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LINKS

- Personal Website: https://www.tajtac.com/
- Google Scholar: https://scholar.google.com/citations?user=ml44TKkAAAAJ&hl=en

Publications

PUBLICATIONS

- **Tissue expansion mitigates radiation-induced skin fibrosis in a porcine model.** *Acta biomaterialia*
  Nunez-Alvarez, L., Ledwon, J. K., Applebaum, S., Progri, B., Han, T., Laudo, J., Tac, V., Gosain, A. K., Tepole, A. B.
  2024

- **Data-driven continuum damage mechanics with built-in physics.** *Extreme Mechanics Letters*
  Tac, V., Kuhl, E., Tepole, A. B.
  2024; 71

- **Generative hyperelasticity with physics-informed probabilistic diffusion fields** *ENGINEERING WITH COMPUTERS*
  Tac, V., Rausch, M. K., Bilionis, I., Sahli Costabal, F., Tepole, A.
  2024

- **Benchmarking physics-informed frameworks for data-driven hyperelasticity.** *Computational mechanics*
  Taç, V., Linka, K., Sahli-Costabal, F., Kuhl, E., Tepole, A. B.
  2024; 73 (1): 49-65

- **Data-driven anisotropic finite viscoelasticity using neural ordinary differential equations.** *Computer methods in applied mechanics and engineering*
  Taç, V., Rausch, M., Costabal, F. S., Tepole, A. B.
  2023; 411

- **Data-driven Modeling of the Mechanical Behavior of Anisotropic Soft Biological Tissue.** *Engineering with computers*
  Tac, V., Sree, V. D., Rausch, M. K., Tepole, A. B.
  2022; 38 (5): 4167-4182

- **Data-driven Tissue Mechanics with Polyconvex Neural Ordinary Differential Equations.** *Computer methods in applied mechanics and engineering*
  Tac, V., Sahli Costabal, F., Tepole, A. B.
  2022; 398

- **Predicting the mechanical properties of biopolymer gels using neural networks trained on discrete fiber network data** *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*
  Leng, Y., Tac, V., Calve, S., Tepole, A. B.
  2021; 387
- **Micromechanical modelling of carbon nanotube reinforced composite materials with a functionally graded interphase** *JOURNAL OF COMPOSITE MATERIALS*
  Tac, V., Gurses, E.
  2019; 53 (28-30): 4337-4348
- **Dynamic Frictional Sliding Modes between Two Homogenous Interfaces**
  Taj, W., Coker, D.
  edited by Karamis, M. B., Nair, F., Savas, S., Gocer, A., Hamamci, M.
  IOP PUBLISHING LTD.2018