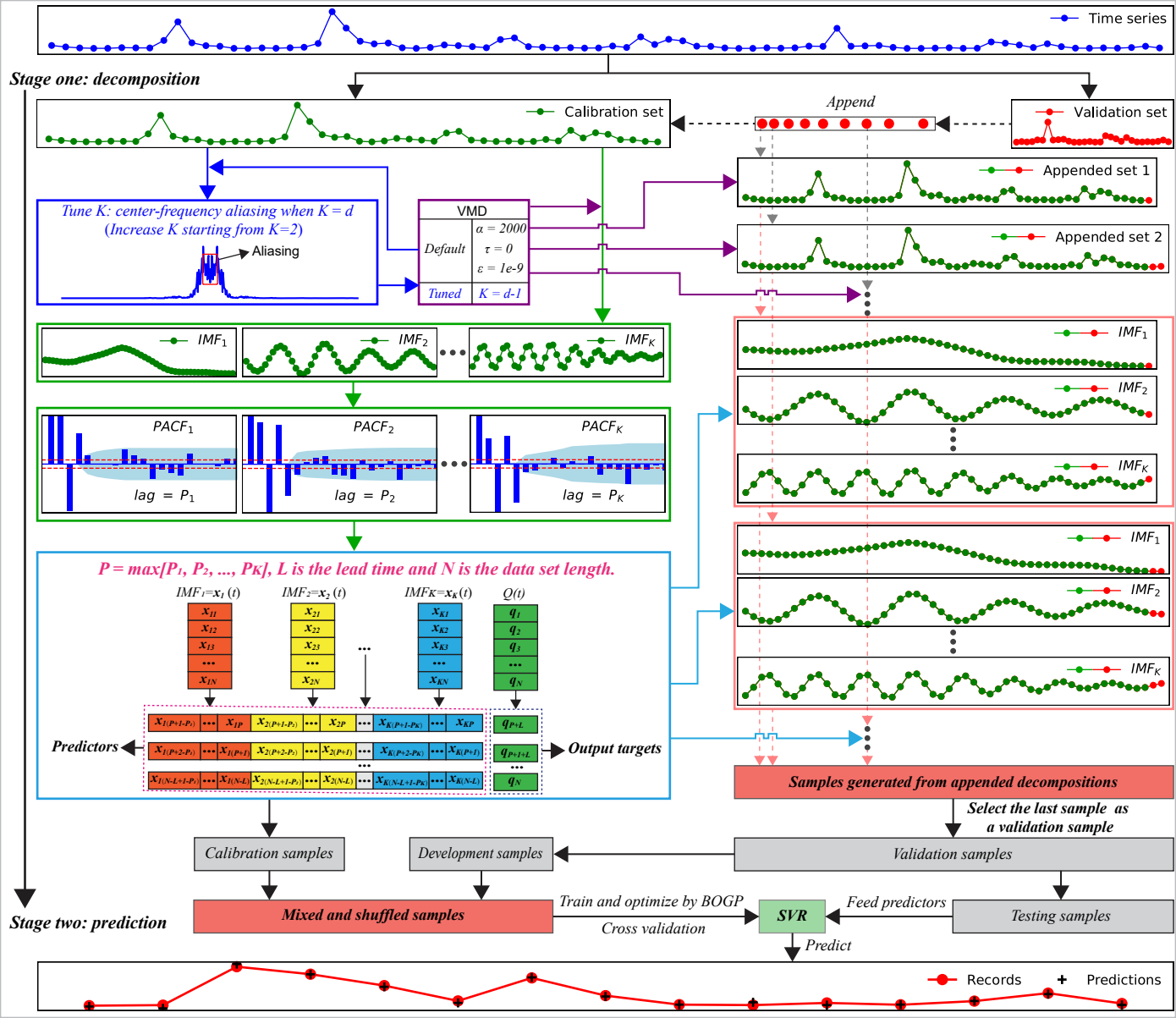
Time series
Stage one: decomposition
Calibration set
Append
Validation set
Appended set 1
Appended set 2
Tune K: center-frequency aliasing when K = d
(Increase K starting from K=2)
Aliasing
VMD
Default
α = 2000
τ = 0
ε = 1e-9
Tuned
K = d-1
IMF1
IMF2
IMFK
PACF1
PACF2
PACFK
lag = P1
lag = P2
lag = PK
P = max[P1, P2, ..., PK], L is the lead time and N is the data set length.
IMF1=x1 (t)
IMF2=x2 (t)
IMFK=xK (t)
Q(t)
Predictors
Output targets
Samples generated from appended decompositions
Select the last sample as
a validation sample
Calibration samples
Development samples
Validation samples
Stage two: prediction
Mixed and shuffled samples
Train and optimize by BOGP
Cross validation
SVR
Feed predictors
Testing samples
Predict
Records
Predictions