The following lines explain the routines used to obtain the results presented in the manuscript.

MAIN ROUTINE

- OKCKSim : to drive the computations. This is the routine that needs to be executed to generate the outcomes of the paper.

SUBROUTINES AND USED FUNCTIONS

- ajustermulti : to simultaneously adjust a model in multiple directions.
- covardm : to compute theoretical covariances (Marcotte, 1991).
- do_anamor : to create a table associating Gaussian values to real values.
- gocovardm : to calculate variogram values and differences with the experimental variogram.
- grille : to create a regular 3D grid.
- regres : to obtain the linear regression of x over y.
- tab.mat : table with 3 different anamorphosis created using do_anamor.
- test_ck : to perform the simulations and compute KNA statistics, recovery functions and other stats.
- trans : to take as input original coordinates and return the rotated and reduced coordinates.
- transcov : to simulate and fit the real variogram from the Gaussian variogram.

RUN EXPLANATIONS

- Run OKCKSim to obtain the results for the base case (BC) considering the first distribution (lognormal).
- To control the sampling density, set SD_vol to 100, 500 or 2500 in line 18 for respectively HSD, BC and LSD cases.
- To change the distribution type, set 'cas' (line 19) to 1 (lognormal distribution), 2(reverse lognormal distribution), or 3 (bimodal distribution).