



## **Inverse simulation versus prior information**

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A problem faced in stochastic inverse conditional simulation is whether the final realizations should respect some a priori model of spatial continuity or if the conditioning data should drive the generation process without accounting for such a priori model. In this respect, stochastic inverse conditional simulation techniques could be classified in two groups: those that consistently and persistently use the a priori model in the simulation process, and those that use it only marginally (generally at the starting point). In the first group we have gradual deformation and Markov chain Monte Carlo (McMC), and in the second group, the self-calibrating approach and ensemble Kalman filtering (EnKF). We will compare, in a synthetic example, the performance of two such techniques, a blocking version of McMC and EnKF. We find that, for the case study analyzed, EnKF does a better job in inverse conditioning at data locations but fails in its predictions elsewhere in comparison with blocking McMC.