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Floppy Modes in Mechanical Metamaterials LUUK LUBBERS, MARTIN VAN HECKE, University of Leiden / AMOLF — We explore the rigidity for a model of hinged square tiles, which compose the backbone of a range of mechanical metamaterials. These non-generic systems allow for a single degree of freedom motion even for full filling, and here we explore the increase of the number of floppy modes when these systems are diluted (squares are removed). We discuss differences with rigidity percolation, due to the symmetric, non-generic nature of the building blocks.

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