

Analog forecasting (AnDA) and large-ensemble ocean simulations to improve satellite-derived gridded products

- **Objective:**

- **General:** Explore Artificial Intelligence approaches for oceanography DA
- **Specific :** A Machine Learning method vs. OI for satellite altimetry mapping in the North Atlantic

- **Approach:**

- Set up of the system in a simple test case (Lorenz model) and in a twin experiment model of the Gulf of Mexico

- **Conclusions**

- AnDA clearly improves the small scales representation and the capture of high-frequency SSH signals (e.g. Florida coastal waves)
- AnDA produces realistic SSH trajectories, with a reconstructed variance much less sensitive to observational sampling than OI
- AnDA depends on the reliability of the catalog (size, resolution, realism)