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Modeling branching morphogenesis using materials with programmable mechanical instabilities

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Modeling branching morphogenesis using materials with programmable mechanical

## instabilities

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Short title: Mechanical instabilities and branching morphogenesis

**Keywords:** Programmable mechanical instabilities; branching morphogenesis; buckling; wrinkling; clefting; creases; passive forces; morphodynamics

**Abbreviations:** 1D, one-dimensional; 2D, two-dimensional; 3D, three-dimensional; BMP, bone morphogenetic protein; ECM, extracellular matrix; FGF, fibroblast growth factor; IR, infrared

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