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Scaling Property of Ideal Granitic Sequences

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The Ideal Granite Model was proposed by Vistelius in 1980's for discriminating the granitic sequences observed under microscope by identifying the first-order or second-order Markov properties of the these sequences. Discrete multifractal model was proposed by Cheng in 1997 for modeling embedded fractals with distinct fractals dimensions. To demonstrate the processes resulting in discrete multifractals Cheng has used Markov chain as the typical processes. This paper will explore the interconnection and differences of the two models with emphasis on their capability of distinguishing granite sequences on the basis of ordinary Markov properties vs. scaling property observed from ideal granite sequences.