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Linear isometric deformations of polyhedra

Why handmade model of polyhedron is bending while by the theory it should not be bended? It turns out that this phenomenon is unexpected for geometry and structural topology; it is due to a new kind of isometric deformations, i. e. linear bendings of polyhedra. A linear bending was studied for regular polyhedra and a one-parameter family of the Douady shaddock type polyhedra . The family of the "shaddock" polyhedra generates an anharmonic group with the modular function and algebraic Cauchy and Cayley relation as geometric invariants. The geometric nature of these invariants for the complex-valued parameter is not still well understood. Some computer simulation shows that modular function draws the Mandelbrot classic fractal set.

Reference: A. D. Milka, Linear bendings of regular convex polyhedra// Matematicheskaya Fizika, Analiz, Geometriya, (1994) v. 1, N 1, 116-130.