

LIST of PUBLICATIONS



Peer-reviewed journal articles and book chapters:

1. S. Weima, R. Norouzkudiani, J. Baek, J. Peixoto, T. Slot, D. Broer, A. DeSimone, D. Liu: Human Interactive Liquid Crystal Fiber Arrays. *Science Advances*, in press (2024).
2. P. Sartori, R.S. Yadav, J. Del Barrio, A. DeSimone, C. Sanchez Somolinos: Photochemically Induced Propulsion of a 4D Printed Liquid Crystal Elastomer Biomimetic Swimmer. *Advanced Science* 25, 2308561 (2024). Featured on the inside back cover.
3. G. Corsi, P.G. Ledda, G. Vagnoli, F. Gallaire, A. DeSimone: Instability and trajectories of buoyancy-driven annular disks: A numerical study. *Phys Rev Fluids* 9, 043907 (2024).
4. J. Quaglierini, M. Arroyo, A. DeSimone: Mechanics of tubular meshes formed by elastic helical fibers. *Int J Solids Structures* 282, 112451 (2023).
5. E.O.H. Alameen, A. Lucantonio, A. DeSimone: Mechanics and transient morphing of soft hygroscopic bilayers. *Mech Res Comm* 131, 104131 (2023).
6. R. Norouzkudiani, A. Lucantonio, A. DeSimone: Equilibrium and transient response of photo-actuated Liquid Crystal Elastomer beams. *Mech Res Comm* 131, 104126 (2023).
7. J. Quaglierini, M. Arroyo, A. DeSimone: Mechanics of tubular meshes made of helical fibers and application to modeling McKibben artificial muscles. 2023 IEEE International Conference on Soft Robotics, *RoboSoft 2023* (2023).
8. T.E. Ebenezer et al.: Euglena International Network (EIN): Driving euglenoid biotechnology for the benefit of a challenged world. *Biology Open* 11(11) (2022).
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10. L. Vanozzi, A. Lucantonio, A. Castillo, A. DeSimone, L. Ricotti: Modeling Self-Rollable Elastomeric Films for Building Bioinspired Hierarchical 3D Structures. *International Journal of Molecular Sciences*, 23(15), 8467 (2022).
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12. A. Ippolito, A. DeSimone, V. Deshpande: Contact guidance as a consequence of coupled morphological evolution and motility of adherent cells. *Biomechanics and Modeling in Mechanobiology* 21(4), 1043–1065 (2022).
13. A. DeSimone, L. Teresi: Shape Control, Morphing and Mechanobiology. In: 50+ Years of AIMETA: A Journey Through Theoretical and Applied Mechanics in Italy, G. Rega (ed.), 477-494, Springer Nature (2022).
14. N. Giuliani, M. Hess, A. DeSimone, G. Rozza: MicroROM: An efficient and accurate reduced order method to solve many-query problems in micro-motility. *ESAIM: Mathematical Modelling and Numerical Analysis*, 56(4), 1151–1172 (2022).
15. V. Damioli, E. Zorzin, A. DeSimone, G. Noselli, A. Lucantonio: Transient shape morphing of active gel plates: geometry and physics. *Soft Matter* 18(31), 5867–5876 (2022).
16. B. Mazzolai et al.: Advancing environmental intelligence through novel approaches in soft bioinspired robotics and allied technologies: I-Seed project position paper for Environmental Intelligence in Europe. *ACM International Conference Proceeding Series*, 265–268 (2022).
17. V. Deshpande, A. DeSimone, R. McMeeking, P. Recho: Chemo-mechanical model of a cell as a stochastic active gel. *J Mech Phys Solids* 151, 104381 (2021).
18. H.E. Pettermann, C. Cheyrou, A. DeSimone: Modeling and simulation of anisotropic linear viscoelasticity: direction-dependent temperature-shift functions. *Mechanics of Time-Dependent Materials* 25(4), 679-689 (2021).
19. J. Quaglierini, A. Lucantonio, A. DeSimone: Mechanics of tubular helical assemblies: ensemble response to axial compression and extension. *Acta Mechanica Sinica* 37(2), 173-186 (2021).
20. G. Cicconofri, G. Noselli, A. DeSimone: The biomechanical role of extra-axonemal structures in shaping the flagellar beat of *Euglena gracilis*. *eLife* 10:e58610. DOI: <https://doi.org/10.7554/eLife.58610> (2021).
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