Getting boundary and initial conditions

WRF model

- Antecedent rainfall
- Ensemble meteorological forecasts
- Base flow of the river

Predictor variable

- Artificial Neural Network (ANN)
  - Normalizing data
  - Training using different learning algorithms
    - Trained ANN
      - Evidence
        - Inference
          - Prediction
            - Predicted flood peak using ANN

- Bayesian Network (BN) Structure
  - Parameter learning
    - Trained BN
      - Evidence
        - Inference
          - Prediction
            - Predicted flood peak using BN

Observed flood peak

Error index

Selecting the best model between ANN and BN

End