problems via the inverse method", Inverse Problems in Science and Engineering, 1741-5985, Vol. 17, No. 7, pp. 961 – 975, 2009

- R. Madoliat, and A. Ghasemi, "Inverse finite element formulations for transient heat conduction problems", Heat and Mass Transfer, Vol. 44, Number 5, pp. 569- 577, 2008

- R. Madoliat, and A. Ghasemi, "Operating regions for discrete models based on physical reality of diffusion problems" Journal of Thermophysics and Heat Transfer, Vol. 21, Number 1 , pp. 158-165, 2007

Conference Papers

- M.H. Safari-Naderi, H. Ekhteraei-Toussi, A. Ghasemi-Ghalebahman, "Investigation of delamination phenomenon in a multilayer composite structure used in the wind turbine blade", ISME2018 (in Persian), 24-26 April 2018, Semnan University, Semnan, Iran

- H. Sayar, M. Alizadeh, M. Azadi, A. Ghasemi G., and S.M. Jafari, "Analysis of acoustic emission data to investigate the crack growth behavior in an aluminum alloy under low cycle fatigue loading", ISME2018 (in Persian), 24-26 April 2018, Semnan University, Semnan, Iran

- M. Khademi-Kouhi, O. Mir, H. Mohammadi-Feizi, A. Ghasemi Ghalehbahman, H. Pourmirza-Agha, Investigating the effect of compressor pressure ratio on the performance of axial gas turbine operation, ISME2018 (in Persian), 24-26 April 2018, Semnan University, Semnan, Iran

- M. Azadi, H. Sayar, M. Alizadeh , N. Raeisi , A. Moosavian , A. Ghasemi G., S.M. Jafari, and M. Shakouri, "A Comparison between Acoustic Emission Approach and Vibration Analysis in Detection of Failure Mechanisms in Carbon/Epoxy Composites", The Biennial International Conference on Experimental Solid Mechanics, Feb. 13-14, 2018, Tehran, Iran.

- F. Masoumi, A. Ghasemi Ghalebahman, "Determination of mechanical constants of unidirectional glass/epoxy composite plates by using modal test", The 25th Annual International Conference on Mechanical Engineering, ISME2017-1630, 2-4 May 2017, Tarbiat Modares University, Tehran, Iran

- F. Masoumi, A. Ghasemi Ghalebahman, “Stacking sequence identification of thin and thick laminated composite plates by vibration analysis and an inverse method”, The 25th Annual International Conference on Mechanical Engineering, ISME2017-1401, 2-4 May 2017, Tarbiat Modares University, Tehran, Iran

- S. Babaei, H. Mansoori , A. Ghasemi-Ghalebahman, “Numerical modification for fatigue life prediction under asymmetric loading”, 16th International Conference on New Trends in Fatigue and Fracture (NT2F16), May 24-27, 2016, Dubrovnik, Croatia

- A. Zamani, A. Ghasemi-Ghalebahman, and A. Fereidoon, “Fatigue life prediction in symmetric composite laminates based on micromechanical approach”, 16th International Conference on New Trends in Fatigue and Fracture (NT2F16), May 24-27, 2016, Dubrovnik, Croatia

- S. Babaei, H. Mansouri , and A. Ghasemi G., "Modification for fatigue life prediction under non-proportional loading", 16th International Conference on New Trends in Fatigue and Fracture (NT2F16), May 24-27, 2016, Dubrovnik, Croatia

- A. Ghasemi G., M. Moradi Golestani, “A novel optimization technique for identifying stacking sequence and elastic constants in composite laminates”, The Bi-Annual International Conference on Experimental Solid Mechanics, Feb. 16-17, 2016, Tehran, Iran.

- A. Kamaloo, R. Madoliat, A. Ghasemi G., "Optimization of Composite Laminates for Minimum Weight and Delamination Fatigue Crack Growth Rate using NSGA-II", The 4th international conference on composites: characterization, fabrication and application (ccfa-4), Dec. 16-17, 2014, Tehran, Iran

- A. Ghasemi-Ghalebahman, R. Amininejad, “A review of self-healing polymeric nanocomposites based on the encapsulation method”, 3rd nation conference and 1st international conference on applied research in electrical, mechanical & mechatronic (in Persian), February 17-18, 2016, Malek-Ashtar University of Technology, Tehran, Iran

- احمد قاسمی قلعه بهمن، عبدالحسین فریدون و آرش زمانی، "پیش بینی عمر خستگی در چندلایه های مرکب متقارن با الیاف زاویه دار بر اساس دیدگاه میکرومکانیک"، دومین کنفرانس بین المللی پژوهش در مهندسی، علوم و تکنولوژی، ۲ اسفند ۱۳۹۴، دبی، امارات

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- احمد قاسمی قلعه بهمن و محمد مرادی گلستانی، "تکنیک روش معکوس برای تعیین خواص مکانیکی و توزیع ماده در ورق های مستطیلی FGM"، کنفرانس بین المللی پژوهش های نوین در علوم مهندسی، ۱۳ خرداد ۱۳۹۵، دانشگاه تهران، ایران

- A. Ghasemi G. and M. Akbarzadeh, "Determining the residual stresses in composite materials by finite element method", United Kingdom-Malaysia- Ireland, Engineering Science Conference, 12-14 July, 2011

Published Books:

- V.V. Vasiliev and E. V. Morozov, *Advanced Mechanics of Composite Materials and Structural Elements*, Translated from English to Persian by A. Ghasemi-Ghalebahman and A. Kamyab, 1st Edition, Semnan: Semnan University Press, Iran, 2017 (Original work published: 3rd Edition 2013).
- R. Madoliat and A. Ghasemi-Ghalebahman, *Finite Element: Conventional Approach and Inverse Method* (In Persian), 1st Edition, Tehran: IUST Press, Iran, 2018.

Number of theses completed under my supervision:

- *Undergraduate*: **48**
- *Graduate:* **54**

Number of theses currently under my supervision:

- *Undergraduate*: **4**
- *Graduate:* **6**

Master's thesis topics completed under my supervision:

1. Hossein Sabahi-Khatib: Investigation of Essential Work of Fracture in polypropylene/graphene nanosheets nanocomposites prepared by compression molding, Semnan University, October 2025
2. Iman Yousefi: Experimental Investigation of the Mechanical Strength and Fracture Behavior of Friction Stir Spot Welded Aluminum and Copper-Pure Joints, Semnan University, September 2025
3. Jalal Jalaliyoon: Investigation of low cycle fatigue (LCF) behaviour of Ultrafine-grained laminated AL/ALFe3O4 nano composites fabricated by accumulative roll bonding (ARB), Semnan University, October 2025
4. Mohamad-Ali Vahdati: Improvement of Fracture Toughness of Notching Blades in Cutting Automotive Rubber Sealing Profiles Using Finite Element Modeling, Semnan University, October 2025
5. Ehsan Kargar: Experimental analysis of compressive strength of polyethylene terephthalate glycol (PETG) functionally graded cellular structures manufactured by additive manufacturing method, Semnan University, September 2025
6. Mohammad-Amin Razavi-Kia: Prediction of stress-controlled fatigue lifetime in 3D-printed Acrylonitrile styrene acrylate by machine learning techniques: Impact of nozzle temperature, stress level, and metamaterial structure, Semnan University, September 2025
7. Ali Zakershoghi: Investigation and Simulation of the Vibro-Acoustic Behavior Induced by Electromagnetic Noise in the Electric Motor Body, Semnan University, February 2025
8. Seyed-Ali Hoseiny-Nezhad: Experimental study of fracture toughness of aluminum/copper composites produced by accumulative roll bonding (ARB) process, Semnan University, September 2024
9. Mehdi Gharehbash: Ductile fracture analysis of notched polymeric specimens reinforced whit nanoparticles using the equivalent material concept, Semnan University, February 2024
10. Seyed-Ali Bineshtarigh: Experimental investigation of the essential work of fracture (EWF) of aluminum sheets fabricated by accumulative roll bonding (ARB) process, Semnan University, February 2023
11. Seyyed-Hesamoddin Vaez-Shahidi: Investigating the effect of parameters on shape memory behavior of 4D printed polylactic acid (PLA) with auxetic structure, Semnan University, September 2022

12. Mostafa Abednejad: Experimental Investigation of Mechanical Properties of Aluminium\Epoxy-carbon fiber and nanosilica, Semnan University, February 2022
13. Adel Basiri: Numerical Simulation of Ratcheting Behavior in Aluminum and Magnesium Cast Light Alloys by Multi-scale Microstructure Models, Semnan University, January 2021
14. Mohammad Kordi: Detection of gear wear defect in gearbox by experimental mode analysis and wavelet transform, Semnan University, February 2021
15. Reza Afshar Movahed: Analysis and Testing of Composite Sandwich Structures Under Mechanical Loading, Semnan University, February 2021
16. Ali Abdi-Aghdam: Experimental investigation of size effect on mixed-mode fracture toughness of polymer concretes, Semnan University, December 2020
17. Mohammad Ali Hamedi Tabari: Optimization of weight and strength in composite cylindrical shells under thermomechanical loading, Islamic Azad University - North Tehran Branch, December 2020
18. Mojtaba Solhi-Raj: Predicting the creep life in polymeric nanocomposites, Semnan University, Semnan University, February 2020
19. Esmaeel Mirzarazi: Investigation of the Effect of Ply Drops on the Mechanical Properties of Composite Laminates, Semnan University, February 2019
20. Ali Khakbaz: Free vibration analysis of two-layer graphene plates in an elastic medium using nonlocal shear deformation theory, Semnan University, February 2018.
21. Elham Cheloeian: Vibration analysis of Boron-Nitride nanocomposites with consideration of electrical and magnetic effects, Semnan University, February 2018.
22. Meysam Bigdeli-Yeganeh: Using semi-energy finite strip method for buckling analysis of composite plates, Semnan University, February 2018.
23. Sasan Pourjalil: Nonlinear free vibration analysis of FG-CNTRC plates resting on nonlinear elastic foundation by means of perturbation theory, Islamic Azad University Karaj Branch, Semnan University, September 2018
24. Mahdi Kharamideh: Dynamic Instability Analysis of Nanobeams Under Electrostatic and van der Waals Forces - Adviser, Semnan University, September 2017
25. Marzie Shajaryan: Study of the Effect of Matrix-Crack-Induced Stiffness Degradation on the Tensile Response of Orthogonal Laminates with Holes - Adviser, Semnan University, September 2017
26. Hasan Sayar: Failure mode decomposition in composite laminates through acoustic emission approach, Semnan University, September 2017.
27. Ali Rahmani: Buckling and post-buckling analysis of functionally graded nanocomposite cylindrical shells, Semnan University, February 2017.
28. Mostafa Sabbaghian: Predicting the fracture behavior of the key-hole shapes in polyamide polymers, Semnan University, September 2017.
29. Mahdi Golbakhi: Determination of mixed-mode stress intensity factors using interaction integral approach, Semnan University, February 2017.
30. Seyyed-Mohsen Hosseini: Optimization of weight and natural frequency of stiffened FGM cylindrical shells, Semnan University, August 2016.
31. Yaser Ghaffari: Size effect on mixed-mode brittle fracture of nanosilica/epoxy composites, Semnan University, June 2015.
32. Saeid Babaei: Modeling of cyclic plasticity and investigating the effect of fluctuating loading path on fatigue life prediction, Semnan University, February 2015.
33. Mohammad-Reza Hosein-Poorian-Taheri: Active vibration control of laminated composite rectangular plates coupled with piezoelectric actuators, Semnan University, February 2015
34. Abdulwahid Chalaki: Inverse vibration technique for identifying the elastic constants of composite plates, Semnan University, October 2015.
35. Reza Abdolmaleki: Study of Matrix-Crack–Induced Damage under Fatigue Loading in Laminated Composites Using a Micromechanics Approach, October 2014.

36. Oveis Asgari: Mixed-mode Interlaminar crack growth modeling in composite laminates under fatigue loading, Semnan University, October 2014.
37. Reza Abdulmaleki: Damage study due to matrix cracking in laminated composites subjected to fatigue loading using a micromechanics approach, Semnan University, October 2014.
38. Saeed Salavati: Crack growth modeling in isotropic media using extended finite element method, Semnan University, March 2014.
39. Hossein-Ali Khayat: Design of a new 4000 tons hydraulic particle-board press, Semnan University, March 2013.
40. Morteza Rezvani: Determination of Interlaminar stresses in cross-ply and balanced composite laminates using Layerwise theory, Semnan University, February 2013.
41. Farshid Masoumi: Characterization of elastic moduli in polymer-based composite laminates via vibration modal testing, Semnan University, February 2013.
42. Mohammad Akbarzadeh: Determination of residual stresses in composite laminates using hole-drilling approach, Semnan University, September 2011.

PhD thesis topics completed under my supervision:

1. Sina Jabarzadeh: Investigation of Non-Linear Behavior of Functionally Graded Geometry 316L Steel Samples Fabricated by Selective Laser Melting Using Multi-Scale Microstructural Models, Semnan University, March 2025
2. Mohammad Saberian: Shape Optimization in Rectangular 1045 steel plate for High-cycle Fatigue life Extension, Semnan University, October 2024
3. Mojtaba Aghamirzaei: Experimental and numerical analysis of origami energy absorbers under quasi-static axial loading and its optimization, Semnan University, March 2024
4. Mohammad-Hadi Safari-Naderi: Analysis of Elastoplastic Model and Prediction of Crack Propagation Based on Bond-based Peridynamics Theory Using Variable Material Property Method Considering Strain Rate Effects, Semnan University, March 2024
5. Ali Bakhshizade: Fatigue Analysis of Styrene–Butadiene Rubber/Natural Rubber and Natural Rubber/Styrene–Butadiene Rubber/Nanoclay Nanocomposites, Semnan University, March 2023
6. Amir Kamyab: Shape-Memory Behavior and Dynamic–Mechanical Properties of Polycaprolactone-Based Nanocomposites: Experimental and Theoretical Investigation, Semnan University, May 2023
7. Seyed-Morteza Hosseini: Analysis of vibration and acoustic emission data in GJS700 cast iron under cyclic bending loading for estimation of fatigue life equivalent to nucleation and growth of crack, Semnan University, March 2023
8. Mohammad Nejati: Fracture analysis of repaired Aluminum2024-T3 plate with shape memory alloy reinforced composite patch, April 2023
9. Fatemeh Abdolkarimzadeh: Predicting brain deformation due to tumor extraction, by finite element modeling and numerical analysis, and based on adaptation to magnetic resonance imaging results, Semnan University, March 2022
10. Jaber Mirzaie: Experimental investigation of mechanical properties of short kenaf/basalt fiber-reinforced polypropylene hybrid nanocomposites, Semnan University, Semnan University, August 2021
11. Reza Amini-Nejad: Experimental study and simulation of self-healing polyurethane composite using encapsulation technique and characterization of its mechanical properties and fracture behavior, Semnan University, Semnan University, March 2021
12. Mohammad-Javad Kokabi: Determination of depth and size of delamination damage in composite plates based on simultaneous use of wavelet transform and finite element model updating, Semnan University, Semnan University, February 2017

Master's thesis topics currently under my supervision:

1. Fatigue Life Extension in Polymers via Stop-Hole Technique
2. Experimental Crashworthiness Study of Origami Crash Boxes
3. Mechanical Evaluation of a PLA/Gelatin–nHA Scaffold for Bone Tissue Engineering
4. Design and Analysis of a Wearable Support Chair
5. Tensile and Fatigue Study of 3D-Printed PETG Cellular Structures
6. Bending Energy Absorption of 3D-Printed TPU Graded Cellular Structures
7. Size Effect on Fracture Toughness of FSW Bimetal Specimens Size Effect on Fracture Toughness of FSW Bimetal Specimens

PhD's thesis topics currently under my supervision:

1. Synthesis of a hybrid shape memory polymer and evaluation of its mechanical behavior
2. Effect of Filament Quality and Secondary Pressure on FDM Carbon-Fiber Composites
3. Energy Absorption and Vibration of SMA-Reinforced FG Lattice Sandwich Beams
4. Fatigue Modeling and Optimization of Additively Manufactured Porous Scaffolds
5. Topology Optimization of AM Metallic Implants for Bone Repair

Peer-Review Activities

No.	Journal Title	Review Assignments
1	Journal of Stress Analysis	1
2	Thin-Walled Structures	2
3	Composite Structures	2
4	Composite Interfaces	1
5	Journal of Materials Engineering and Performance	2
6	Journal of Elastomers and Plastics	1
7	PLOS ONE	15
8	Advanced Composite Materials	1
9	Mechanics of Advanced Materials and Structures	1
10	Steel and Composite Structures, An International Journal	1
11	Journal of Testing and Evaluation	1
12	International Journal of Fatigue	2
13	Shock and Vibration	1
14	Theoretical and Applied Fracture Mechanics	1
15	Journal of Composite Materials	2
16	Advanced Engineering Materials	2
17	Ain Shams Engineering Journal	1
18	IEEE Access	1
19	Results in Engineering	1
20	Mechanics of Advanced Composite Structures	46
21	Scientific Reports	3
22	Mechanics Based Design of Structures and Machines, An International Journal	2
23	Journal of Elastomers and Plastics	1
24	Journal of Renewable Materials	2
25	Journal of Aerospace Engineering	1
26	Journal of Heat and Mass Transfer Research	3
27	Journal of Reinforced Plastics and Composites	1
28	Science and Engineering of Composite Materials	2
29	Mechanics of Advanced and Smart Materials (Persian)	6
30	Journal of Solid and Fluid Mechanics (Persian)	11
31	Journal of Science and Technology of Composites (Persian)	17
32	Journal of Modares Mechanical Engineering (Persian)	10
33	Modeling in Engineering (Persian)	8