

# Relaxed clock model optimisation protocol

## 1) Rate parameterisation

1. *cat* (2006)
2. *real* (2006)
3. *quant* (2006)
4. *real* (2020)
5. *quant* (2020)

Optimum:

*quant* (2020)

## 2) Proposal kernel

1. *Uniform*
2. *Bactrian*(0.92)
3. *Bactrian*(0.95)
4. *Bactrian*(0.98)

Optimum:

*Bactrian*(0.95)

## 3) Narrow exchange rate (NER) constraint satisfaction

1. *NER* { }
2. *NER* { $D_{AB}$ }
3. *NER* { $D_{AC}$ }
- ...
64. *NER* { $D_{AB}, D_{AC}, D_{AE}, D_{BC}, D_{BE}, D_{CE}$ }
65. *NER<sub>w</sub>* { }
- ...
128. *NER<sub>w</sub>* { $D_{AB}, D_{AC}, D_{AE}, D_{BC}, D_{BE}, D_{CE}$ }

Optimum:

*NER* { $D_{AE}, D_{BE}, D_{CE}$ }

## 4) Guided scalar operators

1. *No guiding*
2. *Mirror*
3. *AVMN*

Optimum:

*Mirror*

## 5) Guided NER

1. *No guiding*
2. *Parsimony*
3. *MDS*

Optimum:

*MDS*