

PUBLICATIONS

Articles-Research papers

- Thermodynamics of MacMillan's liquid crystal model, en collaboration avec H. Le Dret, *Mathematics and Mechanics of Solids*, 24 pages, 2026, doi.org/10.1177/10812865251414016, <https://cnrs.hal.science/MAP5/hal-05339310v1>.
- A Lagrangian formulation for the Oldroyd B fluid and the second law of thermodynamics, en collaboration avec H. Le Dret, *Acta Appl. Math.*, 196, 28 pages, 2025, doi.org/10.1007/s10440-025-00716-y, <https://cnrs.hal.science/MAP5/hal-04166054v3>.
- A few remarks on thermomechanics, en collaboration avec H. Le Dret, *Discrete and Continuous Dynamical Systems - Series S*, 17, 40 pages, 2024, doi.org/10.3934/dcdss.2023116, <https://cnrs.hal.science/MAP5/hal-03903814v2>.
- Thin structures with imposed metric, en collaboration avec M. Lewicka, *ESAIM :ProcS*, 62, 79-90, doi.org/10.1051/proc/201862079, 2018, <https://cnrs.hal.science/MAP5/hal-01757026v1>.
- Plates with incompatible prestrain of high order, en collaboration avec M. Lewicka et D. Ricciotti, *Ann. Inst. H. Poincaré Anal. Non Linéaire*, 34, 1883-1912, 2017, <https://cnrs.hal.science/MAP5/hal-01138338v1>.
- Hexagonal lattices with three-point interactions, en collaboration avec H. Le Dret, *J. Math. Pures Appl.*, 108, 613-632, 2017, <https://cnrs.hal.science/MAP5/hal-01149377v2>.
- Nonlinear elasticity of cross-linked networks, en collaboration avec K. John, Ch. Misbah, Ph. Peyla, et D. Caillerie, *Phys. Rev. E*, 87(4) :042721, 2013, <https://cnrs.hal.science/MAP5/hal-00881106v1>.
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- Elastic limit of square lattices with three-point interactions, en collaboration avec N. Meunier et O. Pantz, *Math. Mod. Meth. Appl. Sci.*, 22 (11), doi.org/10.1142/S0218202512500327, 2012, <https://cnrs.hal.science/MAP5/hal-00589926v2>.
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- Mathematical modelling of the atherosclerotic plaque formation, en collaboration avec V. Calvez, A. Ebde et N. Meunier, *ESAIM Proceedings*, 28, 1-12, 2009, <https://cnrs.hal.science/MAP5/hal-00523290v1>.
- Applications of level set methods in computational biophysics, en collaboration avec E. Maitre, T. Milcent, G.-H. Cottet et Y. Usson, *Math. Comput. Modelling*, 49, 2161-2169, 2009, <https://cnrs.hal.science/MAP5/hal-00177593v3>.
- Symmetry groups in nonlinear elasticity : An exercise in vintage mathematics, sollicité par *Commun. Pure Appl. Anal.*, 8, 435-456, 2009, <https://cnrs.hal.science/MAP5/hal-00275450v1>.
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- On internal and boundary layers with unbounded energy in thin shell theory. Parabolic characteristic and noncharacteristic cases, en collaboration avec D. Caillerie et E. Sanchez-Palencia, *Asymptotic Anal.*, 46, 221-249, 2006.
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- Modelling of piezoelectric plates including magnetic effects, en collaboration avec A. Sène, *Asymptotic Analysis*, 34, 1-40, 2003.
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Chapitres de livres-Book chapters

- Actin based propulsion : Intriguing interplay between material properties and growth processes, en collaboration avec K. John, D. Caillerie, Ph. Peyla, M. Ismail, J. Prost, Ch. Misbah, in *Cell Mechanics : from single scale-based models to multiscale modelling*, A. Chauvière, L. Preziosi, C. Verdier Eds, Mathematical & Computational Biology, 29-66, Chapman et Hall, London, 2010.
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