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Limit points of root systems of infinite Coxeter groups

Let W be an infinite Coxeter group, and consider the root system constructed from its geometric representation. We study the set E of limit points of the directions of roots. As motivational examples, we describe with pictures in rank 2, 3, 4, the fractal shape of this limit set E. We define a natural geometric action of W on E and explain its properties (transitivity, orbit of a point). We also study the extreme points of the convex hull of E and its relation with the "imaginary cone" of W. (joint works with M. Dyer, Ch. Hohlweg and J.-P. Labbé, arXiv:1112.5415)