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Mathematical Physics

On the Existence of a Self-Similar Coarse Graining of a Self-Similar Space

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A topological space homeomorphic to a self-similar space is demonstrated to be self-similar. There exists a self-similar space \$S\$ whose coarse graining is homeomorphic to \$S\$. The coarse graining of \$S\$ is, therefore, self-similar again. In the same way, the coarse graining of the self-similar coarse graining of \$S\$ is, furthermore, self-similar. These situations succeed endlessly. Such a self-similar \$S\$ is generated actually from an intense quadratic dynamics.

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