CALL FOR ABSTRACTS

INJURY AND DAMAGE BIOMECHANICS

(Biomedical and Biotechnology Engineering Track)

Organized by:

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Injury and damage to biological and biologically relevant structures caused by various internal and external agents (*e.g.,* trauma, sports, accidents, surgery, disease) are being investigated in considerable research efforts utilizing analytical models, numerical simulations, physics-informed machine learning approaches and applications, experimental methods, motion tracking and sensing methods, imaging techniques, human spaceflight-association injury biomechanics, and other clinical and preclinical approaches. This symposium aims to provide a forum to showcase new developments in injury and damage biomechanics for assessment, analysis, prediction, mitigation, and protection, and to facilitate the exchange of ideas. Topics of interest include, but are not limited to, the following:

- Civilian and sports related injury and trauma due to vehicular crashes, falls, collisions, and blunt impacts, among others.
- Military related injury and trauma due to blunt and ballistic impacts, and blast exposures.
- Imaging and other clinical techniques to diagnose, assess and quantify extent of mild (sub- concussive) to moderate traumatic brain injury (TBI).
- Integration of image-based analysis with clinical and preclinical, biomechanical computational modeling and/or experimental data.
- Classification of tissue damage and/or injury based on biomechanical predictors and their correlation with actual biological mechanisms, which are usually multiphysics in nature.
- Multiphysics and/or multiscale experimentation, analysis, and modeling of biomechanical injury and damage.
- Biomechanical physics-informed machine learning augmented approaches to investigate traumatic injuries.
- Advanced 3D characterization, measurement and testing tools, and surrogate methods.
- Innovative procedures, techniques, and algorithms for assessment and interpretation of damage biomechanics, *e.g.,* sensors for quantification of trauma severity, coarsening and homogenization schemes for multiscale modeling.
- Development and application of techniques to relate impact motion with injury risk assessment.
- Fundamental constitutive descriptions and understanding of damage mechanisms and associated changes in material behavior caused by disease and injury.
- Investigation and modeling of protective equipment for injury reduction.
- Verification and validation of relevant laboratory, physical surrogate, and computational models including various applications of Artificial Intelligence/Machine Learning.

To submit your abstract, visit the IMECE website at https://event.asme.org/IMECE. Choose the *Biomedical & Biotechnology track (Track 7),* and then select the *Injury and Damage Biomechanics topic (Topic 7-01)*. Submission deadlines:

Mar 10	March 10, 2026	**Abstract Submission**
Mar 24	March 24, 2026	**Notification of Abstract Acceptance**
May 05	May 05, 2026	**Submission of Full-Length Paper for Review & Electronic Copyright Process Opens**

The guidelines for abstract submission as well as important dates and all information for authors are provided at the conference website. Please reach out to any of the co-organizers with additional questions or to inquire about topics not mentioned above.