Viscoelastic analysis of a spring-connected dielectric elastomer actuator undergoing large inhomogeneous deformation

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Highlights

- Viscoelastic model is developed for a conical dielectric elastomer actuator.
- A differential-algebraic system of equations is obtained and solved.
- Creep behaviors under the constant electro-mechanical loadings are investigated.
- Cyclic performance under the cyclic electro-mechanical loadings is presented.