**Computer Code for “Efficient Training Image Selection for Multiple-Point Geostatistics via Analysis of Contours”**

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Programming Language: MATLAB,

The code is freely available for academic purposes.

**To Run The Code:**

Set the folder containing these files as current directory of MATLAB. Then, run either of the following codes:

>>use\_TISelection\_Binary

>>use\_TISelection\_Categorical

>>use\_TISelection\_Continuous

You can set the parameters in the aforementioned m-files.

The core of these codes is a function named *TISelection,* which takes the sampling grid *Is* (with nans at unknown locations), a cell containing TIs, the categories (*cats*=[0,1] for binary images, *cats*=[0,1,2, …,nC] for categorical images, and *cats*=[] for continuous images), parameters structure *params*.

**Paramters:**

params.N= number of triangles to be considered in a data-event,

params.R= radius of the circle delimiting each data-event,

params.Npad= the number of rows/columns added to the beginning and end of the Is symmetrically. Set this to 20.

Params.tolerance= acceptable error for match finding, for binary and categorical variables set this to 0.001 (instead of zero), for continuous images higher values can also be used.

**Other functions:**

The functions *TISelection\_DS, TISelection\_exhaustive, TISelection\_partial can also be used in the same way.*