

## Node Insertion in Coalescence Hidden-Variable Fractal Interpolation Surface

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**Abstract :** The Coalescence Hidden-variable Fractal Interpolation Surface (CHFIS) was built by combining interpolation data from the Iterated Function System (IFS). The interpolation data in a CHFIS comprises a row and/or column of uncertain values when a single point is entered. Alternatively, a row and/or column of additional points are placed in the given interpolation data to demonstrate the node added CHFIS. There are three techniques for inserting new points that correspond to the row and/or column of nodes inserted, and each method is further classified into four types based on the values of the inserted nodes. As a result, numerous forms of node insertion can be found in a CHFIS.

**Keywords :** fractal, interpolation, iterated function system, coalescence, node insertion, knot insertion

**Conference Title :** ICFG 2022 : International Conference on Fractal Geometry

**Conference Location :** Vienna, Austria

**Conference Dates :** June 23-24, 2022