

**UNIVERSITY OF BOLOGNA**  
*Subject: Advanced Hydrology*

**Exercise - Computation of historical sequence of Standardized Precipitation Index  
for mean areal precipitation**

One hundred years of hourly precipitation data have been generated for five raingauges over the Secchia River Basin. Compute the SPI at annual, monthly and weekly time scale and report the results by using graphs.

The data are available at

<http://distart119.ing.unibo.it/albertonew/sites/default/files/didattica/rain-secchia-synthetic.zip>

Let us assume that the 5 individual raingauges have equal weight in determining the mean areal precipitation.

Explain in a brief report the above elaborations with the required graphs.