# Multi-timescale SST-Streamflow connectivity: A complex network approach

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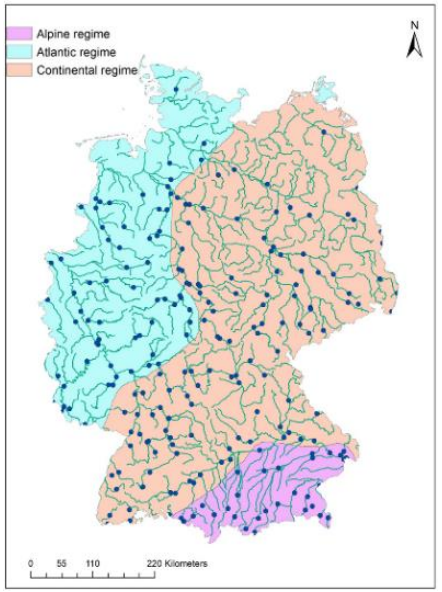
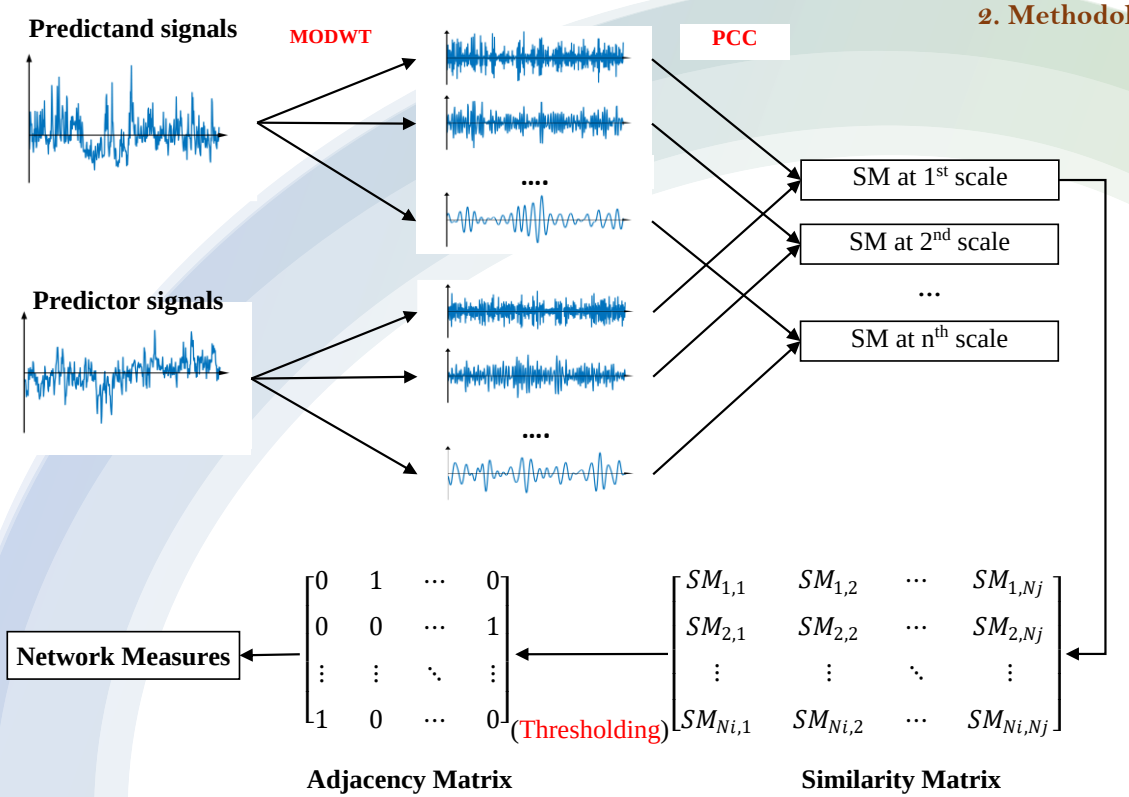
## 1. Highlights

- Coupled wavelets and complex network to explore SST-Streamflow connectivity
- North Atlantic SST tripole like pattern emerges as a key driver for all the German streamflow regimes
- Equatorial Atlantic Mode at the inter-annual timescale has potential connection with the Atlantic and Continental streamflow
- Continental streamflow regime comprises the characteristics of both Atlantic and Alpine streamflow regions

Study area – Germany (Alpine, Atlantic & Continental)
Data Used – GRDC streamflow data, ERSSTv5 sea surface temperature data
Time period – 1979-2015



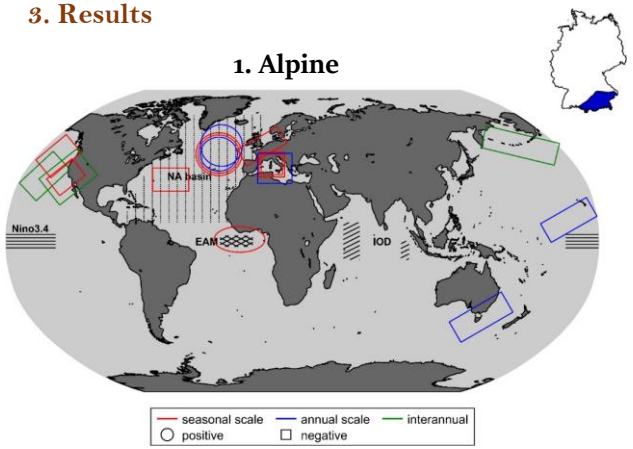

## 2. Methodology



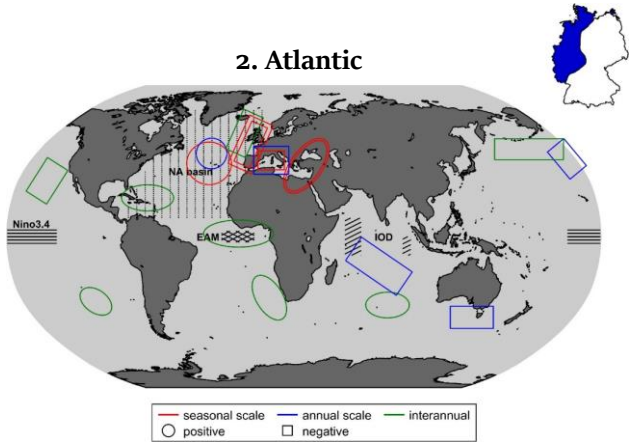

MODWT – Maximal Overlap Discrete Wavelet Transform, PCC – Pearson Correlation Coefficient

## 3. Results

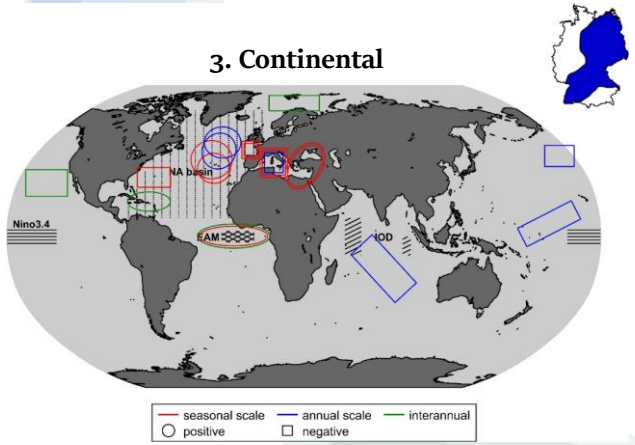
### 1. Alpine




### 2. Atlantic




### 3. Continental




## 4. Take-home message

- Unravelling SST-streamflow connectivity and understanding physical mechanism underneath the connection helps evaluate local hydrology at future climatic conditions

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