



جعفر غضنفریان

وبسایت دانشگاهی

وبسایت شخصی

متولد ۱۳۶۲، متاهل با یک دختر

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عضو هیئت علمی

دانشیار گروه مهندسی مکانیک دانشگاه زنجان

عضو کمیته آموزش و ترویج سازمان نظام مهندسی استان زنجان (۱۴۰۰-۱۴۰۶)

عضو کمیسیون تخصصی دانشکده مهندسی به انتخاب اعضای هیئت علمی (۱۴۰۴)

عضو کمیته برنامه ریزی و پایش دستاوردهای انجمن آموزش مهندسی ایران (۱۴۰۳-۱۴۰۶)

مدیر امور پژوهشی دانشگاه زنجان (۱۴۰۱-۱۴۰۵)

مدیر گروه مهندسی مکانیک و صنایع (۱۳۹۵-۱۳۹۷)

تحصیلات

دکتری (مهر ۱۳۸۶ تا تیر ۱۳۹۰)

مهندس مکانیک در گرایش تبدیل انرژی از دانشگاه صنعتی امیرکبیر (پلی تکنیک تهران)

معدل کل: ۱۹/۴۶ رتبه اول دوره دکتری از ابتدای تاسیس دانشگاه (آخرین استعلام ۶ سال پیش)

کارشناسی ارشد (مهر ۱۳۸۴ تا تیر ۱۳۸۶)

مهندسی مکانیک در گرایش تبدیل انرژی از دانشگاه صنعتی امیرکبیر (پلی تکنیک تهران)

معدل کل: ۱۷/۹۷ (رتبه اول)

کارشناسی (۱۳۸۰-۱۳۸۴)

مهندسی مکانیک در گرایش حرارت و سیالات از دانشگاه تهران

معدل کل: ۱۶/۳۶ (ما بین ده نفر اول)

دیپلستان (۱۳۷۶-۱۳۸۰)

فارغ التحصیل مرکز استعدادهای درخشان (سمپاد)، معدل ۱۹/۲۰

زمینه‌های تحقیقاتی مورد علاقه

- انرژی‌های تجدیدپذیر (انرژی هاروستینگ، دودکش خورشیدی، تبدیل مستقیم انرژی)
- یادگیری ماشین
- جریان و انتقال حرارت در ابعاد نانو
- جریان‌های تراکم‌پذیر
- مسائل با مرز متحرک
- تهویه مطبوع سبز

افتخارات

۱۴۰۴	سرآمد آموزشی دانشگاه زنجان
۱۴۰۳	سرآمد پژوهشی دانشگاه زنجان
۱۴۰۳	سرآمد آموزشی دانشگاه زنجان
۱۴۰۲	سرآمد پژوهشی دانشگاه زنجان
۱۴۰۲	سخنرانی تدکس در اصفهان در مورد کاربرد ریاضیات در هنر
تسهیلات از	جایزه تحصیلی به صورت حقوق ماهیانه، وام خرید مسکن، حج عمره رایگان، انجام سربازی به صورت پروژه در بنیاد نخبگان و گرنت پژوهشی استادیاران جوان به مبلغ ۲۰۰ میلیون ریال
بنیاد ملی نخبگان	(حدود ۷ سال پیش)
۱۳۹۸-۱۳۹۶	داور برگزیده (Outstanding Reviewer) مجله‌های: Computational Condensed Matter, International Journal of Heat and Mass Transfer, Renewable and Sustainable Energy Reviews, Energy, Applied Thermal Engineering, Powder Technology
۱۳۹۴	کандید شدن کتاب "طراحی توسط تئوری ساختارها" در میان ۵ کتاب معرفی شده برای کسب جایزه کتاب سال.
۱۳۹۲	برنده جایزه پژوهشی استادیاران جوان به نام مرحوم دکتر کاظمی آشتیانی، اعطاء شده از طرف بنیاد ملی نخبگان.
۱۳۹۱	"استاد نمونه از دیدگاه دانشجویان"، دانشکده مهندسی مکانیک دانشگاه زنجان.
۱۳۹۰	"دانشجوی ممتاز فارغ‌التحصیل دوره دکتری"، دانشگاه صنعتی امیرکبیر.
۱۳۹۰	"دارای بالاترین معدل" و "رتبه یک" دوره دکتری ما بین کلیه ورودی‌های رشته مهندسی مکانیک در کلیه گرایش‌ها از "ابتدای تاسیس دانشگاه صنعتی امیرکبیر" (آخرین اعلام ۶ سال پیش).
۱۳۸۶	"دانشجوی ممتاز فارغ‌التحصیل کارشناسی ارشد"، دانشگاه صنعتی امیرکبیر.
۱۳۸۶	"نفر اول بین دانشجویان تبدیل‌انرژی"، دانشگاه صنعتی امیرکبیر.
۱۳۷۸	"پذیرفته المپیاد کامپیوتر"، مرحله استانی.

زمینه‌های آموزشی مورد علاقه

ویدئوهای آموزشی تهیه شده از طریق آپارات و یوتیوب به رایگان در اختیار عموم قرار گرفته است.

- محاسبات عددی (۳۴ ساعت)
- ریاضیات (۳۴ ساعت)
- یادگیری ماشین (۱۵ ساعت)
- مکانیک سیالات (۶۰ ساعت)
- توربوماشین‌ها (۴۲ ساعت)
- مکانیک سیالات پیشرفته (۶۰ ساعت)
- مکانیک محیط پیوسته (۲۸ ساعت)
- انتقال حرارت (۴۸ ساعت)
- جریان تراکم‌پذیر (۱۸ ساعت)
- ترمودینامیک (۵۵ ساعت)
- انرژی‌های تجدید پذیر و تبدیل مستقیم انرژی (۱۲ ساعت)
- دینامیک سیالات محاسباتی (۳۲ ساعت)
- سایر موارد مرتبط با علم و پژوهش (۳۶ ساعت)
- ...

داوری مجلات منتخب

داوری بیش از ۱۷۰ مقاله در بیش از ۴۵ مجله

Physical Review Letters | IEEE Transactions on Fuzzy Systems | Energy | Microfluidics and Nanofluidics | Applied Thermal Engineering | Applied Mathematical Modelling | International Journal of Thermal Sciences | International Journal of Heat and Mass Transfer | Physical Review E | Renewable & Sustainable Energy Reviewers | International Journal for Numerical Methods for Fluids | Numerical Methods for Partial Differential Equations | Journal of Heat Transfer-ASME | International Journal of Hydrogen Energy | IEEE Trans. On Electron Devices | Physical Review Applied | Journal of Non-Crystalline Solids | Powder Technology | Journal of Fluids Engineering-Transactions of ASME | Heat and Mass Transfer | Journal of Scientific Computing | Journal of Thermophysics and Heat Transfer

سوابق پژوهشی، آموزشی، اجرایی

- عضو کمیسیون تخصصی دانشکده مهندسی دانشگاه زنجان، ۱۴۰۴
- عضو کمیته برنامه‌ریزی و پایش دستاوردهای انجمن آموزش مهندسی ایران، ۱۴۰۳
- عضو کمیته آموزش سازمان نظام مهندسی ساختمان استان زنجان، ۱۴۰۰-۱۴۰۶

- عضو پیوسته انجمن آموزش مهندسی ایران
- مدیریت گروه مهندسی مکانیک و صنایع دانشگاه زنجان، ۱۳۹۵-۱۳۹۷
- دارای پروانه اشتغال به کار مهندسی پایه ۲ از سازمان نظام مهندسی ساختمان، ۱۳۹۵
- عضو تیم نظارت و ارزیابی "هیات نظارت و ارزیابی دانشگاه‌ها و موسسات آموزش عالی استان زنجان"، ۱۳۹۲ تا به حال.
- اجرای طرح تحقیقاتی-کابردی (در قالب پروژه سربازی): شبیه‌سازی جریان در پمپ دنده‌ای، سازمان صنایع هوافضا، ۱۳۸۸-۱۳۹۱.
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- پژوهشگر در مرکز تحقیقات خودرو سوخت و محیط زیست، دانشگاه تهران، طراحی و ساخت دینامومتر AC، ۱۳۸۳-۱۳۸۴.

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- 5- **Jafar Ghazanfarian, "The Art of Engineering: Fundamentals and Principles", CRC press, 2026.**
- 4- **Jafar Ghazanfarian, "Applied Continuum Mechanics for Thermo-fluids", CRC press, 2024.**
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- 23- Mojtaba Amiraslanpour, Jafar Ghazanfarian, S.E. Razavi, **"Drag Suppression for 2D Oscillating Cylinder with Various Arrangement of Splitters at $Re=100$: A High-Amplitude Study with OpenFOAM"**, Journal of Wind Engineering and Industrial Aerodynamics, 164, 128-137, 2017.
- 22- Zahra Shomali, Behrad Pedar, Jafar Ghazanfarian, Abbas Abbassi, **"Monte-Carlo Parallel Simulation of Phonon Transport for 3D Silicon Nano-Devices"**, International Journal of Thermal Sciences, 114, 139-154, 2017.
- 21- Sajjad Bouzari, Jafar Ghazanfarian, **"Unsteady Forced Convection over Cylinder with Radial Fins in Cross Flow"**, Applied Thermal Engineering, 112, 214-225, 2017.
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- 14- Jafar Ghazanfarian, D. Ghanbari **"Computational fluid dynamics investigation of turbulent flow inside a rotary double external gear pump"**, Journal of Fluids Engineering-Transactions of ASME, 137(2), 021101, 2015.
- 13- Roozbeh Saghatchi, Jafar Ghazanfarian, **"A Novel SPH Method for the Solution of Dual-Phase-Lag Model with Temperature-Jump Boundary Condition in Nanoscale"**, Applied Mathematical Modelling, Applied Mathematical Modelling, Vol. 39(3), 1063-1073, 2015.
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- 32- Jafar Ghazanfarian, Zahra Shomali, "**Heat Transfer Augmentation Through the Sliding-Wall Concept**", ICHMT International Symposium on Advances in Computational Heat Transfer, 26-30 May, Istanbul, Turkiye 2024.
- 31- Kamyar Dobahkti, **Jafar Ghazanfarian**, "**Active Control of Flow Over Spinning Cylinder by Flow Injection Using Deep Reinforcement Learning**", The 32th Annual International Conference of Iranian Society of Mechanical Engineers, May 9-11, Arak, Iran 2024.
- 30- Alireza Ghaderi Saneh, Ali Rezaei Barandagh, **Jafar Ghazanfarian**, "**Natural convection over a cylinder with extended surfaces and local superhydrophilicity**", 31th Annual International Conference of the Iranian Association of Mechanical Engineers, 9-12 May, Tehran, Iran 2023
- 29- Ali Rezaei Barandagh, **Jafar Ghazanfarian**, "**Acoustic analysis of turbulent flow over superhydrophobic cylinder**", 12th International Conference on Acoustics and Vibration, December 14th, Tehran, Iran 2022.
- 28- Seyed Emran Hamzehnezhad Abkenari, **Jafar Ghazanfarian**, Mohammad Mostafa Mohammadi "**Implementation of Machine learning for voltage generation from a piezomaterial in a fluid flow**", 30th Annular International Conference on Mechanical Engineering, May 10th, Tehran, Iran, 2022.
- 27- Zahra Shomali, Haleh Soheibi, Jafar Ghazanfarian, "**Investigation of Fin Ripping on Convective Heat Transfer over a Cylinder in Cross Flow**", 21st IACM Computational Fluids Conference, 17-21 October, Hangzhou, China, 2021
- 26- H. Adabzadeh, M.M. Mohammadi, Jafar Ghazanfarian, "**Harnessing energy from water waves by ore-shaped piezoelectric energy harvesters, and experimental study based on response surface methodology**", Understanding Transport Processes on the Nanoscale for Energy Harvesting Devices, 8th March, Bad Honnef, Germany, 2021
- 25- Jafar Ghazanfarian, Mohammad Mostafa Mohammadi, Seyed Behnam Hosseini, "**A Variable angle Piezo electric Harvester for Offshore Applications**", Understanding Transport Processes on the Nanoscale for Energy Harvesting Devices, 8th March, Bad Honnef, Germany, 2021

- 24- Mohammad Amin Seifinia, Jafar Ghazanfarian, "**Computational Platform for Convolution-type Constitutive Relation for Nanoscale Phonon Transport**", Conference on Nanophononics, Bridging Statistical Physics, Molecular Modeling and Experiments, 24th June, Trieste, Italy, 2019.
- 23- Mehdi Mehri, Jafar Ghazanfarian, "**Numerical Analysis of 2D Subsonic Flow over Oscillating Airfoil at Incidence**", 26th Annular International Conference on Mechanical Engineering, April 24th, Semnan, Iran, 2018.
- 22- Ehsan Khavasi, Zahra Mashhadi, Jafar Ghazanfarian, "**LES Investigation of 3D turbudity flow with 2 set of particles with various diameters in an experimental setup with a bump using OpenFOAM**", 25th Annular International Conference on Mechanical Engineering, May 2nd, Tehran, Iran, 2017.
- 21- Behrad Zeinali, Jafar Ghazanfarian, "**LES simulation of 3D flow over cylinder with superhydrophobic surfaces**", 25th Annular International Conference on Mechanical Engineering, May 2nd, Tehran, Iran, 2017.
- 20- Jafar Ghazanfarian, Mostafa Mostafavi, "**Aeroacoustic analysis of flow over cylinder with splitter plate using FWH model**", 25th Annular International Conference on Mechanical Engineering, May 2nd, Tehran, Iran, 2017.
- 19- Zahra Shomali, Jafar Ghazanfarian, "**3-D Atomistic Investigation of silicon MOSFETs**", International Symposium on Advances in Computational Heat Transfer, May 28th, Napoli, Italy, 2017.
- 18- Mohammad Jamshidi, Jafar Ghazanfarian, "**Development of DPL-Based Heat Conduction Solver for Multi-Layered Arbitrary Shapes: Nano- and Bio- Case Studies**", International Symposium on Advances in Computational Heat Transfer, May 28th, Napoli, Italy, 2017.
- 17- Z. Shomali, A. Abbassi, J. Ghazanfarian, "**Non-Fourier investigation of the Tri-Gate MOSFET with a graphene heat spreader**", 6th International Advances in Applied Physics and Materials Science Congress & Exhibition (APMAS2016), June 1-3, Istanbul, Turkey, 2016.
- 16- J. Ghazanfarian, Z. Shomali, A. Abbassi, "**Non-Fourier behaviours in different three-dimensional MOSFET transistors**", 6th International Advances in Applied Physics and Materials Science Congress & Exhibition (APMAS2016), June 1-3, Istanbul, Turkey, 2016.
- 15- Reza Sepahi Samian, Abbass Abbassi, Jafar Ghazanfarian, "**High-Knudsen Conjugate Heat Transfer in Micro/Nano-Channels for use in microelectronic devices: Thermal Lattice Boltzmann Study**", Proceedings of Sixth International Conference on Nanostructures (ICNS6), March 7-10, Kish Island, Iran, 2016.
- 14- Sajad Bouzari, Jafar Ghazanfarian, "**Heat Transfer Augmentation for Flow over Finned Cylinder using OpenFOAM**", Proceedings of 24th Annular International Conference on Mechanical Engineering (ISME16), April 26-28, Yazd, Iran, 2016.
- 13- Jafar Ghazanfarian, Masood Moghaddam, "**Dual-Phase-Lag Investigation of High-k Material in Novel Generation of Nanoscale MOS Devices**", Proceedings of 23rd Annual International Conference on Mechanical Engineering (ISME2015), 12-14 May, Tehran, Iran, 2015.
- 12- Dourna Jamshideasli, Abbas Abbassi, Jafar Ghazanfarian, "**Thermal Lattice Boltzmann Method for Curved Boundaries in the Transition Regime**", Proceedings of 23rd Annual International Conference on Mechanical Engineering (ISME2015), 12-14 May, Tehran, Iran, 2015.
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- 11- Jafar Ghazanfarian, Masood Moghaddam, Abbas Abbassi, "**Development of Dual-Phase-Lag model for Conjugate Heat Transfer in Nanoscale MOS Devices**", Proceedings of 23rd Annual International Conference on Mechanical Engineering (ISME2015), 12-14 May, Tehran, Iran, 2015.
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- 8- Zahra Shomali, Jafar Ghazanfarian, Abbas Abbassi, "**Investigation of solid argon film with temperature-dependent properties under the framework of highly non-linear Dual-Phase-Lag Model in a nanoscale geometry**", Proceedings of National Conference on Mechanical Engineering of Iran (NCMEI2014), February 27, Shiraz, Iran, 2014.
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- 6- R. Saghatchi, M Gorji-Bandpy, J. Ghazanfarian, "**Water Impact and Sedimentation of Solid Bodies in a Newtonian Fluid using SPH Method**", Proceedings of International Conference on Mechanical Engineering and Advanced Technologies (ICMEAT2012), October 10-12, Isfahan, Iran, 2012.
- 5- J. Ghazanfarian, D. Ghanbari, "**2D Numerical Simulation of a Double Gear Pump using Dynamic Mesh**", Proceedings of International Conference on Mechanical Engineering and Advanced Technologies (ICMEAT2012), October 10-12, Isfahan, Iran, 2012.
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- 3- I. Tasdighi, J. Ghazanfarian, "**Evaluation and Simulation of Surgery Room Air Conditioning System Using Fluent**", Proceedings of the 2nd Conference on Heating, Ventilating and Air Conditioning, June 1-3, Tehran, Iran, 2010.
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