Literature List (Active Composites Inverse Design / Shape Morphing, ML-related)

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Notes: initial broad sweep (arXiv API + one known publisher landing page). Not guaranteed exhaustive across all publishers/databases.

Seed / Local Reference Papers

- Xu (2025) *Machine Learning-Assisted Inverse Design of 3D Shape Morphing in Liquid Crystal Elastomer Composite Strips* (Adv. Funct. Mater.) — Wiley landing page
- Sun et al. (2022) *Machine Learning-Evolutionary Algorithm Enabled Design for 4D-Printed Active Composite Structures* (Adv. Funct. Mater.) — (verify publisher page)
- Sun et al. (2024) *Machine learning and sequential subdomain optimization for ultrafast inverse design of 4D-printed active composite structures* — (verify venue/publisher page)

arXiv (recent/related)

- Chen et al. (2026) *Shape-morphing programming of soft materials on complex geometries via neural operator* — arXiv:2601.11126
- Song, Hyde (2025) *PhysMorph-GS: Differentiable Shape Morphing via Joint Optimization of Physics and Rendering Objectives* — arXiv:2511.16988
- Su (2024) *Acoustic shape-morphing micromachines* — arXiv:2410.12200
- Ying, Fernando, Dias (2024) *Inverse design of programmable shape-morphing kirigami structures* — arXiv:2406.10566
- Wang et al. (2023) *Physics-aware differentiable design of magnetically actuated kirigami for shape morphing* — arXiv:2308.05054
- (2023) *Inverse design and additive manufacturing of shape-morphing structures based on functionally graded composites* — arXiv:2307.05805
- Zou et al. (2022) *Encoding of direct 4D printing of isotropic single-material system for double-curvature and multimodal morphing* — arXiv:2205.02510
- Yang et al. (2020) *SimuLearn: Fast and Accurate Simulator to Support Morphing Materials Design and Workflows* — arXiv:2007.15065