

Complete List of Research Publications

Refereed Articles

- [1] R. De Pascalis, M. Destrade, and G. Saccomandi. The stress field in a pulled cork and some subtle points in the semi-inverse method of nonlinear elasticity. *Proceedings of the Royal Society of London A: Mathematical, Physical and Engineering Sciences*, 463(2087):2945–2959, 2007. [Publisher](#) - [Available](#).
- [2] R. De Pascalis, K. R. Rajagopal, and G. Saccomandi. Remarks on the use and misuse of the semi-inverse method in the nonlinear theory of elasticity. *The Quarterly Journal of Mechanics and Applied Mathematics*, 62(4):451–464, 2009. [Publisher](#) ([OA](#)).
- [3] R. De Pascalis, M. Destrade, and A. Goriely. Nonlinear correction to the euler buckling formula for compressed cylinders with guided-guided end conditions. *Journal of Elasticity*, 102(2):191–200, 2011. [Publisher](#) - [Available](#).
- [4] R. De Pascalis, I. D. Abrahams, and W. J. Parnell. Predicting the pressure–volume curve of an elastic microsphere composite. *Journal of the Mechanics and Physics of Solids*, 61(4):1106–1123, 2013. [Publisher](#) - [Available](#).
- [5] R. De Pascalis, I. D. Abrahams, and W. J. Parnell. On nonlinear viscoelastic deformations: a reappraisal of fung’s quasi-linear viscoelastic model. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 470(2166):20140058, 2014. [Available](#) ([OA](#)).
- [6] R. De Pascalis, G. Napoli, and S. S. Turzi. Growth-induced blisters in a circular tube. *Physica D: Nonlinear Phenomena*, 283:1 – 9, 2014. [Publisher](#) - [Available](#).
- [7] R. De Pascalis, I. D. Abrahams, and W. J. Parnell. Simple shear of a compressible quasi-linear viscoelastic material. *International Journal of Engineering Science*, 88:64 – 72, 2015. [Publisher](#) ([OA](#)).
- [8] R. De Pascalis, J. Dervaux, I. Ionescu, and L. Limat. Numerical multiscale modelling of nonlinear elastowetting. *European Journal of Mechanics - A/Solids*, 71:151 – 164, 2018. [Publisher](#) - [Available](#).
- [9] R. De Pascalis, W. J. Parnell, I. D. Abrahams, T. Shearer, D. M. Daly, and D. Grundy. The inflation of viscoelastic balloons and hollow viscera. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 474(2218):20180102, 2018. [Publisher](#) ([OA](#)).
- [10] R. De Pascalis, G. Napoli, and G. Saccomandi. Kink-type solitary waves within the quasi-linear viscoelastic model. *Wave Motion*, 86:195 – 202, 2019. [Publisher](#).
- [11] W. J. Parnell and R. De Pascalis. Soft metamaterials with dynamic viscoelastic functionality tuned by pre-deformation. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 377(2144):20180072, 2019. [Publisher](#) ([OA](#)).
- [12] R. De Pascalis. Mechanically induced helfrich-hurault effect in a confined lamellar system with finite surface anchoring. *Phys. Rev. E*, 100:012705, July 2019. [Publisher](#) - [Available](#).
- [13] G. Napoli and R. De Pascalis. Weak anchoring effects in smectic-a fréedericksz transitions. *Zeitschrift für angewandte Mathematik und Physik (ZAMP)*, 70(5):132, 2019. [Publisher](#) - [Available](#).

- [14] R. De Pascalis, T. Donateo, A. Ficarella, and W. J. Parnell. Optimal design of phononic media through genetic algorithm-informed pre-stress for the control of antiplane wave propagation. *Extreme Mechanics Letters*, 40:100896, 2020. [Publisher \(OA\)](#).

PhD Thesis

1. R. De Pascalis, *The Semi-Inverse Method in solid mechanics: Theoretical underpinnings and novel applications*, PhD Thesis, Dipartimento di Matematica, Università del Salento, Italy / Institut Jean Le Rond d'Alembert, Université Pierre et Marie Curie, France, December 2010, [Available](#)