

Get initial model
Randomly pick a model from prior distributions (Section 2.2)

$i++$

do $i=1, N$

Candidate selection
Perturb candidate model according to the moves described in Section 2.3. One move is randomly selected and applied to the current model to generate the candidate model.

Compute weights w_{ij}
Define w_{ij} based on change-points distribution in time and compute:
 $C_e(m) = W^{-1}(m) C^* e W^{-1}(m)$
(Section 2.1, Equations 7-9).

Misfit computation
Compute Likelihood value for the candidate model using $C_e(m)$ (Equation 3)

Metropolis-Hasting
Apply Metropolis' rule to accept or reject candidate model based on its Likelihood ratio (Equation 5)

Accept

Reject

Candidate model becomes the current model

LEGEND
N - number of models sampled
i - index of the model
 w_{ij} - weight for ij-th datum
 $C_e(m)$ - covariance matrix
 $W(m)$ - weight matrix
 C^*e - original covariance matrix

If $mod(i, 1000)=0$

Store current model
for post-processing

If $i < N$

If $i = N$

END