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Laboratoire PMMH
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Séminaire PMMH

Bureau d'Études

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Origami mechanics and multistability

Over the past thirty years, the ancient art of paper folding, or origami, has evolved into an interdisciplinary scientific field. Origami offers the possibility for new metamaterials whose overall mechanical properties can be programmed by acting locally on each crease. In particular, origami metamaterials generically display multistability, allowing reprogrammable configurations and deployable structures. Starting from a thin plate and knowing the properties of the material and the folding procedure, it is desirable to be able to design the different metastable shapes accessible to the structure. During this talk, we review some recent experimental and theoretical developments on different mechanisms of multistability in planar and tubular origami-based metamaterials.

