List of Publications

Seyed Shayan Sajjadinia

Journal Articles

- **Sajjadinia, S.S.**, Carpentieri, B., Shriram, D., and Holzapfel, G.A. (2022). *Multi-fidelity surrogate modeling through hybrid machine learning for biomechanical and finite element analysis of soft tissues* Computers in Biology and Medicine, p. 105699. DOI:10.1016/j.compbiomed.2022.105699
- **Sajjadinia, S.S.**, Carpentieri, B., and Holzapfel, G.A. (2021). *A backward pre-stressing algorithm for efficient finite element implementation of in vivo material and geometrical parameters into fibril-reinforced mixture models of articular cartilage*, Journal of the Mechanical Behavior of Biomedical Materials, 114, p. 104203. DOI:10.1016/j.jmbbm.2020.104203
- **Sajjadinia, S.S.** and Haghpanahi, M. (2021). *A parametric study on the mechanical role of fibrillar rotations in an articular cartilage finite element model*, Scientia Iranica, 28(2), pp. 830–836. DOI:10.1016/j.jmbbm.2020.104203
- **Sajjadinia, S.S.**, Haghpanahi, M., and Razi, M. (2019). *Computational simulation of the multiphasic degeneration of the bone-cartilage unit during osteoarthritis via indentation and unconfined compression tests*, Journal of Engineering in Medicine, 233(9), pp. 871–882. DOI:10.1016/j.jmbbm.2020.104203

Conference Proceedings Papers

- **Sajjadinia, S.S.**, Carpentieri, B., and Holzapfel, G.A. (2021). *A pointwise evaluation metric to visualize errors in machine learning surrogate models* in Tallón-Ballesteros, A.J. (ed.), Proceedings of CECNet 2021, Frontiers in Artificial Intelligence and Applications, 345, pp. 26–34.

Invited Book Chapter

- **Sajjadinia, S.S.**, Carpentieri, B., and Holzapfel, G.A. *Hybrid data-driven and numerical modeling of articular cartilage* in Carpentieri, B. and Lecca, P. (eds.), Big Data Analysis and Artificial Intelligence for Medical Sciences. Wiley, *in press*.

Talk Abstracts

- **Sajjadinia, S.S.**, Carpentieri, B., and Holzapfel, G.A. (2023, May). *Bridging tissue-scale multi-physics to organ-scale biomechanics through multi-fidelity machine learning*, 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, Paris, France.
- **Sajjadinia, S.S.**, Carpentieri, B., Shriram, D., and Holzapfel, G.A. (2021, September). *Biomechanical modeling of soft tissue multiphysics using hybrid machine learning and finite element analysis*, 17th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, online.

Poster Abstracts

- **Sajjadinia, S.S.**, Carpentieri, B., and Holzapfel, G.A. (2023, May). *Large-scale finite element modeling of pre-stress in articular cartilage* 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, Paris, France.
- **Sajjadinia, S.S.**, Carpentieri, B., and Holzapfel, G.A. (2021, November). *A pointwise evaluation metric to visualize errors in machine learning surrogate models*, The 3rd International Conference on Machine Learning and Intelligent Systems, online.