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Totally Disconnected Sierpinski Relatives

This talk will present work in progress regarding the totally disconnected Sierpinski Relatives. The Sierpinski Relatives are a class of fractals that include the well-known Sierpinski Gasket. They all have the same fractal dimension. Each is an attractor of an iterated function system (IFS) that involves three contractive similarities composed with symmetries of the square. In general, the relatives have different topologies. A sub-class of these fractals consists of the relatives that are totally disconnected. Current work focuses on the use of morphisms between fractals to distinguish between relatives. For example, some relatives have double points (points that correspond to two different addresses) while other ones do not.