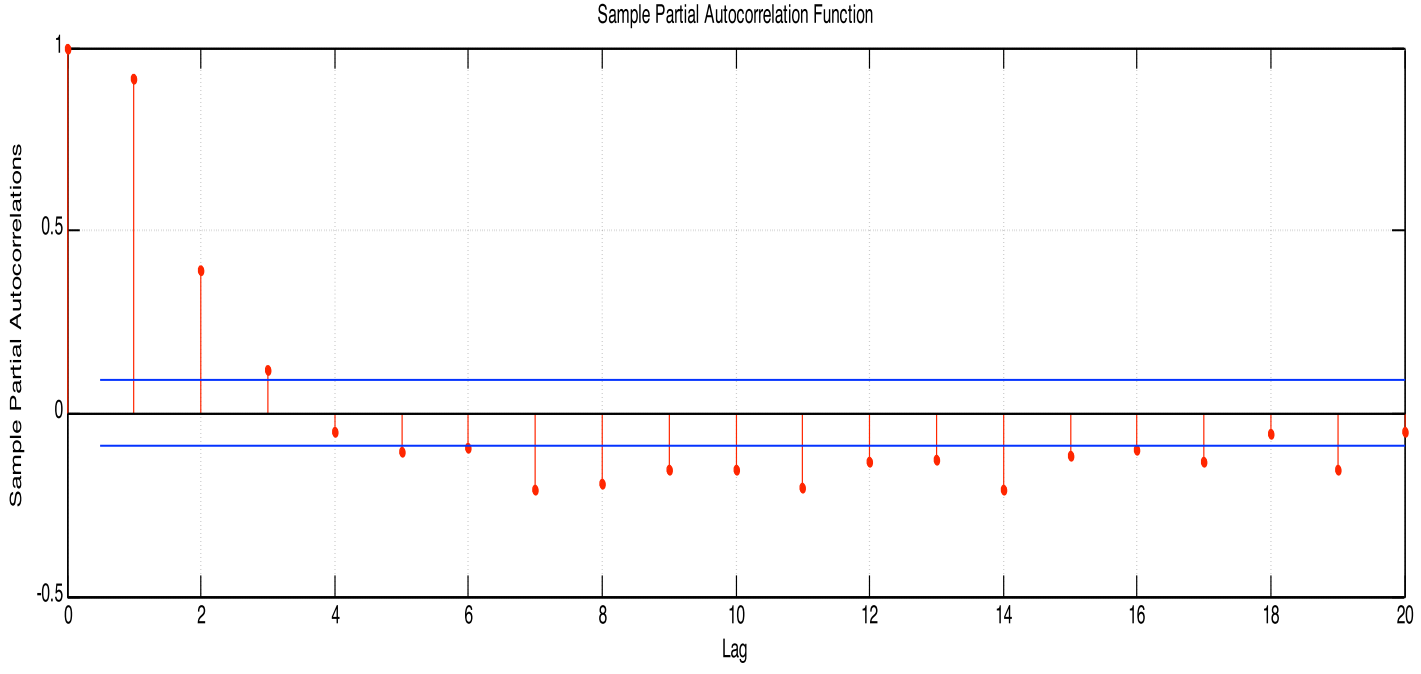
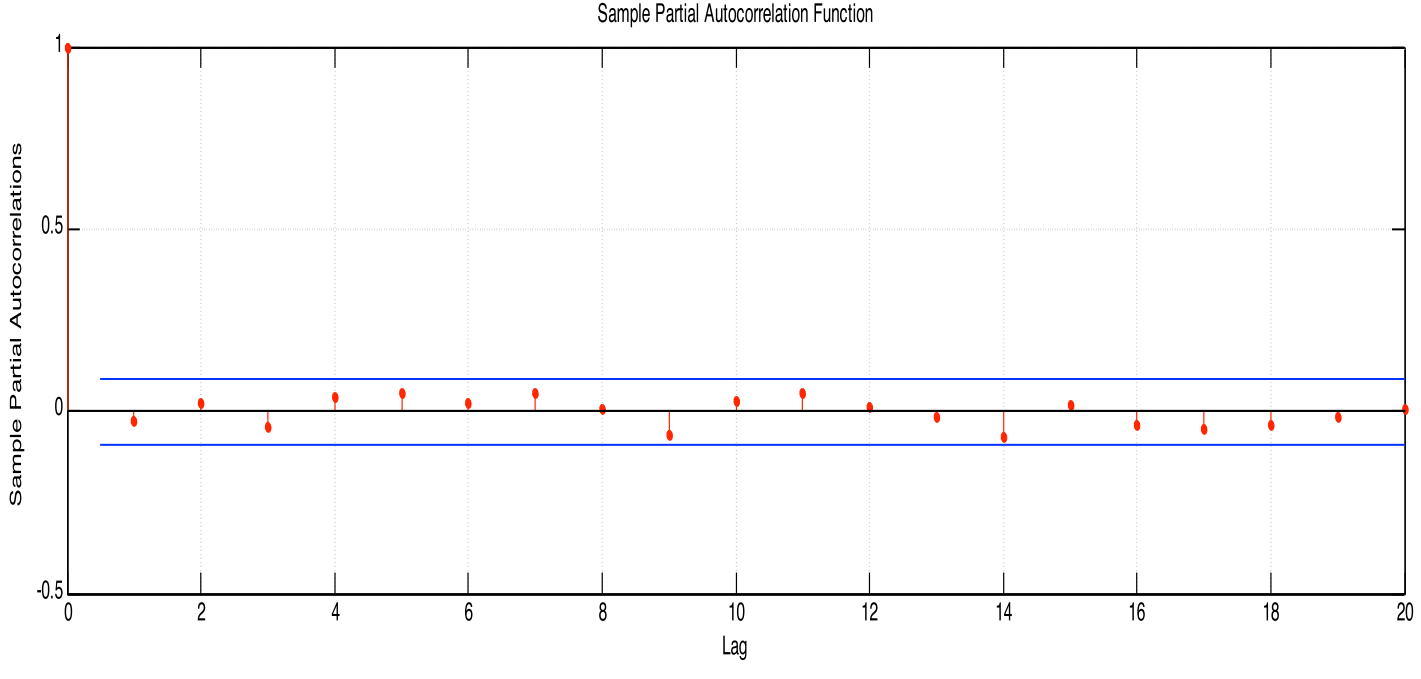
IN·NOMINE·PATRIS

Radboud University Nijmegen

Behavioural Science Institute


Sample Partial Autocorrelation Function
Sample Partial Autocorrelations
1
0.5
0
-0.5
0
2
4
6
8
10
12
14
16
18
20
Lag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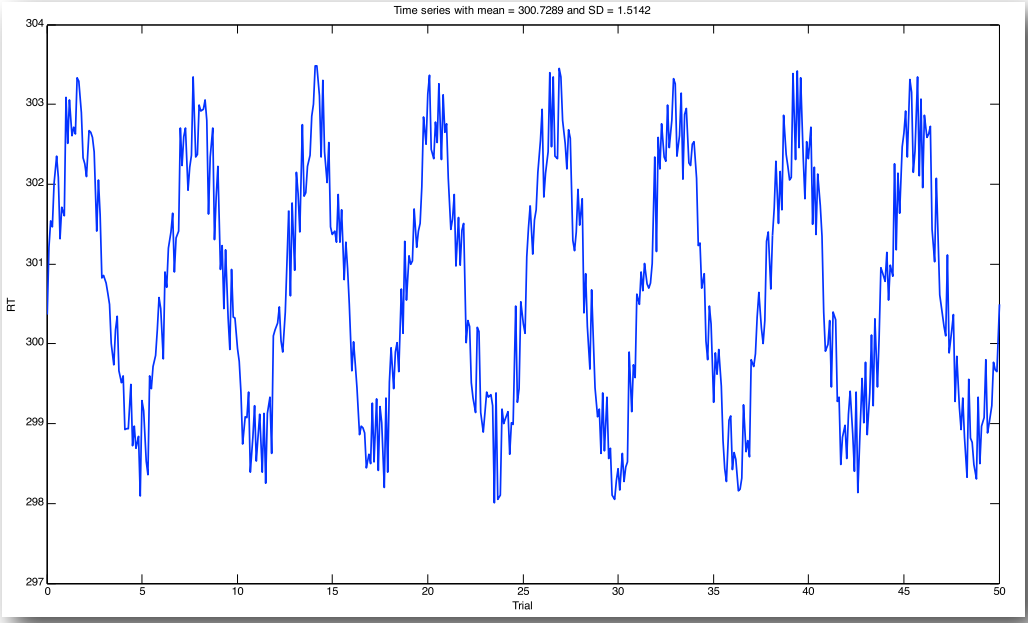
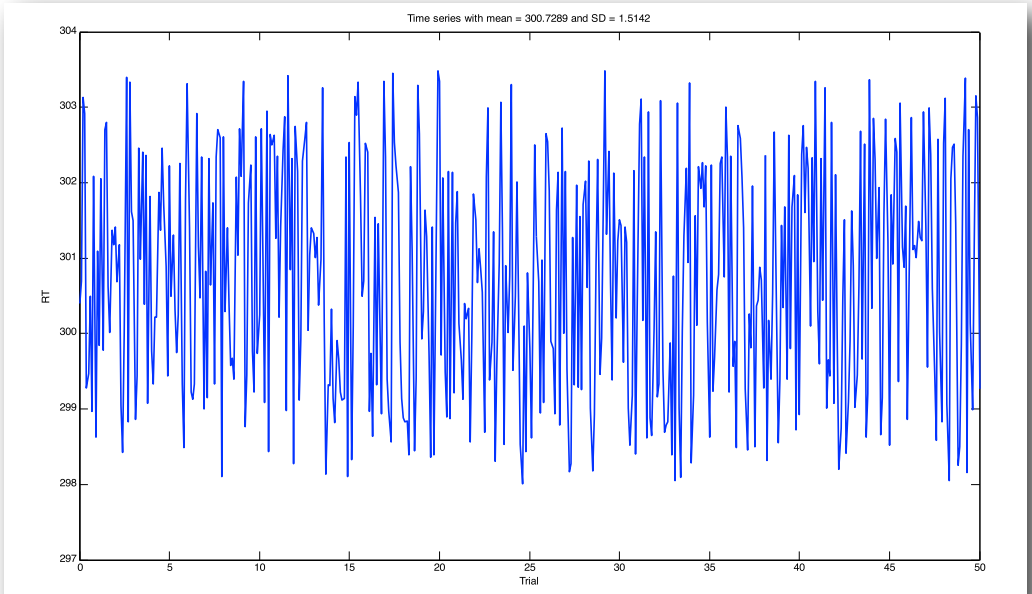

Time series with mean = 300.7289 and SD = 1.5142
RT
Trial
304
303
302
301
300
299
298
297
0
5
10
15
20
25
30
35
40
45
50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Noisy Sine

Randomised Noisy Sine

Randomising temporal order = Destroying correlations in the data

PACF

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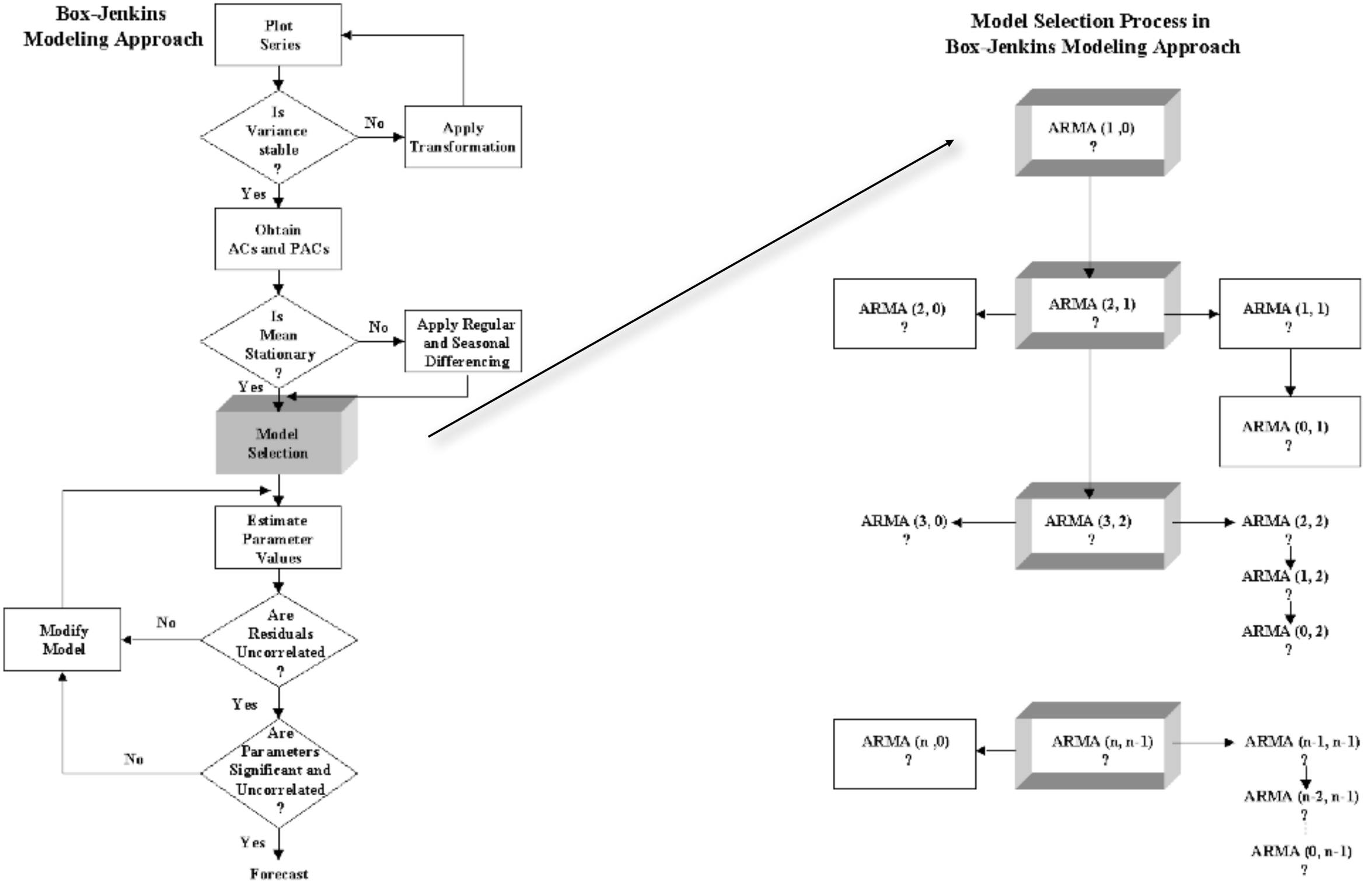
Box-Jenkins
Modeling Approach
Plot
Series
Is
Variance
stable
?
No
Apply
Transformation
Yes
Obtain
ACs and PACs
Is
Mean
Stationary
?
No
Apply Regular
and Seasonal
Differencing
Yes
Model
Selection
Estimate
Parameter
Values
Are
Residuals
Uncorrelated
?
No
Modify
Model
Yes
Are
Parameters
Significant and
Uncorrelated
?
No
Yes
Forecast
Model Selection Process in
Box-Jenkins Modeling Approach
ARMA (1 ,0)
?
ARMA (2, 0)
?
ARMA (2, 1)
?
ARMA (1, 1)
?
ARMA (0, 1)
?
ARMA (3, 0)
?
ARMA (3, 2)
?
ARMA (2, 2)
?
ARMA (1, 2)
?
ARMA (0, 2)
?
ARMA (n ,0)
?
ARMA (n, n-1)
?
ARMA (n-1, n-1)
?
ARMA (n-2, n-1)
?
ARMA (0, n-1)
?