Quality assessment of neural networks based hydrological ensemble forecasts

- Main objective: validate daily streamflow predictive distributions obtained with neural networks using the bootstrap technique.
- Exploit the optimization process with random initialization of weights and biases to obtain an ensemble for each time steps.
- Fit a normal distribution to the ensembles.
- Use of graphical and numerical evaluation tools
  - CRPS
  - Rank histograms
  - Reliability diagrams
- The ensemble forecasts are usually underdispersed
  - The bootstrap improves the calibration of the *NN* based ensemble forecasts, but not sufficiently.
  - Need for an a posteriori calibration process in the future.

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