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Complex pathways in multistable matter

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Publications

C.M. Meulblok, A. Singh, M. Labousse, M. van Hecke, *Path-dependency and emergent computing under vectorial driving*, Physical Review X, **16**, 031021 (2026)

C.M. Meulblok, M. van Hecke, *Transient and multiperiodic responses: a hierarchy of material bits*, New Journal of Physics **28**, 025002 (2026)

C.M. Meulblok, H. Bense, M. Caelen, M. van Hecke, *Early onset of snapping of slender beams under transverse forcing*, Extreme Mechanics Letters **80**, 102407 (2025)

E. Gutierrez-Prieto*, C.M. Meulblok*, M. van Hecke, P.M. Reis *Dynamic drives allow independent control of material bits for targeted memory*, Science Advances **12**, eaec1606 (2026)

C.M. Meulblok, M. van Hecke, *Vectorial driving of multistable materials: singularities, pt-graphs, and non-generic paths*. arXiv:2607.11179 (2026)

In preperation

C.M. Meulblok, P. Baconnier, M. van Hecke, *Return point memory in vectorial drive*. In preparation

L. Jin, C.M. Meulblok, H. Bense, M. van Hecke, *Materializing advanced memories in hysteronic metamaterials*. In preparation

Curriculum Vitae

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