

Publications — Mohammad Javad Beigrezaee

Under Review

2. **M. J. Beigrezaee**, S. K. Jalali, D. Misseroni, N. M. Pugno, “A Refined Gibson–Ashby Model for Functionally Graded Honeycombs with Random Irregularities,” *International Journal of Mechanical Sciences*, under review.
1. **M. J. Beigrezaee**, M. Heshmati, S. K. Jalali, N. M. Pugno, “Wave propagation in honeycombs with functionally graded wall thickness and random lattice irregularities,” *International Journal of Mechanical Sciences*, under review.

Journal Papers (ISI)

9. S. K. Jalali, **M. J. Beigrezaee**, N. M. Pugno, “Physically based machine learning for multi-objective optimal design of partially recycled materials,” *Journal of Cleaner Production*, 2025, <https://doi.org/10.1016/j.jclepro.2025.147081>
8. S. K. Jalali, **M. J. Beigrezaee**, D. Misseroni, N. M. Pugno, “A modified Gibson–Ashby model for functionally graded lattice structures,” *Mechanics of Materials*, 2024, <https://doi.org/10.1016/j.mechmat.2023.104822>
7. S. K. Jalali, **M. J. Beigrezaee**, and N. M. Pugno, “Reporting a misunderstanding in relating the Young’s modulus to functionally graded porosity,” *Composite Structures*, vol. 281, p. 115007, Feb. 2022, <https://doi.org/10.1016/j.compstruct.2021.115007>
6. S. K. Jalali, **M. J. Beigrezaee**, and N. M. Pugno, “Is it always worthwhile to resolve the governing equations of plate theories for graded porosity along the thickness?,” *Composite Structures*, vol. 256, p. 112960, Jan. 2021, <https://doi.org/10.1016/j.compstruct.2020.112960>
5. **M. J. Beigrezaee**, M. R. Ayatollahi, B. Bahrami, and L. F. M. da Silva, “A new geometry for improving the strength of single lap joints using adherend notching technique,” *Journal of Adhesion*, vol. 97, no. 11, pp. 1004–1023, 2021, <https://doi.org/10.1080/00218464.2020.1724787>
4. B. Bahrami, M. R. Ayatollahi, **M. J. Beigrezaee**, and L. F. M. da Silva, “Strength improvement in single lap adhesive joints by notching the adherends,” *International Journal of Adhesion and Adhesives*, vol. 95, no. June, p. 102401, 2019, <https://doi.org/10.1016/j.ijadhadh.2019.102401>
3. **M. J. Beigrezaee**, M. R. Ayatollahi, B. Bahrami, and L. F. M. da Silva, “Failure load analysis in single lap joints - effect of adherend notching,” *Engineering Failure Analysis*, vol. 104, no. May, pp. 75–83, 2019, <https://doi.org/10.1016/j.engfailanal.2019.05.020>
2. S. K. Jalali, **M. J. Beigrezaee**, and S. Hayati, “How does porosity affect the free vibration of single-layered graphene sheets?,” *Superlattices and Microstructures*, vol. 128, no. November 2018, pp. 221–242, 2019, <https://doi.org/10.1016/j.spmi.2019.01.023>
1. S. K. Jalali, **M. J. Beigrezaee**, and N. M. Pugno, “Atomistic evaluation of the stress concentration factor of graphene sheets having circular holes,” *Physica E: Low-Dimensional Systems and Nanostructures*, vol. 93, no. January, pp. 318–323, Sep. 2017, <https://doi.org/10.1016/j.physe.2017.06.031>.

Other Publications (non-ISI)

2. B. Bahrami, M. R. Ayatollahi, **M. J. Beigrezaee**, “Strength improvement by adherend notching and tapering,” *Journal of Science and Technology of Composites*, 2020.
1. S. K. Jalali, **M. J. Beigrezaee**, “Stress concentration factor of graphene sheets with elliptical vacancies,” *Journal of Solid Mechanics*, 2019.

Conference Proceedings

6. S. K. Jalali, **M. J. Beigrezaee**, N. Pugno, ” Machine Learning-Based Optimization of Recycled Resources Integration in Virgin Materials: A Focus on Automotive Applications”, *UK Association for Computational Mechanics (UKACM 2025)*, London, United Kingdom, 23 – 25 April 2025.
5. **M. J. Beigrezaee**, S. K. Jalali, D. Misseroni, N. Pugno, ” Nonlinear Mechanical Simulation of Spider Silk Composites for Enhanced Energy Absorption”, *26th International Conference of the Theoretical and Applied Mechanics (ICTAM 2024)*, Daegu, Korea, 25 – 30 August 2024.
4. **M. J. Beigrezaee**, S. K. Jalali, D. Misseroni, N. Pugno, ”A Gibson-Ashby Model for Graded 2D Cellular Solids”, *XVII international conference in computational plasticity, fundamentals, and applications (COMPLAS 2023)*, Barcelona, Spain, 5 – 7 September 2023.
3. S. K. Jalali, **M. J. Beigrezaee**, N. M. Pugno, “Vibrational Analysis of Defected Circular Single-layered Graphene and Silicene Sheets Under Pre-strains”, *25th International Congress of Theoretical and Applied Mechanics (ICTAM 2021)*, Milan, Italy, 22 – 27 August 2021
2. S. K. Jalali and **M. J. Beigrezaee**, ”Molecular Dynamic Based Free Vibrational Analysis of Circular Single Layered Graphene Sheets, ” *5th International Conference on Advances in Mechanical Engineering (ICAME 2019)*, Istanbul, Turkey, 17 – 19 December 2019.
1. M. R. Ayatollahi, B. Bahrami, **M. J. Beigrezaee**, ”Finite element analysis of a geometrically improved single lap joint,” *2nd International Conference on Structural Integrity and Durability (ICSID 2018)*, Dubrovnik, Croatia, 2 – 5 October 2018.