

The Spring Topology and Dynamics Conference 2009, March 7–9, 2009, University of Florida, Gainesville, FL, USA

HAGOPIAN SPHERES

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In an earlier talk, I introduced the class of Hagopian spheres. These are inverse limits of two dimensional spheres with branched coverings as bonding maps. C. L. Hagopian first defined this class of continua in conversation several years ago; his hope was that some of them might turn out to be examples of two dimensional homogeneous indecomposable continua. Whether this is possible is still unknown. Many of them are decomposable, and whether any are homogeneous is still open. These continua have some interesting properties and lead to some deep questions, and some useful techniques. Mostly, this talk will concentrate on what I call standard Hagopian spheres, which are created using bonding maps which are of the form HfG where H and G are isometries of three space which are inverses of each other and f is the map which keeps r and z fixed in cylindrical coordinates and multiplies the azimuthal angle by some nonzero integer n . (briefly, a suspension of a complex n -th power map, conjugated by an isometry.)

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